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Union Calendar No. 232

112th Congress, 1st Session – – – – – – – – – – – – – – House Report 112–347

SECOND SEMIANNUAL REPORT OF ACTIVITIES

OF THE

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

FOR THE

ONE HUNDRED TWELFTH CONGRESS

DECEMBER 23, 2011.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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U.S. GOVERNMENT PRINTING OFFICE

19–006 WASHINGTON : 2011

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*** Ranking Minority Member**
**** Vice Chair appointments/Full Committee and Subcommittee.**
+ The Chairman and Ranking Minority Member shall serve as Ex-officio Members of all Subcommittees and shall have the right to vote and be counted as part of the quorum and ratios on all matters before the Subcommittees.

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112TH CONGRESS, FIRST SESSION

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LETTER OF TRANSMITTAL

December 23, 2011

Honorable Karen L. Haas
Clerk
U.S. House of the House of Representatives
Washington, DC 20515

Dear Ms. Haas:

Pursuant to Clause (1)(d)(1) of Rule XI and Rule X of the Rules of the House of Representatives, I hereby submit the second Semiannual Report of Activities for the Committee on Science, Space, and Technology for the *112th* Congress.

This second semiannual report provides an overview of the legislative and oversight activities conducted by the Committee, as defined by Rule X Clause 1(p) and Clause 3(k) of the Rules of the House of Representatives, a summary of actions taken and recommendations made with respect to the Committee's oversight plan and a summary of hearings held pursuant to clauses 2(n), (o), and (p) of Rule XI.

This document is intended as a general reference tool and not as a substitute for the hearing records, reports, and other files.

Sincerely,

Ralph M. Hall

Ralph M. Hall
Chairman

Enclosure

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Committee on Science, Space, and Technology
112th Congress, 2011

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Union Calendar No. 232

111TH CONGRESS, 2d Session | HOUSE OF REPRESENTATIVES | REPORT 112–347

SECOND SEMIANNUAL REPORT OF ACTIVITIES—COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

DECEMBER 23, 2011.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

Mr. HALL, from the Committee on Science, Space, and Technology, submitted the following

R E P O R T

OVERVIEW

The Committee on Science, Space, and Technology met on February 10, 2011 for an organizational meeting and adoption of the Committee on Science, Space, and Technology Oversight Plan for the 112th Congress under the direction of Ralph M. Hall, Chair. The Committee Membership was 40 Members with 23 Republicans (one vacancy) and 17 Democrats.

The Committee established five subcommittees: Energy and Environment (Andy Harris, Chair); Investigations and Oversight (Paul Broun, Chair); Research and Science Education (Mo Brooks, Chair); Space and Aeronautics (Steven Palazzo, Chair); and Technology and Innovation (Benjamin Quayle, Chair). Representative F. James Sensenbrenner appointed Full Committee Vice Chair.

The jurisdiction of the Committee on Science, Space, and Technology, as prescribed by Clauses 1(p) and 3(k) of Rule X of the Rules of the House of Representatives is as follows:

HOUSE RULE X
LEGISLATIVE AND OVERSIGHT JURISDICTION OF THE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

1. There shall be in the House the following standing committees, each of which shall have the jurisdiction and related functions assigned by this clause and clauses 2, 3, and 4. All bills, resolutions, and other matters relating to subjects within the jurisdiction of the standing committees listed in this clause shall be referred to those committees, in accordance with clause 2 of rule XII, as follows:

* * * * * * *

(p) Committee on Science, Space, and Technology.

(1) All energy research, development, and demonstration, and projects therefor, and all federally owned or operated nonmilitary energy laboratories.

(2) Astronautical research and development, including resources, personnel, equipment, and facilities.

(3) Civil aviation research and development.

(4) Environmental research and development.

(5) Marine research.

(6) Commercial application of energy technology.

(7) National Institute of Standards and Technology, standardization of weights and measures, and the metric system.

(8) National Aeronautics and Space Administration.

(9) National Space Council.

(10) National Science Foundation.

(11) National Weather Service.

(12) Outer space, including exploration and control thereof.

(13) Science scholarships.

(14) Scientific research, development, and demonstration, and projects therefor.

* * * * * * *

SPECIAL OVERSIGHT FUNCTIONS

3(k) The Committee on Science, Space, and Technology shall review and study on a continuing basis laws, programs, and Government activities relating to nonmilitary research and development.

ACTIVITIES REPORT
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY STATISTICS

112th Congress, First Session
January 3rd — December 23rd 2011

Business Meeting Held – *2*

Bills and Resolutions Referred to the Committee – *103*

Hearings Held – *56*

Witnesses Appeared Before the Committee – *258*

Full Committee Markups Held – *5*

Subcommittee Markups Held – *3*

Reports Filed – *4*

Legislation Passed the House – *8*

FULL COMMITTEE LEGISLATIVE AND ADMINISTRATIVE ACTIVITIES

FEBRUARY 10, 2011—FULL COMMITTEE ORGANIZATIONAL MEETING

THE FULL COMMITTEE MET TO ORGANIZE FOR THE 112TH CONGRESS, ESTABLISHED SUBCOMMITTEES, APPOINTED SUBCOMMITTEE CHAIRMEN AND RANKING MEMBERS, AND ADOPTED THE OVERSIGHT PLAN.

MARCH 17, 2011—MARKUP HELD ON H.R. 970, THE FEDERAL AVIATION RESEARCH AND DEVELOPMENT REAUTHORIZATION ACT OF 2011

Background and Need

The purpose of H.R. 970 is to reauthorize research and development activities at the Federal Aviation Administration for fiscal years 2011–2014 and to add specific direction to existing programs to enhance the research that is currently being performed. Additionally the bill requires an assessment of existing research and development activities in a number of programs to encourage coordination and streamlining of research to discourage duplication.

The Federal Aviation Administration (FAA) was created to develop the nation's air commerce system and promote aviation safety. As part of the Airport Development and Airway Trust Fund established by Congress in 1982, a comprehensive research and development program was put in place to maintain a safe and efficient air transportation system. In 2003, Congress passed Vision 100—Century of Aviation Reauthorization Act (P.L. 108–176) that authorized funding for FAA's activities, including research and development, for fiscal years 2003–2007. P.L. 108–176 also established the Next Generation Air Transportation System's Joint Planning and Development Office (JPDO) in Title VII, Aviation Research, to manage work related to planning, research, development and creation of a transition plan for the implementation of the Next Generation Air Transportation System.

Since 2007 Congress has attempted without success to complete legislative work on a comprehensive FAA reauthorization, including these programs. As civil aviation is such a critical element of our economy, FAA's research and development program plays a crucial role ensuring that the agency's modernization and safety programs are properly focused and well planned. H.R. 970 reauthorizes appropriations for the Federal Aviation Administration's research and development programs for fiscal year 2011–2014.

Legislative History

H.R. 970 was introduced by Representative Ralph Hall on March 9, 2011 and referred to the Committee on Science, Space, and Technology. On March 17, 2011, the Committee met to consider the bill. The Committee voted to report the bill, as amended, to the House by a vote of 17 yeas and 13 nays on March 17, 2011.

The Committee on Science, Space, and Technology reported H.R. 970, as amended, to the House on April 4, 2011 (H. Rept. 112–52)

and placed on the Union Calendar (Union Calendar No. 26). No further legislative action was taken on H.R. 970. However, the substance of H.R. 970 passed the House as a component (Title X) of H.R. 658, the FAA Reauthorization and Reform Act of 2011.

MAY 4, 2011—MARKUP HELD ON H.R. 1425, THE CREATING JOBS THROUGH SMALL BUSINESS INNOVATION ACT OF 2011

Background and Need

The purpose of H.R. 1425 is to reauthorize the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) programs through Fiscal Year 2014, to increase SBIR and STTR award sizes to reflect changes in inflation, to allow small businesses with majority venture capital backing to compete for a limited percentage of awards, and to collect better data on the SBIR and STTR programs to evaluate the effectiveness of the programs and to prevent fraud, waste, and abuse.

The Small Business Innovation Research (SBIR) program was originally established when the Congress passed the Small Business Innovation Development Act in 1982 (P.L. 97–219).The original objectives of the SBIR program included:

- Stimulation of technological innovation in the small business sector;
- Increased use of the small business sector to meet the government's research and development (R&D) needs;
- Additional involvement of minority and disadvantaged individuals in the process; and
- Expanded commercialization of the results of federally funded R&D.

The 1992 SBIR reauthorization (P.L. 102–564) placed greater emphasis on the objective of commercialization of SBIR projects.

Current law requires that every federal department with an extramural R&D budget of $100 million or more establish and operate an SBIR program. Eleven federal departments have SBIR programs, including the Departments of Agriculture, Commerce, Defense, Education, Energy, Health and Human Services, Homeland Security, and Transportation; the Environmental Protection Agency, the National Aeronautics and Space Administration (NASA); and the National Science Foundation (NSF). Under the program, each qualifying federal department is mandated to set aside 2.5 percent of its applicable extramural R&D for the SBIR program. Cumulatively, the SBIR program makes almost $2 billion in awards to small businesses annually.

The Small Business Technology Transfer (STTR) program was created in 1992 to provide federal R&D funding for research proposals that are developed and executed cooperatively between a small firm and a scientist in a nonprofit research organization, and fall under the mission requirements of the federal funding agency. Federal departments with annual extramural research budgets over $1 billion must set aside 0.3 percent for STTR programs.

Currently, the Departments of Energy, Defense, and Health and Human Services, as well as NASA and NSF participate in the

STTR program. Across the participating agencies, approximately $800 million in STTR awards are made annually.

The SBIR and STTR programs have been operating under temporary extensions since their authorizations expired in 2008 and 2009, respectively. This bill will increase the size guidelines for award amounts for Phase I and Phase II SBIR and STTR awards, will enable majority venture capital backed firms to compete for a limited percentage of SBIR awards, and will improve evaluation of the programs through greater data collection, sharing of best practices, and increased efforts to prevent fraud, waste, and abuse. H.R. 1425 will reauthorize the SBIR and the STTR programs through Fiscal Year 2014.

Legislative History

On April 7, 2011, H.R. 1425, the Creating Jobs Through Small Business Innovation Act of 2011 was introduced by Rep. Renee Ellmers (R–NC 2). H.R. 1425 was referred to the Committee on Small Business and the Committee on Science, Space, and Technology and the Committee on Armed Services. On April 13, 2011 the Subcommittee on Technology and Innovation met to consider H.R. 1425 and ordered it favorably reported to the Full Committee, as amended, by voice vote. On May 4, 2011 the Committee on Science, Space, and Technology met in open markup session and ordered H.R. 1425, favorably reported to the House, as amended, by voice vote. On May 11, 2011 the Committee on Small Business met to consider the bill. The Committee voted to report the bill, as amended to the House by voice vote. The bill was reported to the House by Committee on Science, Space, and Technology on May 26, 2011 (H. Rept. 112–90, Part I). On July 1, 2011 the Committee on Small Business reported the bill to the House (H. Rept. 112–90, Part II) and the Committee on Armed Services discharged. H.R. 1425 was placed on the Union Calendar, Calendar No. 85. No further action was taken on H.R. 1425

On December 1, 2011 the Senate laid before it H.R. 1540, the National Defense Authorization Act for Fiscal Year 2012, struck all after the enacting clause and substituted the language of S. 1867, the National Defense Authorization Act for Fiscal Year 2012, as amended. The Senate insisted on its amendment and asked for a conference, including in the Senate amendment, as passed, as Division E, the text of S 493, the SBIR/STTR Reauthorization Act of 2011.

On December 7, 2011 the House moved without objection to disagree to the Senate amendment and agree to a conference. The Speaker appointed conferees, naming Messrs. Hall, Quayle and Ms. Johnson, for the consideration of sections 911 and 1098 of the House bill, and sections 885, 911, 912, and Division E of the Senate amendment (SBIR/STTR) and modifications committed to conference.

On December 12, 2011 the conference report (112-329), including conferenced language reauthorizing SBIR/STTR was filed. The House considered the conference report, subject to a rule (H. Res. 493) on December 14, 2011, and the report passed by: Y–283, N–136 (Roll Call No. 932). The Senate considered the conference report on December 15, 2011 and the conference report passed the Senate on December 15, 2011, by: Y–786, N–13 (Record Vote No.

230). The bill was signed into law by the President on December XX, 2011, and became Public Law 112–XX.

JUNE 22, 2011—FULL COMMITTEE BUSINESS MEETING

The Committee met to adopt the First Semiannual Report of Activities of the Committee on Science, Space, and Technology for the 112th Congress. The Report was adopted and reported to the House by voice vote.

JULY 21, 2011—MARKUP HELD ON H.R. 2096, THE CYBERSECURITY ENHANCEMENT ACT OF 2011

Background and Need

The purpose of H.R. 2096 is to improve cybersecurity in the Federal, private, and public sectors through: coordination and prioritization of federal cybersecurity research and development activities; strengthening of the cybersecurity workforce; coordination of Federal agency engagement in international cybersecurity technical standards development; and the reauthorization of cybersecurity related programs at the National Science Foundation (NSF) and the National Institute of Standards and Technology (NIST).

According to the Office of Management and Budget, Federal agencies spent $8.6 billion in FY 2010 on cybersecurity, and the Federal government has spent more than $600 billion on information technology in the last decade. In addition, the Federal government funds nearly $400 million in cybersecurity research and development each year.

In January 2008, the Bush Administration established, through a series of classified executive directives, the Comprehensive National Cybersecurity Initiative (CNCI). The Obama Administration continued this initiative, with the goal of securing Federal systems and fostering public-private cooperation. In February 2009, the Obama Administration called for a 60-day review of the national cybersecurity strategy. The President's review required the development of a framework that would ensure that the CNCI was adequately funded, integrated, and coordinated among Federal agencies, the private sector, and state and local authorities.

On May 29, 2009, the Obama Administration released its Cyberspace Policy Review. The Review recommended an increased level of interagency cooperation among all departments and agencies, highlighted the need for information sharing concerning attacks and vulnerabilities, and highlighted the need for an exchange of research and security strategies essential to the efficient and effective defense of Federal computer systems. Furthermore, it stressed the importance of advancing cybersecurity research and development, and the need for the Federal Government to partner with the private sector to guarantee a secure and reliable infrastructure. The Review also called for increased public awareness, improved education and expansion of the number of information technology professionals.

In June 2009, GAO found that the Federal agencies responsible for protecting the U.S. Information Technology (IT) infrastructure were not satisfying their responsibilities, leaving the Nation's IT infrastructure vulnerable to attack. In an effort to strengthen the work of those Federal agencies, the U.S. House of Representatives

passed the Cybersecurity Enhancement Act of 2010 (H.R. 4061) in the 111th Congress by a vote of 422–5.

H.R. 4061 required increased coordination and prioritization of Federal cybersecurity research and development activities, and the development and advancement of cybersecurity technical standards. It also strengthened cybersecurity education and talent development and industry partnership initiatives. The Senate did not act on the legislation.

The task of coordinating unclassified cybersecurity research and development (R&D) lies with the Networking and Information Technology Research and Development (NITRD) program, which was originally authorized in statute by the High-Performance Computing Act of 1991 (P.L. 102–194). The NITRD program, which consists of 15 Federal agencies, coordinates a broad spectrum of R&D activities related to information technology. It also includes an interagency working group and program component area focused specifically on cybersecurity and information R&D. However, many expert panels, including the President's Council of Advisors on Science and Technology, have argued that the portfolio of Federal investments in cybersecurity R&D is not properly balanced and is focused on short-term reactive technologies at the expense of long-term, fundamental R&D.

With a budget of $127 million for FY 2010, NSF is the principal agency supporting unclassified cybersecurity R&D and education. NSF's cybersecurity research activities are primarily funded through the Directorate for Computer & Information Science & Engineering (CISE). CISE supports cybersecurity R&D through a targeted program, Trustworthy Computing, as well as through a number of its core activities in Computer Systems Research, Computing Research Infrastructure, and Network and Science Engineering. In addition to its basic research activities, NSF's Directorate for Education & Human Resources (EHR) manages the Scholarship for Service program which provides funding to colleges and universities for the award of 2-year scholarships in information assurance and computer security fields.

NIST is tasked with protecting the federal information technology network by developing and promulgating cybersecurity standards for federal non-classified network systems (Federal Information Processing Standards [FIPS]), identifying methods for assessing effectiveness of security requirements, conducting tests to validate security in information systems, and conducting outreach exercises. Experts have stated that NIST's technical standards and best practices are too highly technical for general public use, and making this information more usable to average computer users with less technical expertise will help raise the base level of cybersecurity knowledge among individuals, business, education, and government.

Currently, the United States is represented on international bodies dealing with cybersecurity by an array of organizations, including the Department of State, Department of Commerce, Federal Communications Commission, and the United States Trade Representative without a coordinated and comprehensive strategy or plan. The Cyberspace Policy Review called for a comprehensive international cybersecurity strategy that defines what cybersecurity standards we need, where they are being developed, and en-

sures that the United States Federal government has agency representation for each. Recognizing that private sector standards development organizations also are engaged in international standards work, in some scenarios a nonfederal entity may be best equipped to represent United States interests, and coordination is necessary.

In the 107th Congress, the Science and Technology Committee developed the Cyber Security Research and Development Act (P.L. 107–305). The bill created new programs and expanded existing programs at NSF and NIST for computer and network security. The authorizations established under the Cyber Security Research and Development Act expired in fiscal year 2007.

Legislative History

On June 2, 2011 Representative Michael T. McCaul (R–TX) for himself and Representative Daniel Lipinski (D–IL) introduced H.R. 2096, the Cybersecurity Enhancement Act of 2011. H.R. 2096 was referred to the Committee on Science, Space, and Technology. On July 21, 2011, the full Committee met in open markup session to consider the bill and ordered H.R. 2096 favorably reported to the House, as amended, by voice vote.

The Committee on Science, Space, and Technology reported H.R. 2096, as amended, to the House on October 31, 2011 (H. Rept. 112–264) and it was placed on the Union Calendar (Union Calendar No. 177).

JULY 28, 2011—MARKUP HELD ON H.R. 2484, THE HARMFUL ALGAL BLOOMS AND HYPOXIA RESEARCH AND CONTROL AMENDMENTS ACT OF 2011

Background and Need

The purpose of H.R. 2484 is to reauthorize the Harmful Algal Bloom and Hypoxia Research and Control Act of 1998 to include a comprehensive and integrated strategy to address harmful algal blooms and hypoxia; to provide for the development and implementation of a comprehensive research plan and action strategy to reduce harmful algal blooms and hypoxia.

A harmful algal bloom (HAB) is a bloom, or rapid overproduction of algal cells, that produces toxins, which are detrimental to plants and animals. These outbreaks are commonly referred to as "red" or "brown" tides. Blooms can kill fish and other aquatic life by decreasing sunlight available to the water and by depleting the available oxygen in the water, causing hypoxia. The produced toxins accumulate in shellfish, fish, or through the accumulation of biomass that affect other organisms and alter food webs. In recent years, many of the nation's coastlines, near shore marine waters, and freshwaters have experienced an increase in the number, frequency, duration, and type of HABs.

Harmful algal blooms are one of the most scientifically complex and economically significant coastal management issues facing the nation. In the past, only a few regions of the United States were affected by HABs, but now almost all states have reported blooms. In severe cases, these phenomena can have serious environmental, economic, and human health impacts.

In 1998, Congress passed the Harmful Algal Bloom and Hypoxia Research and Control Act (HABHRCA, Public Law 105–83), which established an Interagency Task Force to develop a national HABs assessment and authorized funding for existing and new research programs on HABs. Funding supported the development of a national scientific research, development, demonstration, and technology transfer program at the National Oceanic and Atmospheric Administration (NOAA) that focused on HABs and included the Ecology and Oceanography of Harmful Algal Blooms (ECOHAB) program and the Monitoring and Event Response for Harmful Algal Blooms (MERHAB) program. The program at NOAA involves federal, state, and academic partners and supports interdisciplinary extramural research studies to address the issues of HABs in an ecosystem context.

In 2004, HABHRCA was reauthorized in Public Law 108–456. The reauthorized Act required assessments of HABs in different coastal regions and in the Great Lakes and included plans to expand research to address the impacts of HABs. The law also authorized research, education, and monitoring activities related to the prevention, reduction, and control of harmful algal blooms and hypoxia and reconstituted the Interagency Task Force on HABs and Hypoxia.

The 2004 reauthorization also directed NOAA to produce several reports and assessments, which have since been completed, including:

- The Prediction and Response Report (September 2007) addressed both the state of research and methods for HAB prediction and response, especially at the federal level.
- The 2008 National Scientific Research, Development, Demonstration, and Technology Transfer Plan for Reducing Impacts from Harmful Algal Blooms (RDDTT Plan) established research priorities to develop and demonstrate prevention, control and mitigation methods to advance current prediction and response capabilities.
- The Scientific Assessment of Marine Harmful Algal Blooms (December 2008) described the state of the science with respect to: understanding HABs causes and controls and developing predictive models; developing detection methods for cells and toxins; characterizing toxins and impacts; HAB impacts on food webs and fisheries; and assessing public health, economic and socio-cultural impacts.
- The 2008 Scientific Assessment of Freshwater Harmful Algal Blooms released in 2008 described the state of the knowledge of HABs in U.S inland and freshwaters and presented a plan to advance research and reduce the impacts on humans and the environment.
- The Scientific Assessment of Hypoxia in U.S. Coastal Waters (September 2010) assessed the prevalence of low-oxygen "dead-zones", or hypoxic zones, in U.S. coastal waters and outlined a series of research steps needed to address these occurrences.

Additionally, the 2004 reauthorization directed NOAA, in coordination with the Task Force, to conduct local and regional scientific

assessments if requested by state, tribal, or local governments or for affected areas identified by NOAA. Funding was also authorized for ongoing and new programs and activities such as: competitive, peer-reviewed research through the ECOHAB program; freshwater harmful algal bloom research added to the research priorities of ECOHAB; a competitive, peer-reviewed research program on management measures to prevent, reduce, control, and mitigate harmful algal blooms supported by the MERHAB program, and; activities related to research and monitoring of hypoxia supported by the Northern Gulf of Mexico program and Coastal Hypoxia Research Program.

The 2004 HABHRCA authorized funds to conduct research and reduce HABs and hypoxia in U.S. marine waters, estuaries and the Great Lakes. In its role as a task force participant, the Environmental Protection Agency (EPA) has signed Memorandums of Understanding to fund competitive research into the occurrence of HABs in these areas. However, since the completion of the freshwater report in 2008, EPA has ceased participation in HABHRCA for freshwater HAB research and mitigation activities. As a result, although EPA oversees a wide array of programs specifically designed to protect and preserve freshwater sources and the coastal and marine waters of the United States, including watershed protection programs and an array of regulatory programs, the agency currently has no research and development effort that directly addresses freshwater harmful algal blooms.

EPA and NOAA work together to lead a Federal Workgroup of thirteen federal agencies committed to supporting the Gulf of Mexico Alliance, a partnership formed by the five Gulf State Governors. In addition, EPA is also the lead agency of the Mississippi River/Gulf of Mexico Watershed Nutrient Task Force.

The 2004 HABHRCA reauthorization expired in 2008, however, the Consolidated Appropriations Act of 2008 (P.L. 110–161) provided an authorization of appropriations through FY 2010. H.R. 2484 would reauthorize the Act with the primary goal of H.R. 2484 being advancing the body of knowledge of HABs and hypoxia to begin to enable development of solutions for communities affected by these events. By requiring greater Interagency Task Force involvement and a Comprehensive Research Plan and Action Strategy, H.R. 2484 seeks to coordinate efforts across the Federal government. Although there have been long-term strategies in place attempting to mitigate the occurrence of HABs, such strategies take years, even decades, to bear fruit. In the meantime, States and communities are dealing with increasing occurrences of HABs and hypoxia, indicating a greater need for near-term solutions.

Accordingly, H.R. 2484 shifts the focus of the current program to technological research, development, and demonstration, encouraging a move toward finding such near-term solutions through technological innovation.

Legislative History

On July 11, 2011 Representative Andy Harris (R–MD) introduced, H.R. 2484, the Harmful Algal Blooms and Hypoxia Research and Control Amendments Act of 2011. H.R. 2484 was referred to the Committee on Science, Space, and Technology and in addition the Committee on Natural Resources. On July 14, 2011 the Sub-

committee on Energy and Environment met to consider H.R. 2484 and ordered it favorably forwarded to the Full Committee, as amended, by voice vote. On July 28, 2011 the Committee on Science, Space, and Technology met in open markup session and ordered H.R. 2484, favorably reported to the House, as amended, by a record vote of 20 Yeas to 15 Nays. The bill was reported to the House by Committee on Science, Space, and Technology on December 2011 (H. Rept. 112–333, Part I).

DECEMBER 1, 2011—MARKUP HELD ON H.R. 3479, NATURAL HAZARDS RISK REDUCTION ACT OF 2011

Background and Need

Congress created the National Earthquake Hazards Reduction Program (NEHRP) in 1977 with the passage of the Earthquake Hazards Reduction Act (P.L 95–124). Created largely in response to the 1964 Alaska Earthquake and the San Fernando Earthquake of 1971, the original program called on 10 federal agencies to coordinate research and development activities to implement an earthquake prediction system; develop design and construction methods for earthquake resilience; identify seismic hazards, and make model building code and land-use recommendations; increase the understanding of earthquake risks; and educate the public about earthquakes. The 1980 reauthorization of the program designated the Federal Emergency Management Agency (FEMA) as the lead agency.

The 2004 reauthorization of NEHRP (P.L 108–360) changed the lead agency from FEMA to the National Institute of Standards and Technology (NIST). This change reflected concern that FEMA, newly located in the Department of Homeland Security (DHS), was focused on broader threats, rather than national hazard mitigation. In addition, the legislation established an Interagency Coordinating Committee composed of the directors of NIST, FEMA, the National Science Foundation (NSF), the United States Geological Survey (USGS), the Office of Science and Technology Policy (OSTP), and the Office of Management and Budget (OMB). To ensure coordination, the Interagency Committee was required to meet annually and to develop a strategic plan and coordinated inter-agency budget.

Over the past 30 years, NEHRP activities have been instrumental in research and development to advance earthquake knowledge, establish seismic model building codes, and raise the awareness of officials and the general public about earthquake hazards.

THE NATIONAL WINDSTORM IMPACT REDUCTION PROGRAM

The National Windstorm Impact Reduction Program (NWIRP) was established in the National Windstorm Impact Reduction Act of 2004. The legislation directed the National Oceanic and Atmospheric Administration (NOAA), NIST, NSF, and FEMA to support activities to improve the understanding of windstorms and their impacts, and to develop and encourage the implementation of cost-effective mitigation measures to reduce these impacts. The program was authorized for three years through FY 2008.

OSTP submitted a NWIRP implementation plan in April 2006, which assessed programs relevant to the goals of NWIRP across eight federal agencies and identified important areas of research that were not covered by current activities. The knowledge gaps identified in the implementation plan covered the three broad categories of research authorized in the original NWIRP Act: understanding windstorms; assessing the impacts of windstorms; and mitigating against the effects of windstorms. The implementation plan also recommended a continued role for an Interagency Working Group within the National Science and Technology Council's (NSTC) Committee on Environment and Natural Resources, Subcommittee on Disaster Reduction.

The legislation defines NEHRP and NWIRP activities, including research and development to reduce the risk of hazards to the built environment; identifies the agencies that make up the programs; assigns responsibilities to the agencies; and authorizes funding for the programs from FY 2012 through FY 2014.

Legislative History

On November 18, 2011 Representative Judy Biggert (R–IL) introduced the Natural Hazards Risk Reduction Act of 2011. H.R. 3479 was referred to the Committee on Science, Space, and Technology and in addition to the Committees on Transportation and Infrastructure and Natural Resources. H.R. 3479 contained the text of H.R. 3272, the National Windstorm Impact Reduction Act Reauthorization of 2011 as introduced by Representative Neugebauer (R–TX).

On November 15, 2011 the Subcommittee on Technology and Innovation met to consider the Committee Print of the Natural Hazards Risk Reduction Act of 2011 and ordered it favorably forwarded to the Full Committee, as amended, by a record vote of 10 Yeas to 4 Nays. On November 18, 2011 Representative Biggert introduced the Committee Print, as amended, (becoming H.R. 3479). On December 1, 2011 the Full Committee met in open markup session and ordered H.R. 3479, favorably reported to the House, as amended, by a record vote of 21 Yeas to 12 Nays.

FULL COMMITTEE
OTHER LEGISLATIVE ACTIVITIES

H.R. 658, THE FAA REAUTHORIZATION AND REFORM ACT OF 2011

Background and Summary of Legislation

The purpose of H.R. 658 is to authorize appropriations for the Federal Aviation Administration for fiscal years 2011 through 2014, to streamline programs, create efficiencies, reduce waste, and improve aviation safety and capacity, and to provide stable funding for the national aviation system. Provisions within the jurisdiction of the Committee on Science, Space, and Technology include those in Title II, NextGen Air Transportation System and Air Traffic Control Modernization; Title III, Subtitle B, Unmanned Aircraft Systems; Title X, the Federal Aviation Research and Development Reauthorization Act of 2011, incorporating the text of H.R. 970, as reported by the Committee on Science, Space, and Technology on March 17, 2011 (H. Rept. 112–52); and Title XIII, Commercial Space, postponing for eight years after the first licensed commercial launch of a space flight participant the authority to propose, without regard to specified constraints, regulations governing the design or operation of a launch vehicle to protect the health and safety of crew and space flight participants, except in response to specific incidents of accident, injury, or death.

Legislative History

H.R. 658 was introduced by Representative John Mica (R–FL) on February 11, 2011 and referred to the Committee on Transportation and Infrastructure. On March 10, 2011 the bill was jointly and sequentially referred to the Committee on Science, Space, and Technology, and the Committee on the Judiciary. On March 23, 2011 the House Committee on Science, Space, and Technology and the Committee on the Judiciary discharged the bill and it was placed on the Union Calendar, Calendar No. 19. On April 1, 2011 the House considered the measure and it was passed, as amended, by: Y–223; N–196 (Roll Call No. 220). It was received in the Senate on April 4, 2011. On April 7, 2011 the Senate struck all after the enacting clause, substituted the language of S. 223, as amended, and passed by unanimous consent. On April 7, 2011 the Senate insisted on its amendment, asked for a conference, and appointed conferees.

P.L. 112–10, DEPARTMENT OF DEFENSE AND FULL-YEAR CONTINUING APPROPRIATIONS ACT, 2011

Background and Summary

P.L. 112–10 appropriated funds for the remainder of FY 2011 to the Department of Defense and for continuing operations, projects, or activities which were conducted in 2010 and for which appropriations, funds or other authority were made available in the FY 2010 appropriations acts for the other various departments and agencies of the Federal government. The law appropriated resources to programs within the Committee on Science, Space, and

Technology's jurisdiction, including the National Science Foundation (NSF), the National Aeronautics and Space Administration (NASA), the National Institute of Standards and Technology (NIST), the Department of Energy (DOE), the Department of Homeland Security (DHS), the Department of Transportation, (DOT), the National Oceanic and Atmospheric Administration (NOAA), and the Environmental Protection Agency (EPA).

Key programs within the jurisdiction of the Committee on Science, Space, and Technology funded by P.L. 112–110 included, for example, at the DOE: Office of Science, APRA–E, Energy Efficiency and Renewable Energy, Nuclear Energy, Fossil Energy, Electricity Delivery and Energy Reliability, and the Title XVII Loan Guarantee Program. All of these programs received funding below FY 2010 levels. At the EPA and NOAA the overall funding levels for both, including programs in the Committee's jurisdiction were below FY 2010. At NIST several programs saw reductions from 2010 funding levels while the Hollings Manufacturing Extension Program Partnership received a slight increase over FY 2010 funding levels. The DHS' Science and Technology Directorate saw a reduction from FY 2010 levels, while the Fire Grants programs funding levels remained equal to the FY 2010 enacted levels.

P.L. 112–10 also legislated on a select number of areas within the Committee's jurisdiction. In regard to NASA, the bill required the submission to Congress of an operating plan within 60 days of enactment (June 15, 2011), eliminated language preventing NASA from canceling any Constellation related contracts, specified funding levels for the Multi-Purpose Crew Vehicle and Space Launch Systems, and banned NASA from funding collaboration with China.

Additionally, language included in P.L. 112–10 prohibits funding provided to NOAA under the legislation to be used to implement, establish, or create a NOAA climate service.

Legislative History

On April 11, 2011, Rep. Harold Rogers (R–KY), Chairman of the Committee on Appropriations, introduced H.R. 1473, which was referred to the Committees on Appropriations, Budget, and Ways and Means. On April 14, 2011, H.R. 1473 was considered by the House and passed by: Y–260, N–167 (Roll Call No. 268). H.R. 1473 was received in the Senate on April 14, 2011. It was considered and, without amendment, passed by: 81–Y, N–19 (Record Vote No. 61). It was signed into law by the President on April 15, 2010 and became Public Law No. 112–10.

H.R. 1540, THE NATIONAL DEFENSE AUTHORIZATION ACT FOR FISCAL YEAR 2012

Background and Summary of Legislation

The purpose of H.R. 1540 is to authorize appropriations for the Department of Defense for fiscal year 2012. The Committee on Science, Space, and Technology has a jurisdictional interest in certain provisions of the bill dealing with the harmful interference of communication systems with Global Positioning Systems devices needed by the Department of Defense (Section 911 of H.R. 1540 as reported), the integration of unmanned aerial vehicles into the national airspace system (Section 1098 of H.R 1540 as reported), high

performance computing, nuclear science, and the development of a national rocket propulsion strategy for the United States (Section 1096 of H.R. 1540 as reported). The Senate amendment to H.R. 1540 proposed a number of provisions that the Committee had jurisdiction over including: Extension and Expansion of Small Business Programs of the Department of Defense (Section 885 of the Senate amendment), Commercial Space Launch Cooperation (Section 911 of the Senate amendment), Authority to Designate Increments or Blocks of Space Vehicles As Major Subprograms Subject to Acquisition Reporting Requirements (Section 912 of the Senate amendment), and Reauthorization of SBIR and STTR programs (Division E of the Senate amendment).

Section 911 of the House bill restricts the ability of the Federal Communications Commission to permit operations of a space-based or terrestrial based communications system that may interfere with the Global Positioning Systems devices needed by the Department of Defense. NASA works in conjunction with the Department of Defense to operate satellite systems and maintain its GPS capabilities. Section 1096 requires the President to prepare and transmit a national rocket propulsion strategy for the United States to address the effects of the end of the space shuttle program and the termination of the Constellation program on multiple departments and agencies that rely on the solid rocket motor and liquid rocket engine industrial base. Section 1098 provides for the development and testing of unmanned aircraft systems through an FAA program utilizing six test ranges to test the safe operations and develop detection techniques for unmanned flight operations in the national airspace system and develop certification standards and air traffic requirements for unmanned flight operations at those ranges. Section 885 and Division E of the Senate amendment would alter current law with regard to the Small Business Innovation Research program (SBIR) and the Small Business Technology Transfer (STTR) program. Section 911 of the Senate amendment allows the Secretary of Defense to assist the Secretary of Transportation in carrying out the responsibilities set forth in Titles 49 (Transportation) and 51 (National and Commercial Space Programs) with respect to private sector involvement in commercial space activities and public-private partnerships pertaining to space transportation infrastructure. Section 912 amends the acquisition reporting under Title 10 with regard to the purchase of space vehicles.

Legislative History

H.R. 1540 was introduced by Representative Buck McKeon (R–CA) by request on April 14, 2011 and referred to the Committee on Armed Services. On May 17, 2011 the Committee on Armed Services reported as amended H.R. 1540, filed H. Rept. 112–78, and the bill was placed on the Union Calendar, Calendar No. 39. On May 23, 2011 the Committee on Armed Services filed a supplemental report, H. Rept. 112–79, Part II. The Committee on Rules filed H. Rept. 112–86 on H. Res 269, providing for consideration of H.R. 1540. On May 26, 2011 the House passed H.R. 1540, as amended, by: Y–322, N–96 (Roll Call No. 375).

H.R. 1540 was received in the Senate on June 6, 2011 and referred to the Committee on Armed Services. On December 1, 2011

the Committee on Armed Services was discharged and a substitute amendment to H.R. 1540 was considered and passed in the Senate by unanimous consent. The Senate insisted on its amendment, asked for a conference, and appointed conferees.

A message on Senate action was sent to the House on December 5, 2011. On December 7, 2011 Chairman McKeon moved that the House disagree to the Senate amendment to H.R. 1540 and agree to a conference. The motion was agreed to without objection. From the Committee on Science, Space, and Technology, the Speaker appointed conferees, Chairman Ralph Hall, Technology and Innovation Subcommittee Chairman Ben Quayle, and Ranking Member Eddie Bernice Johnson, for consideration of sections 911 and 1098 of the House bill, and sections 885, 911, 912 and Division E of the Senate amendment, and modifications committed to conference.

On December 12, 2011 the conference report (112–239) was filed. The House considered the conference report, subject to a rule (H. Res. 493) on December 14, 2011, and the report passed by: Y–283, N–136 (Roll Call No. 932). The Senate considered the conference report on December 15, 2011 and the conference report passed the Senate on December 15, 2011, by: Y–86, N–13 (Record Vote No. 230) The bill was signed into law by the President on December XX, 2011, and became Public Law 112–XX.

H.R. 672, TO TERMINATE THE ELECTION ASSISTANCE COMMISSION

Background and Summary of Legislation

The purpose of H.R. 672 is to terminate the Election Assistance Commission (EAC) as an agency and transfer certain key functions to other federal agencies to maintain those functions going forward. In particular, the adoption of voluntary voting standards and the certification responsibilities for voting systems is transferred from the EAC to the Federal Election Commission (FEC).

The EAC was created by the Help America Vote Act of 2002 (HAVA). During the 107th Congress, H.R. 3295, which became HAVA, was referred to the Committee on House Administration and the Committee on Science and Technology and incorporated multiple provisions of H.R. 2275, the Voting Technology Standards Act of 2001.

These provisions included a process to ensure that proper technical standards would be developed to improve voting technology and that a reliable system would be set up to test equipment against those standards. These responsibilities have been assigned by HAVA to the National Institute of Standards and Technology (NIST). The Committee on Science, Space, and Technology continues as the Committee of jurisdiction over the scientific and technological aspects of voting reform including research, development, and testing of voting machine standards.

H.R. 672 would transfer the EAC's Office of Voting System Testing and Certification to the FEC while maintaining NIST's current role in the accreditation of laboratories to test voting equipment. The bill continues the formal mechanisms for input into the development of Voluntary Voting System Guidelines (VVSGs) by maintaining the current Technical Guidelines Development Committee (which NIST chairs) and replaces several committees with a

streamlined 56-member Guidelines Review Board composed of state and local election officials and other key constituencies including federal representatives.

Legislative History

H.R. 672 was introduced by Representative Gregg Harper (R–MS) on February 11, 2011 and referred to the Committee on House Administration and in addition the Committee on Science, Space and Technology. On April 14 the Committee on House Administration held a legislative hearing, followed by a markup on May 25. On June 2, 2011 the Committee on House Administration reported H.R. 672, as amended, to the House (H. Rept. 112–100) and the Committee on Science, Space, and Technology discharged. H.R. 672 was placed on the Union Calendar, Calendar No. 55. On June 21, 2011, Chairman Lungren moved to suspend the rules and pass the bill, H.R. 672, and the motion failed by a vote of Y–235, N–187.

H.R. 1309, THE FLOOD INSURANCE REFORM ACT OF 2011

Background and Summary

H.R. 1309, the Flood Insurance Reform Act, reauthorizes the National Flood Insurance Program (NFIP) through September 30, 2016, and amends the National Flood Insurance Act to address fiscal and administrative issues of the NFIP. The bill includes provisions to ensure the continued viability of the NFIP through encouraging broader participation in the program, increasing financial accountability, eliminating unnecessary rate subsidies, and updating the program to meet current needs. The key provisions of the bill include: 1) a five year reauthorization of the NFIP; 2) a three-year delay in the mandatory purchase requirement for certain properties in newly designated Special Flood Hazard Areas (SFHS); 3) a phase-in of full-risk, actuarial rates for areas newly designated as Special Flood Hazard; 4) a reinstatement of the Technical Mapping Advisory Council; and 5) an emphasis on greater private sector participation in providing flood insurance coverage.

Legislative History

H.R. 1309 was introduced by Representative Judy Biggert (R–IL) on April 1, 2011 and referred to the House Committee on Financial Services. The Committee on Financial Services met to consider the bill, H.R. 1309, on May 13, 2011 and ordered the bill favorably reported to the House, as amended, by a vote of Y–54, N–0.

On June 2, 2011, Chairman Hall of the Committee on Science, Space, and Technology and Chairman Bachus of the Committee on Financial Services exchanged correspondence. Chairman Bachus acknowledged the jurisdictional interest of the Committee on Science, Space, and Technology in the bill, H.R. 1309, as amended and Chairman Hall agreed to waive a referral of the bill.

On June 9, 2011, the bill was reported to the House, as amended, by the Committee on Financial Services (H. Rept. 112–102). The House considered and passed H.R. 1309 on July 12, 2011 by a vote of Y–406, N–22 (Roll Call No. 562). H.R. 1309 was received in the Senate on July 27, 2011 and refereed to Senate Committee on Banking, Housing, and Urban Affairs.

P.L. 112–55, THE CONSOLIDATED AND FURTHER CONTINUING APPROPRIATIONS ACT, 2012

Background and Summary

P.L. 112–55 makes appropriations for Agriculture, Rural Development, Food and Drug Administration, and Related Agencies programs for the fiscal year ending September 30, 2012. The law appropriated funds for certain Federal government agencies for fiscal year 2012, including agencies within the jurisdiction of the Committee on Science, Space, and Technology. The law includes appropriations for fiscal year 2012 for the National Institute of Standards and Technology (NIST), the National Oceanic and Atmospheric Administration (NOAA), the Office of Science and Technology Policy (OSTP), the National Aeronautics and Space Administration (NASA), the National Science Foundation (NSF), the Department of Transportation (DOT), and made continuing appropriations for the Department of Homeland Security (DHS), the Department of Energy (DOE), and the Environmental Protection Agency (EPA).

NASA activities are funded in the law at $17.8 billion, a slight decrease from FY 2011. Laboratory research activities at NIST receive a $60 million increase above the FY 2011 levels, but overall funding at NIST is only slightly increased. The overall budget for NOAA increased by $306 million, or seven percent above FY 2011 levels; most of this increase is allocated for the National Weather Service and the Joint Polar Satellite System weather satellite program. The NSF is funded at $7 billion, which represents a modest increase of $173 million over FY 2011, with an emphasis on funding for basic research activities. The OSTP is funded at $4.5 million under the law. The law represents a prioritization of spending for programs within the jurisdiction of the Committee. While the law cut overall discretionary spending, it prioritizes basic research activities at NIST and NSF and minimized cuts to NASA. Additionally, the law specifically does not allocate spending for the establishment of a National Climate Service at NOAA as proposed by the Senate.

Legislative History

On June 3, 2011, Representative Jack Kingston (R–GA) introduced H.R. 2112, which was reported by the Committee on Appropriations and included appropriations for Commerce, Justice, Science and Related Agencies.

On June 14th, 15th, and 16th, the House of Representatives considered the bill, H.R. 2112. The bill passed the House of Representatives on June 16, 2011 by a vote of Y–217, N–203 (Roll Call No. 459). H.R. 2112 was received in the Senate on June 16, 2011, and referred to the Senate Committee on Appropriations. The bill was considered and passed by the Senate with an amendment on November 1, 2011 by a vote of Y–69, N–30.

On November 2, 2011 a message on Senate action was sent to the House of Representatives. On November 3, 2011 Chairman Rogers (R–KY) moved that the House disagree to the Senate amendments and request a conference, which was agreed to by unanimous consent. On November 14, 2011, the conferees agreed to file a conference report. The House of Representatives agreed to

the conference report on November 17, 2011 by a vote of Y–298, N–121. The Senate agreed to the conference report on November 17, 2011 by a vote of Y–70, N–30. On November 18, 2011, the President signed the bill, which became P.L. 112–55.

H.R. 3463, TO REDUCE FEDERAL SPENDING AND THE DEFICIT BY TERMINATING TAXPAYER FINANCING OF PRESIDENTIAL ELECTION CAMPAIGNS AND PARTY CONVENTIONS AND BY TERMINATING THE ELECTION ASSISTANCE COMMISSION

Background and Summary of Legislation

The bill would eliminate the Presidential Election Campaign Fund (PECF), terminate public financing of presidential campaigns, and return PECF funds to the general treasury for deficit reduction. In addition, the bill would terminate the Election Assistance Commission (EAC) and transfer its remaining operations to the Office of Management and Budget and the Federal Election Commission. Eliminating the PECF would immediately return $199 million to the public treasury for deficit reduction and would save taxpayers $447 million over five years.

Legislative History

On November 17, 2011, Representative Gregg Harper (R–MS) introduced H.R. 3463, which was referred to the Committee on House Administration, and in addition to the Committee on Ways and Means. H.R. 3463 was similar to H.R. 672, which was introduced earlier in the 112th Congress and failed to pass the House under a motion to suspend the rules. H.R. 672 was referred to the Committee on Science, Space and Technology Committee. In correspondence between Chairman Lungren of the Committee on House Administration and Chairman Hall of the Committee on Science, Space, and Technology, Chairman Lungren acknowledged the jurisdiction of the Committee over H.R. 3463 and Chairman Hall agreed to waive referral of the bill.

On December 1, 2011, H.R. 3463 was considered under a rule (H. Res. 477) allowing for one hour of general debate, equally divided and controlled. Mr. Bishop (GA) moved to recommit with instructions to House Administration, which failed by a vote of Y–190, N–236 (Roll Call No. 872). H.R. 3463 passed by a record vote: Y–235, N–190 (Roll Call No. 873). On December 5, 2011, the bill was received in the Senate and referred to the Committee on Rules and Administration.

H.R. 2105, THE IRAN, NORTH KOREA, AND SYRIA NONPROLIFERATION REFORM AND MODERNIZATION ACT OF 2011

Background and Summary of Legislation

H.R. 2105 provides for the application of measures to foreign persons who transfer to Iran, North Korea, and Syria certain goods, services, or technology. The legislation is intended to address the growing threats and compel the Iranian, North Korean, and Syrian regimes into abandoning destructive policies.

The legislation is aimed at expanding and strengthening existing sanctions on Iran and Syria and ensuring their full implementation and enforcement by the Executive Branch. H.R. 2105 attempts to compel Iran, North Korea, and Syria to stop activities that threaten our security, our interests, and our allies.

The legislation provides an integrated, cohesive strategy with the goal of preventing Iran, North Korea and Syria's development of nuclear and other non-conventional weapons and the missiles to deliver them and their sponsorship of terrorism and other activities that threaten Americans.

Legislative History

H.R. 2105 was introduced on June 3, 2011, and referred to the Committee on Foreign Affairs, and in addition to the Committees on Oversight and Government Reform; Judiciary; Ways and Means; Science, Space, and Technology; Financial Services; and Transportation and Infrastructure.

The Subcommittee on Terrorism, Nonproliferation, and Trade of the Committee on Foreign Affairs discharged the bill on November 2, 2011. The full Committee on Foreign Affairs met to consider the bill on November 2, 2011 and ordered the bill favorably reported to the House, as amended, by voice vote.

On November 10, 2011, Chairman Hall of the Committee on Science, Space, and Technology and Chairman Ros-Lehtinen of the Committee on Foreign Affairs exchanged correspondence.

Chairman Ros-Lehtinen acknowledged the jurisdiction of the Committee on Science, Space, and Technology over provisions of H.R. 2105 and Chairman Hall waived further consideration of the bill. On December 14, 2011, the House suspended the rules and passed H.R. 2105 by a vote of Y–418, N–2 (Roll Call No. 928). On December 14, 2011 received in the Senate and refereed to Committee on Foreign Affairs.

H.R. 2845, THE PIPELINE SAFETY, REGULATORY CERTAINTY, AND JOB CREATION ACT OF 2011

Background and Summary of Legislation

H.R. 2845 reauthorizes the federal pipeline safety programs administered by the Pipeline and Hazardous Materials Safety Administration (PHMSA) of the U.S. Department of Transportation (USDOT) for fiscal years 2012 through 2015. H.R. 2845 provides for enhanced safety in pipeline transportation and provides for enhanced reliability in the transportation of the Nation's energy products by pipeline. The bill ensures regulatory certainty which will help create a positive environment for job development.

The federal pipeline safety programs were last authorized under the Pipeline, Inspection, Protection, Enforcement, and Safety Act of 2006 (P.L. 109–468), a four year authorization for fiscal years 2007 through 2010. The federal pipeline safety programs expired on September 30, 2010. The bill increases the maximum amount of civil penalties the U.S. can seek from pipeline owners or operators who violate pipeline safety rules and regulations. H.R. 2845 requires states to eliminate most exemptions to their "Call Before You Dig" programs in order to receive federal grant funding. The bill allows the Secretary to issue a rulemaking requiring the installation of

automatic and remote-controlled shutoff valves on newly constructed transmission pipelines but does not require operators to retrofit existing pipelines.

H.R. 2845 requires the Secretary to study expanding pipeline integrity management requirements and leak detection systems, providing Congress the final say in whether or not the requirements should be expanded or the leak detection systems should be installed. Further, the bill requires USDOT and pipeline operators to provide information to first responders on the location of pipelines in their jurisdiction. USDOT is to review regulations regarding accident reporting requirements for pipeline operators.

H.R. 2845 authorizes funding for several pipeline safety programs including pipeline safety research and development.

The bill provides a continued roll for the National Institute of Standards and Technology in the development of ongoing research and development program plans as well as providing for a program-wide thirty percent non-Federal cost sharing requirement in the area of pipeline transportation research and development.

Legislative History

On September 7, 2011 Representatives Bill Shuster (R–PA) and John Mica (R–FL) introduced H.R. 2845, the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011. H.R. 2845 was referred to the Committee on Transportation and Infrastructure and in addition to the Committee on Energy and Commerce. On September 8, 2011 the Committee on Transportation and Infrastructure met and favorably reported H.R. 2845, as amended, by voice vote to the House. In an exchange, Transportation and Infrastructure Committee Chairman Mica acknowledged the jurisdictional interest of the Committee on Science, Space, and Technology in H.R. 2845. Chairman Hall agreed to waive a referral.

On February 3, 2011 Senator Lautenberg (D–NJ) introduced S. 275, the Pipeline Transportation Safety Improvement Act of 2011. The bill was referred to the Senate Committee on Commerce, Science, and Transportation. On July 7, 2011, the Committee met and reported the bill with an amendment and it was placed on the Senate Calendar.

On October 17, 2011 the Senate agreed to the Committee substitute by unanimous consent and sent a message to the House. On October 21, 2011 S. 275 was received in the House and held at the desk. On December 1, 2011 the Committee on Transportation and Infrastructure reported H.R. 2845 (H. Rept. 112–297, Part I) and the Committee on Energy and Commerce discharged. H.R. 2845 was placed on the Union Calendar (Calendar No. 197). On December 12, 2011 the House suspended the rules and passed H.R. 2845, as amended, by a voice. On December 13, 2011 the bill was received in the Senate and passed by unanimous consent.

FULL COMMITTEE OVERSIGHT, INVESTIGATION, AND OTHER ACTIVITIES

February 17, 2011—An Overview of The Administration's Federal Research and Development Budget for Fiscal Year 2012 (Hearing Volume No. 112–2)

On Thursday, February 17, 2011, the Committee on Science, Space, and Technology held an oversight hearing to examine the Administration's research and development budget proposal for fiscal year 2012. The Committee received testimony from Dr. John P. Holdren, Assistant to the President for Science and Technology and Director of the Office of Science, and Technology Policy.

March 2, 2011—The National Aeronautics and Space Administration Fiscal Year 2012 Budget Request (Hearing Volume No. 112–3)

On March 2, 2011 the Committee held an oversight hearing on the National Aeronautics and Space Administration's (NASA) fiscal year 2012 budget request. The hearing examined the Administration's proposed NASA budget and its prioritization of the Agency's investments in human space flight relative to the priorities outlined by Congress in the NASA Authorization Act of 2010 (P.L. 111–267). Over the next two years (FY2012–FY2013) the Administration's budget request underfunds development of the Multi-Purpose Crew Vehicle and Space Launch System/Heavy Lift Launch Vehicle by more than $2.4 billion, a 31 percent decline relative to the authorization levels in P.L. 111–267. Over the same two year period, the Administration's request seeks to increase spending by more than $700 million above authorized levels, a 70 percent increase, to pay for the creation of multiple Commercial Crew service providers to low Earth Orbit.

The Committee received testimony from the NASA Administrator, Charles F. Bolden, Jr.

March 3, 2011—The Department of Energy Fiscal Year 2012 Research And Development Budget Request (Hearing Volume No. 112–4)

On March 3, 2011, the Committee held an oversight hearing on the Department of Energy's fiscal year 2012 research and development budget request. The hearing focused on the Department's proposed budget request for fiscal year 2012 including policies and how budgetary priorities impact DOE R&D programs for fiscal year 2012. The Committee questioned the Secretary of Energy on a wide variety of topics, such as the implementation of a federal Clean Energy Standard, ongoing activities at the Nation's laboratories, and emerging energy technologies. The Committee received testimony from Secretary of Energy, Dr. Steven Chu.

March 10, 2011—An Overview of The Fiscal Year 2012 Research and Development Budget Proposals at The National Oceanic And Atmospheric Administration and The Environmental Protection Agency (Hearing Volume No. 112–5)

On March 10, 2011 the Committee held an oversight hearing on the National Oceanic and Atmospheric Administration (NOAA) and Environmental Protection Agency (EPA) fiscal year 2012 research and development budget requests. The hearing focused on NOAA and EPA's proposed budget requests for fiscal year 2012. For NOAA the Committee focused on the proposed reorganization of NOAA and the satellite programs. The Committee honed in on the creation of a National Climate Service at NOAA included in the 2012 budget request, the Deepwater Horizon oil spill and the state of the Joint Polar Satellite System Program (JPSS). For EPA the Committee focused on the Office of Research and Development's fiscal year 2012 budget priorities. The Committee questioned EPA Assistant Administrator for the Office of Research and Development (ORD) on the science used in development of the carbon dioxide endangerment finding, EPA's quality assurance and control processes for the use of science to inform policy, and nutrient loading in the Chesapeake Bay.

The Committee received testimony from NOAA Administrator and Undersecretary of Commerce for Oceans and Atmosphere, Dr. Jane Lubchenco and EPA Assistant Administrator for the Office of Research and Development, Dr. Paul Anastas.

March 11, 2011—An Overview of the Fiscal Year 2012 Budget Proposals at the National Science Foundation and the National Institute of Standards and Technology (Hearing Volume No. 112–6)

On Friday, March 11, 2011, the Committee held an oversight hearing to examine the Administration's proposed fiscal year 2012 budget request for the National Science Foundation (NSF) and the National Institute of Standards and Technology (NIST). One witness panel provided testimony on NSF's budget, including testimony from the Chairman of the National Science Board, and one witness panel provided testimony on NIST's budget.

The Committee received testimony from Dr. Subra Suresh the Director of the NSF and Dr. Ray Bowen, Chairman of the National Science Board. Dr. Patrick Gallagher testified on behalf of NIST as the Institute's Director and the Undersecretary of Commerce for Standards and Technology.

March 31, 2011—Climate Change: Examining the Process Used to Create Science And Policy (Hearing Volume No. 112–9)

On Thursday, March 31, 2011 the Committee held a hearing to examine processes used to generate key climate change science and information used to inform policy development and decision making. The hearing focused on the integrity of the processes employed by scientists in generating climate-related scientific and technical information for use in public policy.

The Committee received testimony from Dr. J. Scott Armstrong of the University of Pennsylvania, Dr. Richard Muller of the University of California, Dr. John Christy of the University of Alabama, Mr. Peter Glaser of Troutman Sanders, LLP, Dr. Kerry Emanuel of the Massachusetts Institute of Technology, and independent economist, Dr. David Montgomery.

May 11, 2011—Review of Hydraulic Fracturing Technology and Practices (Hearing Volume No. 112–17)

On Wednesday, May 11, 2011 the Committee held a hearing to review the technology and practices of hydraulic fracturing for energy production. The hearing focused on the role of domestic shale gas in meeting growing energy demand and associated concerns related to managing potential risks to drinking water resources.

The Committee received testimony from Elizabeth Ames Jones of the Texas Railroad Commission, Dr. Robert M. Summers of the Maryland Department of Environment, Mr. Harold Fitch of the Michigan Department of Environmental Quality and the Ground Water Protection Council, Dr. Cal Cooper of the Apache Corporation, and Dr. Michael Economides of the University of Houston. Paul Anastas, the Assistant Administrator for Research and Development at the Environmental Protection Agency also testified.

June 16, 2011—STEM Education in Action: Learning Today . . . Leading Tomorrow (Hearing Volume No. 112–26)

On Thursday, June 16, 2011, the Committee held a hearing to highlight Science, Technology, Engineering and Math (STEM) education activities across the Nation, their role in inspiring and educating future generations, and their contribution to our future's economic prosperity.

The first hearing, STEM Education in Action: Learning Today . . . Leading Tomorrow, showcased the finalists, parents, teachers, and mentors of the ExploraVision Awards National Competition, sponsored by Toshiba and the National Science Teachers Association.

The Committee received testimony from: Dr. Karen Lorenzo, parent to Pablo Lorenzo; Ms. Brenda Conwell-Dudley, parent and teacher mentor to Jack Dudley; Ms. Amy Attard, teacher and team mentor to Claudia Cooper; and Ms. Anne Manwell, teacher and mentor to Alison Reed.

June 22, 2011—First Semiannual Report of Activities of the Committee on Science, Space, and Technology (Business Meeting, House Report 112–112)

On Wednesday, June 22, 2011 the Committee held a business meeting to approve the adoption of the first semiannual report of activities of the Committee on Science, Space, and Technology. The Committee adopted the first semiannual report by voice vote and favorably reported it to the House for filing by the Chairman. The report filed on June 22, 2011 became House Report 112–112.

June 22, 2011—Examining NOAA's Climate Service Proposal (Hearing Volume No. 112–27)

On Wednesday, June 22, 2011 the Committee held a hearing to review the Administration's fiscal year 2012 budget request proposal to reorganize NOAA to create a climate service. The Administration's objective for this new line office is to bring together NOAA's existing climate capabilities under a single entity to more efficiently and effectively respond to demands for climate services.

The Committee received testimony from Dr. Jane Lubchenco, Administrator, National Oceanic and Atmospheric Administration and Dr. Robert Winokur, Deputy Oceanographer, Department of the Navy.

July 12, 2011—A Review of NASA's Space Launch System (Hearing Volume No. 112–29)

On Tuesday, July 12, 2011 the Committee held an oversight hearing to examine NASA's Space Launch System—the follow-on to the Space Shuttle—that was congressionally directed by the NASA Authorization Act of 2010 [P.L. 111–267]. NASA's Space Launch System decisions, due to Congress by January 9, 2011, have been repeatedly delayed but were expected by July 8, 2011. The hearing, originally intended to provide Members the opportunity to ask the Administration about the cost, schedule, capabilities, and justification for the final design, became, due to the Administration's continued delays, a forum for NASA to explain why it failed to reach a decision, what analyses still needed to be completed to reach a decision, and when the Administration would be forthcoming with the required decisions.

The Committee received testimony from NASA Administrator, Charles F. Bolden, Jr.

September 8, 2011—Impacts of LightSquared Network on Federal Science Activities (Hearing Volume No. 112–33)

On Thursday, September 8, 2011 the Committee held an oversight hearing to examine the concerns and issues associated with interference with the Global Positioning System (GPS) signal from the proposed LightSquared LLC terrestrial broadband network. The hearing was held in light of recent studies that indicated that the LightSquared network interference with GPS signals, and could potentially disrupt an array of Federal programs and scientific activities. Witnesses discussed LightSquared's business proposal, FCC's authorization of spectrum use, potential disruptions to industry and government, and costs of mitigating frequency interference.

The committee received testimony from: Mr. Anthony Russo, Director, National Coordination Office for Positioning, Navigation and Timing; Ms. Mary Glackin, Deputy Under Secretary, National Oceanic and Atmospheric Administration; Mr. Victor Sparrow, Director, spectrum Policy, Space Communications and Navigation, Space Operations Mission Directorate, National Aeronautics and Space Administration; The Honorable Peter Appel, Administrator, Research and Innovation Technology Administration, Department of Transportation; Dr. David Applegate, Associate Director, Natural

Hazards, U.S. Geological Survey; Mr. Jeffrey Carlisle, Executive Vice President, Regulatory Affairs and Public Policy, LightSquared; Dr. Scott Pace, Director, Space Policy Institute, George Washington University.

September 13, 2011—STEM in Action: Inspiring the Science and Engineering Workforce of Tomorrow (Hearing Volume No. 112–34)

On Tuesday September 13, 2011, the Committee held a hearing to highlight Science, Technology, Engineering, and Math (STEM) education activities across the Nation, their role in inspiring and educating future generations, and their contribution to our future's economic prosperity.

The second hearing, STEM Education in Action: Inspiring the Science and Engineering Workforce of Tomorrow, showcased a variety of public/private partnerships and initiatives that are successfully inspiring the future STEM workforce.

The Committee received testimony from: Mr. Tony Norman, VEX Robotics, Inc., Innovation First International, Inc.; Mrs. Nancy Conrad, Chairman, the Conrad Foundation; Mr. Michael Gallager, Entertainment Software Association.

September 15, 2011—Out of Thin Air: EPA's Cross-State Air Pollution Rule (Hearing Volume No. 112–35)

On Thursday, September 15, 2011 the Committee held a hearing to review the scientific, procedural, and technical basis of the Environmental Protection Agency's Cross-State Air Pollution Rule, including a discussion of the economic, employment, and electric reliability impacts. The Committee received testimony from Dr. Bryan Shaw, Chairman, Texas Commission on Environmental Quality (TCEQ); Mr. Gregory Stella, Senior Scientist, Alpine Geophysics, LLC; Mr. Barry Smitherman, Commissioner, Texas Railroad Commission; Mr. Wayne E. Penrod, Executive Manager, Environmental Policy, Sunflower Electric Corporation; Mr. Chip Merriam, Chief Legislative & Regulatory Compliance Officer, Orlando Utilities Commission; and The Honorable Gina McCarthy, Assistant Administrator, Office of Air and Radiation, U.S. Environmental Protection Agency.

September 22, 2011—NASA Human Spaceflight Past, Present, and Future: Where Do We Go From Here? (Hearing Volume No. 112–38)

On Thursday, September 22, 2011 the Committee held a hearing to examine the strategic goals and priorities of America's human space exploration program, the importance of space access and demonstrated leadership among space-faring nations, the inspirational role of human and robotic space exploration, and the role of the Space Launch System and Multipurpose Crew Vehicle and a healthy industrial base in achieving those goals.

The hearing drew upon our Nation's long history of space exploration to help frame the challenges confronting our present human spaceflight position and explore a path forward.

The Committee received testimony from Mr. Neil Armstrong, Commander, Apollo 11; Captain Eugene A. Cernan USN (ret.), Commander Apollo 17; Dr. Maria Zuber, E.A. Griswold Professor of Geophysics and Head of the Department of Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology; and Dr. Michael Griffin, Eminent Scholar and Professor, Mechanical and Aerospace Engineering, University of Alabama, Huntsville.

September 26, 2011—STEM Education in Action: Communities Preparing for Jobs of the Future (Hearing Volume No. 112–40)

On Monday, September 26, 2011 the Committee held a field hearing in Texarkana, Texas the third in a series of hearings to highlight Science, Technology, Engineering, and Math (STEM) education activities across the Nation, their role in inspiring and educating future generations, and their contribution to our future economic prosperity. The purpose of the hearing was to highlight the role of community colleges, specifically the importance of their partnerships and contributions to the local economy, workforce, and other aspects of the community.

The Committee received testimony from: Dr. Cora Marrett, Deputy Director, National Science Foundation, Mr. James Henry Russell, President, Texarkana College, Dr. Brad Johnson, President, Northeast Texas Community College, Dr. C.B. Rathburn, President, Texas A&M University—Texarkana, Ms. Pam Kennedy, Vice President of Human Resources, CHRISTUS St. Michael Health System, Mr. Myron Barnett, Human Resource Manager, International Paper, and Mr. Denis Washington, Chairman, TexAmericas.

October 26, 2011—NASA's Commercial Crew Development Program: Accomplishments and Challenges (Hearing Volume No. 112–46)

On Wednesday, October 26, 2011, the Committee held an oversight hearing to examine NASA's Commercial Crew Program (CCP) office, focusing on accomplishments achieved by the agency and industry following two rounds of grant awards totaling $320 million (aggregate of FY10 & FY11), and the biggest programmatic and technical challenges remaining. Speaking about challenges ahead, industry witnesses and NASA officials highlighted the uncertainty of Congress' willingness to provide full funding for CCP over the next five years. Many Committee Members asked questions of the witnesses about the size of the commercial markets (i.e., spaceflight participants exclusive of NASA-sponsored astronauts, such as space tourists and/or astronauts from countries having no indigenous space industry).

The Committee received testimony from Mr. John Elbon, Vice President and General Manager for Space Exploration, the Boeing Company; Mr. Steve Lindsey, Director of Space Exploration for the Sierra Nevada Corporation; Mr. Elon Musk, CEO and Chief Technology Officer, Space Exploration Technologies Corp. (SpaceX); Mr. Charlie Precourt, Vice President, ATK Launch Systems Group; Dr. George Sowers, Vice President, United Launch Alliance; the Honorable Paul Martin, Inspector General of NASA; and Mr. Bill

Gerstenmaier, Associate Administrator, Human Exploration and Operations Mission Directorate, NASA.

December 6, 2011—The Next Great Observatory: Assessing the James Webb Space Telescope (Hearing Volume No. 112–55)

On Tuesday, December 6, 2011, the Committee held an oversight hearing to examine NASA's management and re-plan of the James Webb Space Telescope.

In 2001, the James Webb Space Telescope (JWST) was ranked as the highest priority large space mission in astronomy by the National Academies of Science in their decadal survey Astronomy and Astrophysics in the New Millennium. Originally estimated by the decadal committee to cost $1 billion and to be launched in 2007, JWST was dubbed as the next Great Observatory that will be three times more powerful than the Hubble Space Telescope in the infrared and eight times more powerful than the Spitzer Space Telescope. However, after high-level scrutiny arising from years of program cost and schedule overruns, NASA recently developed a revised plan for JWST that — if fully funded — would enable completion and launch by October, 2018. The revised budget life cycle costs now total just over $8.8 billion.

The Committee received testimony from Mr. Rick Howard, NASA Program Manager of the James Webb Space Telescope; Dr. Roger Blandford, Professor of Physics, Stanford University and Former Chair, Committee for the Decadal Survey of Astronomy and Astrophysics, National Research Council; Dr. Garth Illingworth, Professor & Astronomer, UCO/Lick Observatory, University of California, Santa Cruz; and Mr. Jeffrey D. Grant, Sector Vice President & General Manager, Space Systems Division, Northrop Grumman Aerospace Systems.

SUBCOMMITTEE ON ENERGY AND ENVIRONMENT ACTIVITIES

OVERSIGHT, INVESTIGATION, AND OTHER ACTIVITIES, INCLUDING SELECTIVE LEGISLATIVE ACTIVITIES

April 6, 2011—Offshore Drilling Safety and Response Technologies (Hearing Volume No. 112–12)

On April 6, 2011 the Energy and Environment Subcommittee held a hearing on offshore drilling safety and response technologies. The hearing focused on the Federal and industry efforts to identify and address safety and response technology challenges since the Deepwater Horizon oil spill in 2010 and how Federal programs in these areas can best be structured and prioritized.

The Committee received testimony from Department of Energy, Acting Assistant Secretary for Fossil Energy, Dr. Victor Der; Mr. David Miller, Director of Standards for the American Petroleum Institute; Mr. Owen Kratz, President and Chief Executive Officer of Helix Energy Solutions Group; and Research Director and Senior Fellow, Dr. Molly Macauley of Resources for the Future.

May 13, 2011—Nuclear Energy Risk Management (Joint Subcommittee Hearing) (Hearing Volume No. 112–18)

On Friday, May 13, 2011 the Subcommittee on Energy and Environment and the Investigations and Oversight Subcommittee held a joint hearing to examine nuclear safety, risk assessment, public health protection, and associated scientific and technical policy issues in the United States. The subcommittees examined those issues in light of the earthquake and tsunami in Japan that resulted in the disaster at the Fukushima Daiichi nuclear power plant.

The Subcommittees received testimony from Mr. Brian Sheron of the Nuclear Regulatory Commission; Mr. Lake Barrett of LBarrett Consulting LLC; Dr. John Boice of Vanderbilt University and the International Epidemiology Institute; and Mr. Dave Lochbaum of the Union of Concerned Scientists.

June 1, 2011—Harmful Algal Blooms: Action Plans for Scientific Solutions (Hearing Volume No. 112–21)

On Wednesday, June 1, 2011, the Subcommittee on Energy and Environment held a legislative hearing to examine harmful algal blooms (HABs) and hypoxia research and response needs to develop and implement action plans to monitor, prevent, mitigate, and control both marine and fresh water bloom and hypoxia events. The Subcommittee also asked witnesses to comment on draft legislation entitled "the Harmful Algal Blooms and Hypoxia Research and Control Amendments Act of 2011." The Subcommittee received testimony from Dr. Robert Magnien, Director of the Center for Sponsored Coastal Ocean Research, National Oceanic and Atmospheric Administration (NOAA); Dr. Richard Greene, Chief, Ecosystems Dynamics and Effects Branch, Gulf Ecology Division, Office of Research and Development, U.S. Environmental Protection Agency (EPA); Dr. Donald Anderson, Senior Scientist and Director of the

Coastal Ocean Institute, Woods Hole Oceanographic Institution; Dr. Kevin Sellner, Executive Director, Chesapeake Research Consortium; Dr. Stephanie Smith, Chief Scientist, Algaeventure Systems; and Dr. Beth McGee, Senior Water Quality Scientist, Chesapeake Bay Foundation.

June 15, 2011—An Examination of DOE's Clean Technology Programs (Hearing Volume No. 112–25)

On Wednesday, June 15, 2011 the Subcommittee held a hearing to receive testimony on the Department of Energy's (DOE) Fiscal Year (FY) 2012 budget request for clean energy technologies and the relative prioritization therein. DOE manage a wide portfolio of activities related to the development of clean energy technologies. DOE's programs span the lifecycle of energy technology development, ranging from long-term basic research supported by the Basic Energy Sciences program at the Office of Science, through later-stage applied research, development, demonstration, and commercialization activities supported primarily by EERE, ARPA–E, and LPO.

The Subcommittee received testimony from Dr. Arun Majumdar, Director, Advanced Research Projects Agency—Energy (ARPA–E), U.S. Department of Energy (DOE); Dr. Henry Kelly, Acting Assistant Secretary, Office of Energy Efficiency and Renewable Energy, U.S. Department of Energy (DOE); and Mr. David Frantz, Director, Loan Guarantee Program Office, U.S. Department of Energy (DOE).

July 7, 2011—Hitting the Ethanol Blend Wall: Examining the Science on E15 (Hearing Volume No. 112–28)

On Thursday July 7, 2011 the Subcommittee held a hearing on the science and consequences of the use of E15. The hearing focused on examining the scientific and technical issues related to EPA's recent waiver decisions permitting mid-level ethanol blends of up to 15 percent ethanol in gasoline and receiving feedback on draft legislative language providing for a comprehensive assessment of the scientific and technical research on the implications of the use of mid-level ethanol blends.

The Subcommittee received testimony from Ms. Margo Oge, Director of the Office of Transportation and Air Quality, U.S. EPA, Mr Bob Greco, group director for Downstream and Industry Operations, American Petroleum Institute, Ms. Heather White, Chief of Staff and General Counsel for the Environmental Working Group, Mr. Jeff Wasil, Emissions Certification Engineer for Evinrude Outboard Motors, Mr. Mike Brown, President of the National Chicken Council, Mr. W. Steven Burke, President and CEO of Biofuels Center of North Carolina, and Dr. Ron Sahu, Technical Consultant for Outdoor Power Equipment Institute.

July 14, 2011—Subcommittee Markup, H.R. 2484, The Harmful Algal Blooms and Hypoxia Research and Control Amendments Act of 2011

On Thursday, July 14, 2011 the Subcommittee met to consider H.R. 2484, the Harmful Algal Blooms and Hypoxia Research and Control Amendments Act of 2011. The Subcommittee favorably forwarded H.R. 2484 to the Full Committee as amended by voice vote.

September 23, 2011—From NPOESS to JPSS: An Update on the Nation's Restructured Polar Weather Satellite Program. (JOINT SUBCOMMITTEE HEARING) (Hearing Volume No. 112–39)

On Friday, September 23, 2011 the Subcommittees on Investigations & Oversight and Energy & Environment met to examine the impact of the Administration's decision to restructure the National Polar-orbiting Operation Environmental Satellite System (NPOESS) and progress at NOAA and NASA in developing the Joint Polar Satellite System (JPSS) program as the replacement system for polar-orbiting civilian weather satellites and climate services.

Witnesses discussed the cost, schedule, and performance capabilities associated with the new polar-orbiting weather satellite program.

The Committee received testimony from: The Honorable Kathryn Sullivan, Ph.D., Assisstant Secretary of Commerce for Environmental Observation and Prediction and Deputy Administrator, National Oceanic and Atmospheric Administration; Mr. Christopher Scolese, Associate Administrator, National Aeronautics and Space Administration; Mr. David Powner, Director, Information Technology Management Issues, Government Accountability Office.

October 4, 2011—Quality Science for Quality Air (Hearing Volume No. 112–41)

On Tuesday, October 4, 2011 the Subcommittee held a hearing to examine the Environmental Protection Agency's (EPA) process for setting standards under the Clean Air Act including: the role of scientific advice from the Clean Air Scientific Advisory Committee (CASAC) and similar bodies; the economic underpinnings of EPA's Regulatory Impact Analyses (RIAs); and the assumptions, models, and data used in projecting compliance, technological standards necessary to achieve compliance and environmental benefits associated with proposed and finalized rules. With this examination the Subcommittee intended to gather preliminary information in preparation for reauthorizing the Environmental Research, Development, and Demonstration Act.

The Subcommittee received testimony from Dr. Roger O. McClellan, Advisor, Toxicology and Human Health Risk Analysis; Dr. George Thurston, Professor, New York University School of Medicine; Dr. Michael Honeycutt, Chief Toxicologist, Texas Commission on Environmental Quality (TCEQ); Dr. Robert F. Phalen, Professor of Medicine and Co-Director, Air Pollution Effect Laboratory, University of California, Irvine; Dr. Anne E. Smith, Senior Vice Presi-

dent, NERA Economic Consulting; and Mr. J. Edward Cichanowicz, Consultant.

October 13, 2011—Advancing Coal Research and Development for a Secure Energy Future (Hearing Volume No. 112–45)

On Thursday, October 13, 2011, the Subcommittee held a hearing on to examine current Department of Energy (DOE) coal research, development, and demonstration (RD&D) activities and identify future coal RD&D opportunities and priorities.

The Subcommittee received testimony from Mr. Scott Klara, Deputy Director, National Energy Technology Laboratory; Ms. Janet Gellici, Chief Executive Officer, American Coal Council; Mr. Nick Atkins, President, American Electric Power; Mr. David Foerter, Executive Director, Institute of Clean Air Companies; and Mr. Stu Dalton, Senior Government Representative, Electric Power Research Institute (EPRI).

October 27, 2011—Review of the Blue Ribbon Commission on America's Nuclear Future Draft Recommendations (JOINT SUBCOMMITTEE HEARING) (Hearing Volume No. 112–47)

On Thursday, October 27, 2011, the Energy & Environment and Investigations & Oversight Subcommittees held a hearing to examine the recommendations contained in the Blue Ribbon Commission on America's Nuclear Future (BRC) Draft Report to the Secretary of Energy. Additionally, the Subcommittees considered science and technology issues associated with spent nuclear fuel management.

The Subcommittees received testimony from Mr. Jack Spencer, Research Fellow, Nuclear Energy Policy, Heritage Foundation; Dr. Peter Swift, Distinguished Member of the Technical Staff, Sandia National Laboratory; Dr. Roger Kasperson, Professor and Distinguished Scientist, Clark University; Mr. Gary Hollis, Chairman, Nye County Board of County Commissioners; Mr. Rick McLeod, Executive Director, Savannah River Site Community Reuse Organization; and Dr. Mark Peters, Deputy Laboratory Director for Programs, Argonne National Laboratory.

November 2, 2011—Conflicts and Unintended Consequences of Motor Fuel Standards (Hearing Volume No. 112–49)

On Wednesday, November 2, 2011, the Subcommittee on Energy and Environment held a hearing to examine motor fuel standards currently in place at the federal level and under consideration at the federal or state level; assess the scientific foundation for such standards; explore the inherent conflicts and unintended consequences of such standards; and question whether or not conflicts exist within the standards and the consequences of such effect the fungibility of, safe use of and affordability of the United States motor fuel supply.

The Subcommittee received testimony from Mr. Brendan Williams, Senior Director of Advocacy, National Petrochemical & Refiners Association; Dr. Ingrid Burke, Director, Haub School and Ruckelshaus Institute of Environment and Natural Resources, Uni-

versity of Wyoming, and Co-Chair, National Research Council Committee on Economic and Environmental Impacts of Increasing Biofuels Production; Ms. Margo T. Oge, Director, Office of Transportation and Air Quality, U.S. Environmental Protection Agency; Dr. Jay Kesan, Professor and H. Ross & Helen Workman Research Scholar and Program leader of the Biofuel Law & Regulation Program, Energy Biosciences Institute, University of Illinois College of Law; Mr. Bob Greco, Group Director, Downstream and Industry Operations, American Petroleum Institute; Mr. David Hilbert, Thermodynamic Development Engineer, Mercury Marine; and Mr. Jack Huttner, Executive Vice President of Commercial and Public Affairs, Gevo, Inc.

November 17, 2011—Fostering Quality Science at EPA: The Need for Common Sense Reform (Hearing Volume No. 112–52)

On Thursday, November 17, 2011, the Subcommittee held a hearing to review research and development activities at the Environmental Protection Agency (EPA) and how such activities support EPA program needs; explore the transition of science from the Office of Research and Development (ORD) to other program offices for use in developing and implementing regulations; examine the Science Advisory Board (SAB) process and how it contributes to the quality of science developed at ORD; and in preparation for the reauthorization of the Environmental Research, Development, and Demonstration Act (ERDDA) discuss any needed changes to the ERDDA which authorizes science activities at EPA.

The Subcommittee received testimony from Dr. Paul Anastas, Assistant Administrator, Office of Research and Development, U.S. Environmental Protection Agency; Mr. Arthur Elkins, Jr., Inspector General, U.S. Environmental Protection Agency; and Mr. David Trimble, Director, Natural Resources and Environment, U.S. Government Accountability Office.

November 30, 2011—Fostering Quality Science at EPA: Perspectives on Common Sense Reform (Hearing Volume No. 112–54)

On Wednesday, November 30, 2011, the Subcommittee on Energy and Environment held the first day of a hearing to provide external perspectives on the need to reauthorize and reform science, research and development activities at the Environmental Protection Agency (EPA); explore the intersection of Agency-supported science and its regulatory mission; and receive focused recommendations to raise the level, quality, usefulness, and objectivity of EPA science, including any necessary changes to the Environmental Research, Development and Demonstration Authorization Act (ERDDA).

The subcommittee received testimony from Ms. Susan Dudley, Director, Regulatory Studies Center, and Research Professor of Public Policy & Public Administration, The George Washington University; Dr. Alan Moghissi, President, Institute for Regulatory Science; Dr. Kenneth Green, Resident Scholar, American Enterprise Institute; and Dr. Gary Marchant, Professor of Law and Exec-

utive Director, Center for Law, Science & Innovation, Arizona State University.

December 7, 2011—Energy Critical Elements: Identifying Research Needs and Strategic Priorities (Hearing Volume No. 112–56)

On Wednesday, December 7, 2011, the Subcommittee on Energy and Environment held a legislative hearing to examine research needs and priorities relating to Energy Critical Elements (ECE). The Subcommittee asked witnesses to comment on H.R. 2090, "The Energy Critical Elements Advancement Act of 2011" introduced on June 2, 2011 by Representative Hultgren and cosponsored by Representatives Biggert and Lipinski.

The Subcommittee received testimony from the Honorable David Sandalow, Assistant Secretary for Policy and International Affairs, U.S. Department of Energy; Dr. Derek Scissors, Research Fellow, the Heritage Foundation; Dr. Robert Jaffe, Jane and Otto Morningstar Professor of Physics, Massachusetts Institute of Technology; Dr. Karl Gschneidner, Jr. Senior Materials Scientist, Ames Laboratory; Mr. Luka Erceg, President and CEO, Simbol Materials.

SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT ACTIVITIES

April 6, 2011—Behavioral Science and Security: Evaluating TSA's SPOT Program (Hearing Volume No. 112–11)

On Wednesday, April 6, 2011, the Subcommittee on Investigations and Oversight met to examine the Transportation Security Administration's (TSA) efforts to incorporate behavioral science into its transportation security architecture. The Department of Homeland Security (DHS) has been criticized for failing to scientifically validate the Screening of Passengers by Observational Techniques (SPOT) program before operational deployment. SPOT is a TSA program that employs Behavioral Detection Officers (BDO) at airport terminals for the purpose of detecting behavioral based indicators of threats to aviation security. Testimony focused on the validity of behavioral science and experience with SPOT and related programs.

In May 2010, the Government Accountability Office (GAO) issued a report titled "Efforts to Validate TSA's Passenger Screening Behavior Detection Program Underway, but Opportunities Exist to Strengthen Validation and Address Operational Challenges" in response to a Congressional request to review the SPOT program. The report found a lack of scientific consensus on behavioral detection principles and a lack of justification for expanding the SPOT program. GAO also noted that TSA generally does not use all intelligence databases to identify or investigate persons referred through SPOT. In addition, TSA has no database for BDOs to record and analyze information on passengers identified under SPOT.

The Subcommittee received testimony from the following witnesses: Mr. Stephen Lord, Director, Homeland Security and Justice Issues, Government Accountability Office (GAO); Mr. Larry Willis, Program Manager, Homeland Security Advanced Research Projects Agency, Science and Technology Directorate, Department of Homeland Security (DHS); Dr. Paul Ekman, Professor Emeritus of Psychology, University of California, San Francisco and President/Founder, Paul Ekman Group, LLC; Dr. Maria Hartwig, Associate Professor, Department of Psychology, John Jay College of Criminal Justice; Dr. Phillip Rubin, Chief Executive Officer, Haskins Laboratories; and Lieutenant Detective Peter J. DiDomenica, Boston University Police.

April 13, 2011—Green Jobs and Red Tape: Assessing Federal Efforts to Encourage Employment (Hearing Volume No. 112–14)

On Wednesday, April 13, 2011, the Subcommittee met to examine the issue of green jobs and efforts to create them. The term "green jobs" generally refers to employment in the alternative energy and energy efficiency industries. One of the primary goals of the recent growth in federal incentives and funding for alternative energy sources and energy efficiency industries has been the creation of green jobs. The hearing examined international efforts to create green jobs, as well as historical efforts domestically, includ-

ing the American Recovery and Reinvestment Act. In light of the Administration's recently announced "Winning the Future" initiative, the Subcommittee explored the effectiveness of loan guarantees, subsidies, tax incentives, regulations, mandates, research, and other federal efforts to create green jobs. The witnesses discussed their views on the levels of effectiveness of government programs to create green jobs and their experience with such efforts.

The Subcommittee received testimony from: Dr. Kenneth P. Green, Resident Scholar, The American Enterprise Institute; Dr. David Kreutzer, Research Fellow in Energy, Economics, and Climate Change, The Heritage Foundation; Dr. Josh Bivens, Economist, Economic Policy Institute; Dr. David W. Montgomery, Vice President, NERA Economic Consulting; and Mr. William Kovacs, Director of Environment, Technology and Regulatory Affairs Division, U.S. Chamber of Commerce.

May 13, 2011—Nuclear Energy Risk Management (Hearing Volume No. 112–18)

On Friday, May 13, 2011 the Investigations and Oversight Subcommittee and the Energy and Environment Subcommittee met in a joint hearing to examine nuclear energy safety, risk assessment, public health protection, and associated scientific and technical nuclear policy issues in the United States. The Subcommittees examined these issues in light of the earthquake and tsunami in Japan that resulted in the disaster at the Fukushima Daiichi nuclear power plant.

The Subcommittees received testimony from: Dr. Brian Sheron, Director, Office of Nuclear Regulatory Research, Nuclear Regulatory Commission; Mr. Lake Barrett, Principal, LBarrett Consulting, LLC; Dr. John Boice, Scientific Director, International Epidemiology Institute; Mr. Dave Lochbaum, Director, Nuclear Safety Project, Union of Concerned Scientists.

June 14, 2011—The Federal Perspective on a National Critical Materials Strategy (Hearing Volume No. 112–24)

On Tuesday, June 14, 2011 the Subcommittee on Investigations and Oversight met to examine the federal perspective on a national critical materials strategy, including rare earth elements and other critical materials. The hearing was held to examine Chinese dominance of the rare earth materials market and recent shortages in supply resulting from the Chinese government's decision to reduce production. The hearing also inspected ways to diversify the critical materials market and increase domestic production.

Witnesses discussed beneficial steps the federal government could take such as expanding research into critical materials, improving access to market information, loan guarantees for domestic production, stockpiling of certain materials, and streamlining the permitting process for miners. The Subcommittee heard about the actions of the federal government through the interagency working group on critical and strategic mineral supply chains headed by the Office of Science and Technology Policy (OSTP), and examined the Department of Energy's "Critical Materials Strategy" report.

The Subcommittee received testimony from: Dr. John Holdren, Director, Office of Science and Technology Policy; Mr. David Sandalow, Assistant Secretary for Policy and International Affairs, U.S. Department of Energy; Mr. Jeff Doebrich, Program Coordinator (Acting), Mineral Resources Program, U.S. Geological Survey.

July 14, 2011—EPA's IRIS Program: Evaluating the Science and Process Behind Chemical Risk Assessment (Hearing Volume No. 112–30)

On Thursday, July 14, 2011 the Subcommittee on Investigations and Oversight met to examine the process behind the development of EPA's IRIS assessments. The hearing was prompted in part by the National Academies' National Research Council report on EPA's formaldehyde assessment which reiterated several previous criticisms of EPA's IRIS process and provided recommendations for improvement. The goal of the hearing was to better understand the development of IRIS assessments, whether EPA plans on adopting the NAS' recommendations, and whether or not EPA assessments are based on the best available evidence and evaluated in accordance with established protocols.

Witnesses discussed problems with IRIS and methods for improving the process and science behind IRIS assessments. The Committee also heard about regulatory impacts on industry and communities.

The committee received testimony from: The Honorable Paul Anastas, Assistant Administrator, Office of Research and Development, U.S. Environmental Protection Agency; Mr. Trimble, Director, Natural Resources and Environment, U.S. Government Accountability Office; Dr. Jonathan Samet, MD, MS, Professor and Flora L. Thorton Chair, Department of Preventive Medicine, Keck School of Medicine, University of Southern California, and Chair, Committee to Review EPA's Draft IRIS Assessment of Formaldehyde, National Research Council, the National Academies; The Honorable Calvin Dooley, President and CEO, American Chemistry Council; Ms. Rena Steinzor, Professor, University of Maryland School of Law, and President, Center for Progressive Reform; Dr. Gail Charnley, Principal, HealthRisk Strategies; The Honorable J. Christian Bollwage, Mayor, City of Elizabeth, New Jersey.

September 23, 2011—From NPOESS to JPSS: An Update on the Nation's Restructured Polar Weather Satellite Program. (JOINT SUBCOMMITTEE HEARING) (Hearing Volume No. 112–39)

On Friday, September 23, 2011 the Subcommittees on Investigations & Oversight and Energy & Environment met to examine the impact of the Administration's decision to restructure the National Polar-orbiting Operation Environmental Satellite System (NPOESS) and progress at NOAA and NASA in developing the Joint Polar Satellite System (JPSS) program as the replacement system for polar-orbiting civilian weather satellites and climate services.

Witnesses discussed the cost, schedule, and performance capabilities associated with the new polar-orbiting weather satellite program.

The committee received testimony from: The Honorable Kathryn Sullivan, Ph.D., Assisstant Secretary of Commerce for Environmental Observation and Prediction and Deputy Administrator, National Oceanic and Atmospheric Administration; Mr. Christopher Scolese, Associate Administrator, National Aeronautics and Space Administration; Mr. David Powner, Director, Information Technology Management Issues, Government Accountability Office.

October 13, 2011—The Endangered Species Act: Reviewing the Nexus of Science and Policy (Hearing Volume No. 112–44)

On Thursday, October 23, 2011 the Subcommittee on Investigations and Oversight met to examine the combination of science and policy decisions made under the Endangered Species Act (ESA). The hearing reviewed the influence of the growing number of judicial disputes over ESA-related actions and the importance of accurate scientific data for policy decisions.

Witnesses discussed the process for designating species as endangered, delisting species from protection, the quality of science used in policy making decisions, impacts on local communities, benefits and problems associated with the ESA, and methods of improvement.

The committee received testimony from: Mr. Gary Frazer, Assistant Director, Endangered Species, U.S. Fish and Wildlife Service; The Honorable Craig Manson, General Counsel, Westlands Water District; Mr. Douglas Vincent-Lang, Senior Biologist, Alaska Department of Fish and Game; Dr. Neal Wilkins, Director, Texas A&M Institute of Renewable Natural Resources; Mr. Jonathan Adler, Professor, Case Western Reserve University School of Law; Dr. Francesca T. Grifo, Senior Scientist and Director, Scientific Integrity Program, Union of Concerned Scientists.

October 27, 2011—Review of the Blue Ribbon Commission on America's Nuclear Future Draft Recommendations (JOINT SUBCOMMITTEE HEARING) (Hearing Volume No. 112–47)

On Thursday, October 27, 2011, the Energy & Environment and Investigations & Oversight Subcommittees held a hearing to examine the recommendations contained in the Blue Ribbon Commission on America's Nuclear Future (BRC) Draft Report to the Secretary of Energy.

Additionally, the Subcommittees considered science and technology issues associated with spent nuclear fuel management.

The Subcommittees received testimony from Mr. Jack Spencer, Research Fellow, Nuclear Energy Policy, Heritage Foundation; Dr. Peter Swift, Distinguished Member of the Technical Staff, Sandia National Laboratory; Dr. Roger Kasperson, Professor and Distinguished Scientist, Clark University; Mr. Gary Hollis, Chairman, Nye County Board of County Commissioners; Mr. Rick McLeod, Executive Director, Savannah River Site Community Reuse Organiza-

tion; and Dr. Mark Peters, Deputy Laboratory Director for Programs, Argonne National Laboratory.

November 30, 2011—Stimulus Oversight: An Update on Accountability, Transparency, and Performance (Hearing Volume No. 112–53)

On Wednesday, November 30, 2011 the Subcommittee on Investigations and Oversight met to receive an update on accountability, transparency, and performance issues associated with the American Recovery and Reinvestment Act (ARRA). The hearing focused on efforts by agency Inspector General Offices, the Government Accountability Office, and the Recovery, Accountability, and Transparency Board to monitor ARRA funding. The Subcommittee previously held hearings on ARRA funding on March 19, 2009, and May 5, 2009.

Witnesses discussed lessons learned in managing ARRA funds, transparency in awarding funds, assessing risks associated with these investments, and methods for improving the management of taxpayer dollars.

The Committee received testimony from: Mr. Frank Rusco, Director, Natural Resources and Environment Team, General Accountability Office; Mr. Michael Wood, Director, Recovery, Accountability, and Transparency Board; The Honorable Gregory Friedman, Inspector General, U.S. Department of Energy; The Honorable Todd Zinser, Inspector General, U.S. Department of Commerce; Ms. Allison Lerner, Inspector General, National Science Foundation; Ms. Gail Robinson, Deputy Inspector General, National Aeronautics and Space Administration.

SUBCOMMITTEE ON RESEARCH AND SCIENCE EDUCATION OVERSIGHT, INVESTIGATION, AND OTHER ACTIVITIES, INCLUDING SELECTIVE LEGISLATIVE ACTIVITIES

April 14, 2011—Nanotechnology: Oversight of the National Nanotechnology Initiative and Priorities for the Future (Hearing Volume No. 112–15)

On Thursday, April 14, 2011, the Subcommittee on Research and Science Education held a hearing to review the Nation's multi-agency nanotechnology portfolio to ensure U.S. leadership and to discuss research and budget priorities for the future. The hearing provided an overview of the benefits of nanotechnology to society, and commenting on national priority areas, witnesses were asked to provide feedback on reauthorization language passed in the House during the 110th and 111th Congresses in anticipation of reauthorization during the 112th Congress.

In the 111th Congress, H.R. 554, the National Nanotechnology Initiative Amendments Act of 2009, was introduced on January 15, 2009, referred to the Committee on Science and Technology, and passed the House under suspension of the rules on February 11, 2009. The same language was added to H.R. 5116, the America COMPETES Reauthorization Act, passed by the House but not included in the final version signed into law on January 4, 2011.

The Committee received testimony from: Dr. Clayton Teague, Director, National Nanotechnology Coordination Office; Dr. Jeffrey Welser, Director, Nanoelectronics Research Initiative, Semiconductor Research Corporation and Semiconductor Industry Alliance; Dr. Seth Rudnick, Chairman, Board of Directors, Liquidia Technologies; Dr. James Tour, Professor of Chemistry, Computer Science, and Mechanical Engineering and Materials Science, Rice University; Mr. William Moffitt, President and Chief Executive Officer, Nanosphere, Inc.

May 25, 2011—Protecting Information in the Digital Age: Federal Cybersecurity Research and Development Efforts (JOINT SUBCOMMITTEE HEARING) (Hearing Volume No. 112–19)

On Wednesday, May 25, 2011 the Subcommittee on Research and Science Education and the Subcommittee on Technology and Innovation held a joint legislative hearing to examine federal agency efforts to improve our national cybersecurity and prepare the future cybersecurity talent needed for national security, as it pertains to agencies within the Committee's jurisdiction and in the context of the Administration's overall priorities in science, space, and technology.

In the 111th Congress, the House passed the Cybersecurity Enhancement Act of 2010 (H.R. 4061). The bill was referred to the Committee on Science and Technology and favorably reported on January 27, 2010. H.R. 4061 required increased coordination and prioritization of Federal cybersecurity research and development activities and the development of cybersecurity technical standards. It sought to strengthen cybersecurity education and talent development and partnership activities. Witnesses were asked to provide

comments on the legislation in advance of reintroduction during the 112th Congress.

The Subcommittees received testimony from: Dr. George O. Strawn, the Director of the National Coordination Office for Networking and Information Technology Research and Development Program; Dr. Farnam Jahanian, the Assistant Director of the Directorate for Computer and Information Science and Engineering at the National Science Foundation; Ms. Cita Furlani, Director of the Information Technology Laboratory at the National Institute of Standards and Technology; and Rear Admiral Michael Brown, the Director of Cybersecurity Coordination in the National Protection and Programs Directorate for the U.S. Department of Homeland Security.

June 2, 2011—Social, Behavioral, and Economic Science Research: Oversight of the Need for Federal Investments and Priorities for Funding (Hearing Volume No. 112–22)

On Thursday, June 2, 2011, the Subcommittee on Research and Science Education held an oversight hearing to examine the need for Federal investments in the social, behavioral, and economic sciences; to better understand the impact of this type of research; and to assess its value to the American taxpayer.

The Committee received testimony from: Dr. Myron Gutmann, Assistant Director, Directorate for Social, Behavioral, and Economic Sciences, National Science Foundation; Dr. Hillary Anger Elfenbein, Associate Professor of Organizational Behavior, Olin Business School, Washington University in St. Louis; Dr. Peter Wood, President, National Association of Scholars; Ms. Diana Furchtgott-Roth, Senior Fellow, Hudson Institute.

July 26, 2011—The Merit Review Process: Ensuring Limited Federal Resources are Invested in the Best Science (Hearing Volume No. 112–31)

On Thursday, July 26, 2011 the Subcommittee held a hearing examining the merit review grant award process and its effect on federally funded scientific research, in an effort to understand the strengths and potential weaknesses of the process.

The Subcommittee received testimony from: Dr. Cora Marrett, Deputy Director, National Science Foundation; Dr. Keith Yamamoto, Vice Chancellor for Research, University of California, San Francisco; Dr. Nancy Jackson, President, American Chemical Society; Dr. Jorge Jose, Vice President for Research, Indiana University.

September 21, 2011—Oversight of the Networking and Information Technology Research and Development Program and Priorities for the Future (Hearing Volume No. 112–37)

On Wednesday, September 21, 2011, the Subcommittee on Research and Science Education held a hearing to review the networking and information technology research and development (NITRD) program to ensure U.S. leadership in networking and in-

formation technology and to discuss priorities for the future and potential reauthorization.

The Committee received testimony from: Dr. George Strawn, Director, National Coordination Office, Networking and Information Technology Research and Development (NITRD) Program, Dr. Edward Lazowska, Bill & Melinda Gates Chair in Computer Science & Engineering, University of Washington, Dr. Robert Sproull, Director of Oracle Labs, retired, and Dr. Robert Schnabel, Dean, School of Informatics, Indiana University.

October 12, 2011—What Makes for Successful K–12 STEM Education: A Closer Look at Effective STEM Education Approaches (Hearing Volume No. 112–42)

On Wednesday, October 12, 2011, the Subcommittee on Research and Science Education held a hearing to review and examine the findings of the National Research Council Report, Successful K–12 STEM Education: Identifying Effective Approaches in Science, Technology, Engineering, and Mathematics, as requested by Congress in 2009 to identify highly successful K–12 schools and programs in STEM.

The Committee received testimony from: Dr. Adam Gamoran, Director, Wisconsin Center for Education Research, University of Wisconsin, Mr. Mark Heffron, Director, Denver School for Science and Technology: Stapleton High School, Dr. Suzanne Wilson, Chair, Department of Teacher Education, Division of Science and Math, Education, Michigan State University, Dr. Elaine Allensworth, Senior Director and Chief Research Officer, Consortium on Chicago School Research, University of Chicago, and Dr. Barbara Means, Director, Center for Technology in Learning, SRI International.

November 3, 2011—STEM In Action: Transferring Knowledge from the Workplace to the Classroom (Hearing Volume No. 112–50)

On Thursday, November 3, 2011, the Subcommittee on Research and Science Education held the fourth in a series of hearings to highlight Science, Technology, Engineering, and Math (STEM) education activities across the Nation, their role in inspiring and educating future generations, and their contribution to our future economic prosperity. The purpose of this hearing was to examine approaches and programs that encourage and assist STEM professionals looking to transition their knowledge and skills from industry to a second career in teaching or to give back to classroom education as a mentor.

The Committee received testimony from: Dr. Michael Beeth, Professor, Department of Curriculum and Instruction, University of Wisconsin Oshkosh; Mrs. Christine Sutton, Secondary Math Teacher, Virgil I. Grissom High School, Huntsville City Schools, Alabama; Ms. Robin Willner, Vice President, Global Community Initiatives, Corporate Citizenship & Corporate Affairs, IBM Corporation; Mr. Jason Morrella, President, Robotics Education and Competition Foundation; and Dr. Jennifer Jones, Principal Clinical Scientist, Abbott Vascular.

SUBCOMMITTEE ON SPACE AND AERONAUTICS OVERSIGHT, INVESTIGATION, AND OTHER ACTIVITIES, INCLUDING SELECTED LEGISLATIVE ACTIVITIES

February 16, 2011—A Review of the Federal Aviation Administration's Research and Development Programs (Hearing Volume No. 112–1)

On Wednesday, February 16, 2011 the Space and Aeronautics Subcommittee held a hearing on the Federal Aviation Administration's (FAA) portfolio of research and development programs. Since 2007, Congress attempted to complete legislative work to reauthorize FAA including these programs. The Subcommittee examined the current suite of civil aviation research and development programs, including a focus on FAA's Next Generation Air Traffic System (NextGen) that is designed to modernize our nation's air traffic control system and is now in the early stages of deployment.

The Subcommittee received testimony from Ms. Victoria Cox, Vice President of FAA's Air Traffic Organization; the Honorable Calvin Scovel, Inspector General of the Department of Transportation; Dr. John Hansman, Professor of Aeronautics and Astronautics at the Massachusetts Institute of Technology and Chair of the FAA's advisory committee on research and development; and Mr. Peter Bunce, Chief Executive Officer of the General Aviation Manufacturers Association.

March 30, 2011—A Review of NASA's Exploration Program in Transition: Issues For Congress and Industry (Hearing Volume No. 112–8)

On Wednesday, March 30, 2011 the Subcommittee held an oversight hearing to review the National Aeronautics and Space Administration's (NASA's) Constellation program and examine the status of the transition to the Space Launch System (SLS) and Multi Purpose Crew Vehicle (MPCV).

Issues examined included the Administration's compliance with the FY 2011 Continuing Resolution and the Authorization Act's direction to extend and modify the Constellation contracts, and the status of NASA's transition report to Congress. The Subcommittee also examined key challenges and risks to the Nation's aerospace workforce and industrial base caused by delays or other disruptions in NASA's human spaceflight program.

The Subcommittee received testimony from Mr. Douglas Cooke, Associate Administrator, Exploration Systems Mission Directorate, NASA; Dr. Scott Pace, Director, Space Policy Institute, George Washington University; and Mr. James Maser, Chairman, Corporation Membership Committee, the American Institute of Aeronautics and Astronautics.

May 5, 2011—Office of Commercial Space Transportation's Fiscal Year 2012 Budget Request (Hearing Volume No. 112–16)

On Thursday, May 5, 2011, the Space and Aeronautics Subcommittee held a hearing to examine the FY 2012 budget request submitted by the Federal Aviation Administration (FAA), Office of

Commercial Space Transportation. The Subcommittee also examined the new initiatives in the request to expand the Office's roles and responsibilities. The FY 2012 budget request seeks $26.625 million, a 74 percent increase over the FY 2010 enacted level ($15.237 million) and a near 50 percent increase of the Office's workforce, asserting that NASA sponsored commercial cargo flights to the International Space Station, plus the expected start-up of commercial human sub-orbital flights, places new regulatory demands on their operations.

The Subcommittee received testimony from Dr. George Nield, FAA Associate Administrator for Commercial Space Transportation; Dr. Gerald Dillingham, Director of Civil Aviation Issues at the U.S. Government Accountability Office; and Professor Henry Hertzfeld, Research Professor of Space Policy and International Affairs at the George Washington University.

May 26, 2011—NASA's Commercial Cargo Providers: Are They Ready to Supply the Space Station in the Post-Shuttle Era? (Hearing Volume No. 112–20)

On Thursday, May 26, 2011, the Subcommittee on Space and Aeronautics held an oversight hearing to examine NASA's commercial cargo programs. The Subcommittee reviewed the progress made by the commercial providers, as well as the budgetary and programmatic impacts of schedule delays. Through the COTS and cargo re-supply services program NASA has provided its contractors nearly $1.25 billion thus far and has yet to accomplish the goals established for the initial $500 million program, intended to demonstrate commercial cargo delivery capabilities to the International Space Station from two commercial partners, Space Exploration Technologies (SpaceX) and Orbital Science Corporation (Orbital).

The Subcommittee received testimony from Mr. William Gerstenmaier, Associate Administrator, Space Operations Mission Directorate, NASA; Ms. Cristina Chaplain, Director, Acquisition and Sourcing Management, Government Accountability Office; Ms. Gwynne Shotwell, President, Space Exploration Technologies; and Mr. Frank L. Culbertson, Jr., Senior Vice President and Deputy General Manager, Advanced Programs Group, Orbital Sciences Corporation.

October 12, 2011—The International Space Station: Lessons from the Soyuz Rocket Failure and Return to Flight (Hearing Volume No. 112–43)

On Wednesday, October 12, 2011, the Subcommittee held an oversight hearing to examine the impacts of the Russian Soyuz launch vehicle failure on the safe operation and utilization of the International Space Station. The August 24th failure of a Soyuz-U launch vehicle carrying supplies to the International Space Station, coming about a month after the retirement of the Space Shuttle, underscores NASA's loss of the strategically important capability of U.S. human access to space. The hearing provided a current overview of the Russian Federal Space Agency's (Roscosmos) accident investigation, and NASA's involvement in the recertification and return-to-flight plans, as well as touching on the risks and implica-

tions of completely de-crewing the International Space Station. The Subcommittee also probed the basis and rationale for NASA's decision to resume the use of the Soyuz for transportation of its astronauts, including the advice received from independent external bodies. The Subcommittee received testimony from Mr. William Gerstenmaier, Associate Administrator, Human Exploration and Operations Mission Directorate, NASA; Lieutenant General Thomas P. Stafford, USAF (Ret.), Chairman, International Space Station Advisory Committee; and Vice Admiral Joseph W. Dyer, USN (Ret.), Chairman, Aerospace Advisory Panel.

November 15, 2011—Exploring Mars and Beyond: What's Next for Planetary Science? (Hearing Volume No. 112–51)

On Tuesday, November 15, 2011, the Subcommittee held an oversight hearing on the prospects for future exploration of Mars and implications of the current fiscal crisis to the future of U.S. planetary science.

On November 25, 2011, NASA launched the Mars Science Laboratory (MSL) to conduct a variety of experiments that will deepen our understanding of the history of the geological, atmospheric, and chemical composition of Mars and inform future missions, including human expeditions. Yet even as MSL begins its journey to Mars, the follow-on missions in 2016 and 2018—planned jointly with the European Space Agency (ESA)—have been scaled back significantly and could be on the brink of cancellation altogether. Until the Administration delivers the fiscal year 2013 budget request, NASA is left without definitive answers for European partners. This uncertainty has left ESA to explore other opportunities—perhaps with Russia—or to cancel part of the missions. The hearing provided a forum to discuss future plans for Mars exploration, the importance of collaborating on these missions with international partners and the importance of the U.S. maintaining global leadership and prestige by continuing to flagship missions in the future. The Subcommittee posed questions about the role OMB plays in making agency-level decisions on the types of mission NASA should pursue.

The Subcommittee received testimony from Dr. Jim Green, Planetary Science Division Director, Science Mission Directorate, NASA; and Dr. Steve Squyres, Chair, Committee on the Planetary Science Decadal Survey, National Academies of Science. The Office of Management and Budget was invited to testify but chose not to participate.

SUBCOMMITTEE ON TECHNOLOGY AND INNOVATION OVERSIGHT, INVESTIGATION, AND OTHER ACTIVITIES, INCLUDING SELECTIVE LEGISLATIVE ACTIVITIES

March 15, 2011—An Overview of Science and Technology Research and Development Programs and Priorities at the Department of Homeland Security (Hearing Volume No. 112–7)

On Tuesday, March 15, 2011, the Technology and Innovation Subcommittee held an oversight hearing to review activities at the Science and Technology Directorate of the Department of Homeland Security (DHS S&T) and the Domestic Nuclear Detection Office at the Department of Homeland Security (DNDO). The hearing focused on various elements of DHS S&T including the recent reorganization of the Directorate, the strategic planning process, stakeholder involvement in setting research priorities, and the role of research and development in the DHS S&T portfolio.

The Subcommittee received testimony from two witness panels; the first panel included the Under Secretary of the DHS S&T and the Director of DNDO; the second panel represented stakeholders of the DHS enterprise including the Director of the Douglas and Sarah Allison Center for Foreign Policy Studies at the Heritage Foundation; the President and Chief Executive Officer of the Homeland Security and Defense Business Council; and the Director of the Homeland Security and Justice Team at the U.S. Government Accountability Office.

March 31, 2011—The Role of Small Business in Innovation and Job Creation: the SBIR and STTR Programs (Hearing Volume No. 112–10)

On Thursday, March 31, 2011, the Subcommittee held a legislative hearing to examine the role of the Small Business Innovation Research (SBIR) and Small Business Technology Transfer (STTR) Programs in promoting small business innovation and commercialization of federally funded research and development.

These programs are due for reauthorization and the discussion draft of H.R. 1425, the "Creating Jobs Through Small Business Innovation Act of 2011", referred to the Committee, would reauthorize the programs through fiscal year 2014. The legislation, as introduced, would increase the size guidelines for award amounts for Phase I and Phase II SBIR and STTR awards, enable majority venture capital backed firms to participate in the program, and expands evaluation of the programs through increased data collection and sharing of best practices. Witnesses before the Subcommittee discussed their experience with the SBIR and STTR Programs and provided input on areas of potential improvement as the Committee considers H.R. 1425 and the reauthorization of these programs.

The Subcommittee received testimony from the following witnesses: Dr. Salley Rockey, Deputy Director for Extramural Research at the National Institutes of Health; Dr. Donald Siegel, Dean and Professor at the School of Business, University at Albany, State University of New York and a Member of the research team for the Committee for Capitalizing on Science, Technology,

and Innovation, National Research Council of the National Academies; Mr. Mark Crowell, Executive Director and Associate Vice President for Innovation Partnerships and Commercialization at the University of Virginia; Mr. Doug Limbaugh, Chief Executive Officer of Kutta Technologies; and Ms. Laura McKinney, President and Chief Executive Officer of Galois, Inc.

April 7, 2011—Are We Prepared? Assessing Earthquake Risk Reduction in the United States (Hearing Volume No. 112–13)

On Thursday, April 7, 2011, the Subcommittee on Technology and Innovation held a hearing, in preparation for reauthorization during the 112th Congress, to examine earthquake risk in the United States and to review efforts supporting the development of earthquake hazard reduction measures, and the creation of disaster-resilient communities.

The hearing examined various elements of the Nation's level of earthquake preparedness and resiliency including the U.S. capability to detect earthquakes and issue notifications and warnings, coordination between federal, state, and local stakeholders for earthquake emergency preparation, and research and development measures supported by the federal government designed to improve the scientific understanding of earthquakes.

The Committee received testimony from the Director of the National Earthquake Hazards Reduction Program (NEHRP) at the National Institute of Standards and Technology; the Director of the Washington State Emergency Management Association; the Chairman and Chief Executive Officer of Degenkolb Engineers and the Chairman of the NEHRP Advisory Committee; and an Oregon State Geologist and the Director of the Oregon Department of Geology and Mineral Industries.

April 13, 2011—Subcommittee Markup, H.R. 1425, the Creating Jobs through Small Business Innovation Act of 2011 (House Report 112–90, Part I)

On Wednesday, April 13, 2011 the Subcommittee met to consider H.R. 1425, the Creating Jobs Through Small Business Innovation Act of 2011. The Subcommittee ordered H.R. 1425 favorably forwarded to the Full Committee, as amended, by voice vote.

May 25, 2011—Protecting Information in the Digital Age: Federal Cybesecurity Research and Development (JOINT SUBCOMMITTEE HEARING) (Hearing Volume No. 112–19)

On Wednesday, May 25, 2011 the Subcommittee on Technology and Innovation and the Subcommittee on Research and Science Education held a joint legislative hearing to examine federal agency efforts to improve our national cybersecurity and prepare the future cybersecurity talent needed for national security, as it pertains to agencies within the Committee's jurisdiction and in the context of the Administration's overall priorities in science, space, and technology.

In the 111th Congress, the House passed the Cybersecurity Enhancement Act of 2010 (H.R. 4061). The bill was referred to the

Committee on Science and Technology and favorably reported on January 27, 2010. On February 4, 2010 H.R. 4061 was passed by the House by recorded vote of 422-5 (Roll Call No. 43).

H.R. 4061 required increased coordination and prioritization of Federal cybersecurity research and development activities and the development of cybersecurity technical standards. It sought to strengthen cybersecurity education and talent development and partnership activities. Witnesses were asked to provide comments on the legislation in advance of reintroduction during the 112th Congress.

The Subcommittees received testimony from: Dr. George O. Strawn, the Director of the National Coordination Office for Networking and Information Technology Research and Development Program; Dr. Farnam Jahanian, the Assistant Director of the Directorate for Computer and Information Science and Engineering at the National Science Foundation; Ms. Cita Furlani, Director of the Information Technology Laboratory at the National Institute of Standards and Technology; and Rear Admiral Michael Brown, the Director of Cybersecurity Coordination in the National Protection and Programs Directorate for the U.S. Department of Homeland Security.

June 14, 2011—Transportation Research Priorities: Maximizing Return on Investment of Taxpayer Dollars (Hearing Volume No. 112–23)

On Tuesday, June 14, 2011, the Subcommittee on Technology and Innovation held a hearing to review the research, development, and technology (RD&T) activities of the Department of Transportation. The hearing focused on issues related to the funding and prioritization of current research initiatives and how to maximize the efficiency of these activities. With the expiration of SAFETEA–LU in fiscal year 2009, the hearing also examined research issues to inform the current Federal surface transportation reauthorization effort.

The Committee received testimony from: The Honorable Peter Appel, Administrator, Research and Innovative Technology Administration, U.S. Department of Transportation; Mr. John Halikowski, Director, Arizona Department of Transportation, and Chair, American Association of State Highway and Transportation Officials Standing Committee on Research; Mr. David Gehr, Senior Vice President, Highway Market, Parsons Brinckerhoff, and Chairman, American Society of Civil Engineers Transportation Policy Committee; Dr. Irwin Feller, Professor Emeritus of Economics, Pennsylvania State University, and Senior Visiting Fellow, American Association for the Advancement of Science; Ms. Lynn Peterson, Transportation Policy Advisor, Office of Governor John Kitzhaber (OR).

July 13, 2011—Subcommittee Markup, H.R. 2463 , Border Security Technology Innovation Act of 2011

On Wednesday, July 13, 2011 the Subcommittee met to consider H.R. 2463, the Border Security Technology Innovation Act of 2011. The Subcommittee ordered H.R. 2463 favorably forwarded to the Full Committee, as amended, by voice vote.

September 8, 2011—Empowering Consumers and Promoting Innovation through the Smart Grid (Hearing Volume No. 112–32)

On Thursday, September 8, 2011 the Subcommittee on Technology and Innovation of the Committee on Science, Space, and Technology held a hearing to examine the status of efforts led by the National Institute of Standards and Technology to coordinate the development of a common framework as well as the open standards necessary to ensure a secure and interoperable nationwide smart grid. The hearing provided the Subcommittee with witness perspectives on the actions necessary to drive the development of innovative smart grid technologies while protecting consumer interests.

The Committee received testimony from: Dr. George Arnold, National Coordinator for Smart Grid Interoperability, National Institute of Standards and Technology; The Honorable Donna Nelson, Chairman, Public Utility Commission of Texas; Mr. John Caskey, Assistant Vice President, Industry Operations, National Electrical Manufacturers Association; and Mr. Rik Drummond, Chief Executive Officer and Chief Scientist, The Drummond Group.

September 21, 2011—The Next IT Revolution? Cloud Computing Opportunities and Challenges (Hearing Volume No. 112–36)

On Wednesday, September 21, the Subcommittee on Technology and Innovation of the Committee on Science, Space, and Technology held a hearing to examine the potential opportunities and challenges associated with cloud computing, and to assess the appropriate role of the Federal Government in the cloud computing enterprise. The hearing focused on innovation and efficiency opportunities associated with cloud computing, challenges restraining the widespread adoption of cloud computing, and federal cloud computing adoption initiatives.

The Committee received testimony from: Mr. Michael Capellas, Chairman and CEO, Virtual Computing Environment Company; Dr. Dan Reed, Corporate Vice President, Technology Policy Group, Microsoft Corporation; Mr. Nick Combs, Federal Chief Technology Officer, EMC Corporation; Dr. David McClure, Associate Administrator, Office of Citizen Services and Innovative Technologies, General Services Administration.

November 2, 2011—Creating and Growing New Business: Fostering U.S. Innovation (Hearing Volume No. 112–48)

On Wednesday, November 2, 2011, the Subcommittee on Technology and Innovation of the Committee on Science, Space, and Technology held a hearing to examine the current state of small, innovative startup companies, and their roles as engines of both transformative innovations and job creation. The hearing focused on the obstacles limiting individuals with the ideas and desire to either start a new company or take a fledgling company to a place of rapid growth.

The Committee received testimony from: Mr. Brink Lindsey, Senior Scholar in Research and Policy, Ewing Marion Kauffman Foun-

dation; Mr. Julian Mann, Co-Founder and Vice President, Product Development and Research, Skybox Imaging; Mr. Ray Rothrock, Partner, Venrock; Mr. Steve Dubin, Former CEO, Martek Biosciences, and Senior Advisor to DSM Nutritional Products.

November 15, 2011—Subcommittee Markup, Committee Print , Natural Hazards Risk Reduction Act of 2011

On Tuesday, November 15, 2011 the Subcommittee met to consider the Committee Print, the Natural Hazards Risk Reduction Act of 2011. The Subcommittee ordered the Committee Print favorably forwarded to the Full Committee, as amended, by a record vote of 10 yeahs to 4 nays.

Oversight Plan

RALPH M. HALL, TEXAS
CHAIRMAN

EDDIE BERNICE JOHNSON, TEXAS
RANKING MEMBER

U.S. HOUSE OF REPRESENTATIVES

COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

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February 10, 2011

The Honorable Darrell Issa
Chairman
Committee on Oversight and Government Reform
2157 Rayburn House Office Bldg.
Washington, D.C. 20515

The Honorable Daniel E. Lungren
Chairman
Committee on House Administration
1320 Longworth House Office Bldg.
Washington, DC 20515

Dear Chairman Issa and Chairman Lungren:

Enclosed herewith please find the oversight plan of the Committee on Science, Space, and Technology, adopted February 10, 2011, pursuant to House Rule X (2)(d). Further, an electronic version of the oversight plan, in Mircosoft Word format, was received by Molly Boyl, Parliamentarian for Committee on Oversight and Government Reform, today.

If there are any questions or concerns regarding the submission of this plan, please direct them to the Committee's Chief Counsel, Margaret Caravelli or Deputy Chief Counsel, Katy Crooks. Thank you for your attention to this matter.

Sincerely,

Ralph M. Hall

Ralph M. Hall
Chairman

cc: The Honorable Eddie Bernice Johnson

Enclosure

U.S. HOUSE OF REPRESENTATIVES COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY OVERSIGHT PLAN FOR THE 112TH CONGRESS (INCLUDING ACCOMPLISHMENTS AS OF DECEMBER 31, 2011)

House Rule X sets the Committee's legislative jurisdiction while also assigning broad general oversight responsibilities (Appendix A). Rule X also assigns the 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 the special function entrusted to it and will continue to tackle troubled programs and search for waste, fraud, abuse, and mismanagement, in non-military research and development programs regardless of where they may be found.

Much of the oversight work of the Committee is carried out by and through the Investigations and Oversight Subcommittee. However, oversight is required for and necessarily built into every Subcommittee and the full Committee. All elements of the Committee take their oversight charge seriously, and those elements have worked cooperatively in the past, as they will in the future, to meet our oversight responsibilities.

The Committee also routinely works with the Government Accountability Office (GAO) and the Inspectors General of our agencies to maintain detailed awareness of the work of those offices. The Committee currently has numerous outstanding requests with the GAO and more will be developed in the coming weeks and months. Many of these requests are bipartisan, having been signed by both the Chairmen and Ranking Members of our Committee and Subcommittees, or include multiple Committee Chairmen where there are shared interests. The Committee also works collaboratively with the National Academies of Science, the Congressional Research Service, the Office of Government Ethics, and the Office of Special Counsel, as well as various other independent investigative and oversight entities.

Oversight is commonly driven by emerging events. The Committee will address burgeoning issues and topics as they transpire. Nevertheless, the Committee feels that the work contained in this plan reflects an accurate portrayal of its oversight intentions as of January, 2011.

Space and Aeronautics

National Aeronautics and Space Administration (NASA) human space flight program

The Committee will continue to provide oversight of NASA's human spaceflight program as it undergoes a period of uncertainty and transition following various Administration proposals. Specific attention will be paid to the feasibility of NASA's plans and priorities relative to their resources and requirements.

Full Committee Hearing
The National Aeronautics and Space Administration Fiscal Year 2012 Budget Request
March 2, 2011

Full Committee Hearing
A Review of NASA's Space Launch Systems
July 12, 2011

Full Committee Hearing
NASA Human Spaceflight Past, Present, and Future: Where Do We Go From Here?
September 22, 2011

Full Committee Hearing
NASA's Commercial Crew Development Program: Accomplishments and Challenges
October 26, 2011

Federal Aviation Administration (FAA) Commercial Space Transportation

FAA's Office of Commercial Space Transportation (OCST) regulates, including the licensing of commercial launch vehicles. An area of increasing interest is the emergence of a number of fledgling commercial human suborbital space flight ventures. In addition to its oversight of the FAA's OCST, the Committee will examine the progress of the emerging personal space flight industry, as well as the challenges it faces.

Space & Aeronautics Subcommittee Hearing
Office of Commercial Space Transportation's Fiscal Year 2012 Budget Request
May 5, 2011

NASA Earth and Space Science

The Committee will monitor NASA's efforts to prioritize, plan, launch, and operate space and earth science missions with cost and schedule. Particular attention will be paid to programs that exceed cost estimates to ensure they do not adversely impact the development and launch of other missions. The Committee will also examine the impact of large increases in funding for the Earth Science Directorate relative to funding requested for other science disciplines.

Space & Aeronautics Subcommittee Hearing
Exploring Mars and Beyond: What's Next for U.S. Planetary Science
November 15, 2011

Full Committee Hearing
The Next Great Observatory: Assessing the James Webb Space Telescope
December 7, 2011

FAA Research and Development (R&D) activities

The Committee will oversee the R&D activities at the FAA to ensure that they lead to improvements in FAA mission performance. The Committee has a particular interest in the performance of the Joint Planning and Development Office (JPDO), and FAA's management of its Next Generation Air Transportation System (NextGen) program.

Space & Aeronautics Subcommittee Hearing
A Review of the Federal Aviation Administration's Research and Development Programs
February 16, 2011

Commercial Orbital Transportation Services (COTS)

The Committee will evaluate the ability, cost, safety, and reliability of commercial providers to meet NASA requirements to deliver cargo to the ISS. A similar hearing will be held later this Congress on the Agency's commercial crew program.

Space & Aeronautics Subcommittee Hearing
NASA's Commercial Cargo Providers: Are They Ready to Supply the Space Station in the Post-Shuttle Era?
May 26, 2011

Space Shuttle transition

As the Space Shuttle retires, the Committee will monitor the transition of its highly skilled workforce to other programs and projects, as there is potential for major workforce transition issues.

Space & Aeronautics Subcommittee Hearing
A Review of NASA's Exploration Program in Transition: Issues for Congress and Industry
March 30, 2011

International Space Station (ISS) utilization and operation

Plans for operation and utilization of the ISS continue to draw the Committee's attention as NASA attempts to fully utilize the unique research opportunities that the facility offers, while exclusively relying on logistical services from commercial and foreign providers. Given the significant national investment to date in the facility, Congress has directed that NASA maintain a strong research and technology program to take advantage of ISS's unique capabilities.

Space & Aeronautics Subcommittee Hearing

The International Space Station: Lessons from the Soyuz Rocket Failure and Return to Flight
October 12, 2011

Aeronautics Research

An important area for oversight will be NASA's aeronautics research and development program. The Committee plans to examine NASA's ability to support the interagency effort to modernize the nation's air traffic management system, as well as its ability to undertake important long-term R&D on aircraft safety, emissions, noise, and energy consumption—R&D that will have a significant impact on the quality of life and U.S. competitiveness in aviation.

NASA contract and financial management

A perennial topic on GAO's high risk series, NASA financial management will continue to receive attention from the Committee. The Committee will also monitor NASA's contract management to ensure acquisitions are handled appropriately.

Near Earth Objects

Congress provided guidance to NASA relating to Near Earth Objects in its last two authorization bills. The Committee will continue to monitor NASA's compliance with that direction, as well as determine whether additional oversight is necessary.

Within the Space and Aeronautics Subcommittee's jurisdiction, activities warranting further review include costs associated with cancellation of the Constellation program, NASA's approach to develop and fund a successor to the Space Shuttle, and investment in NASA launch infrastructure. NASA has not clearly articulated what types of future human space flight missions it wishes to pursue, or their rationale.

Energy and Environment

Full Committee Hearing
The Department of Energy Fiscal Year 2012 Research and Development Budget Request
March 3, 2011

Full Committee Hearing
An Overview of the Fiscal Year 2012 Research and Development Budget Proposals at the National Oceanic and Atmospheric Administration and the Environmental Protection Agency
March 10, 2011

Department of Energy (DOE) Office of Science

DOE plays a leading role in supporting basic research in the physical sciences and driving long-term innovation and economic growth. The Committee will conduct oversight of Office of Science programs to review prioritization across, and management within, its major program areas. Special attention will also be given to the cost, operation, and maintenance of DOE's existing and planned major facilities.

Energy & Environment Subcommittee Hearing
Energy Critical Elements: Identifying Research Needs and Strategic Priorities
December 7, 2011

National Laboratories

The Committee will continue to oversee the Department's laboratory complex, which provides a wide range of important R&D capabilities. The management and upkeep of the national laboratories' aging facilities, particularly the clean-up of radioactive and hazardous material sites, remains a continuing concern for the Committee. Efforts will continue to assure that the government meets its responsibilities to control risks in and around these facilities.

DOE Office of Energy Efficiency and Renewable Energy (EERE)

After recently receiving significant increases in funding, the Committee will provide close oversight to ensure that programs are managed efficiently, duplication is limited, and funding was allocated appropriately and effectively.

Energy & Environment Subcommittee Hearing
An Examination of DOE's Clean Technology Programs
June 15, 2011

Fossil Energy R&D

Fossil energy will remain a crucial aspect of our energy portfolio for the foreseeable future. In the 112th Congress, the Committee will continue to ensure that fossil fuel R&D programs are appropriately focused and managed efficiently. Expected areas of oversight include carbon capture and sequestration activities (including FutureGen) and oil and gas R&D efforts.

Full Committee Hearing
Review of Hydraulic Fracturing Technology and Practices
May 11, 2011

Energy & Environment Subcommittee Hearing
Advancing Coal Research and Development for a Secure Energy Future
October 13, 2011

DOE loan guarantees

Large increases in funding for DOE loan guarantees necessarily call for greater attention by the Committee. Ensuring the funding is appropriately prioritized and spent effectively will be a priority in the 112th Congress.

Fusion

Technical challenges have hampered our ability to harness nuclear fusion as an energy source. The Committee will continue to monitor progress toward nuclear fusion, specifically international cooperation and progress in the International Thermonuclear Energy Reactor (ITER).

DOE Contract Management

DOE programs have come under frequent scrutiny for contract management practices. GAO designated DOE's contract management as high-risk in 1990 and continues to identify areas of potential waste, fraud, and abuse.

Nuclear R&D

The Committee will provide oversight of the nation's nuclear R&D activities with the goal of unleashing the unlimited potential of emissions-free energy. DOE, the Nuclear Regulatory Commission, and the power industry hope to accelerate reactor construction as soon as possible. The Committee will examine how DOE R&D can best contribute to this goal through the advancement of various nuclear energy technologies.

Joint Subcommittee Hearing
Investigations & Oversight and Energy & Environment
Nuclear Energy Risk Management
May 4, 2011

Joint Subcommittee Hearing
Investigations & Oversight and Energy & Environment
Review of the Blue Ribbon Commission on America's Nuclear Future Draft Recommendations
October 27, 2011

Science and R&D at the Environmental Protection Agency (EPA)

The Committee will continue to provide oversight of EPA's management of science, and its use of science in the decision making process, including the evaluation of quality assurance measures. In particular, the Committee will examine how to better integrate science into the Administration's regulatory decision-making process. EPA's decisions affect every state in the Union and we must demand that EPA's actions are supported by valid and complete science.

Energy & Environment Subcommittee Hearing
Hitting the Ethanol Blend Wall: Examining the Science on E15
July 7, 2011

Full Committee Hearing
Out of Thin Air: EPA's Cross-State Air Pollution Rule
September 15, 2011

Energy & Environment Subcommittee Hearing
Quality Science for Quality Air
October 4, 2011

Energy & Environment Subcommittee Hearing
Conflicts and Unintended Consequences of Motor Fuel Standards
November 2, 2011

Energy & Environment Subcommittee Hearing
Fostering Quality Science at EPA: The Need for Common Sense Reform
November 17, 2011

Energy & Environment Subcommittee Hearing
Fostering Quality Science at EPA: Perspectives on Common Sense Reform
November 30, 2011

EPA Laboratories and Libraries

The Committee will evaluate the effectiveness and utility of EPA resources and infrastructure to ensure the Agency can fully meet its statutory requirements.

Oil Spill Response and Recovery

The Committee will continue its oversight of the cause and impact of the oil spill, as well as the response and recovery efforts associated with the accident. Oversight efforts will build upon the various independent investigations including the President's National Commission on the BP Deepwater Horizon Oil Spill and Offshore Drilling Report, as well as reports from other entities such as the National Academies.

Energy & Environment Subcommittee Hearing
Offshore Drilling Safety and Response Technologies
April 6, 2011

Federal Climate Research Activities

The Committee will continue to monitor programs to address climate change issues across the Federal government to ensure that existing programs are necessary, appropriately focused, effectively coordinated, and properly organized to prevent duplication of efforts and waste taxpayer resources. We must also insist that decisions on climate activities are based on solid and thorough science.

Full Committee Hearing
Climate Change: Examining the Processes Used to Create Science and Policy
March 31, 2011

Energy & Environment Subcommittee Hearing
Examining NOAA's Climate Service Proposal
June 22, 2011

Federal Ocean Research Activities

The Committee will evaluate the President's National Policy for the Stewardship of the Ocean, Coasts, and Great Lakes, which adopted the Interagency Ocean Policy Task Force recommendations aimed at addressing the future of our oceans. The Committee will monitor the implementation of this plan, as well as Federal oceans R&D policy generally.

Energy & Environment Subcommittee Hearing
Harmful Algal Blooms: Action Plans for Scientific Solutions
June 1, 2011

Specific areas of interest within the Energy and Environment Subcommittee's portfolio warranting further review include major projects and facilities construction at the Department of Energy and accounts receiving significant recent increases, such as interagency climate science activities, EPA research programs, and DOE energy efficiency and renewable energy technology development programs.

Technology and Innovation

Department of Homeland Security (DHS) Science and Technology

The Committee will continue to monitor the maturation of DHS, particularly the reorganization of the Science and Technology Directorate, and the research and technology programs associated with the Domestic Nuclear Detection Office.

Technology & Innovation Subcommittee Hearing
An Overview of Science and Technology Research and Development Programs and Priorities at the Department of Homeland Security
March 15, 2011

National Institute of Standards and Technology (NIST) reorganization

The Committee will conduct program oversight for NIST, and other programs in the Department of Commerce, paying special attention to the evaluation of their impact on the private sector. The Committee is aware that the nation's competitive position can be dramatically improved, or weakened, depending on how standards for different products and processes are developed. NIST is the only federal agency with long-term expertise working in this arena, and the Committee is concerned that the cooperation on standards development across agencies is less than optimal. It is the Committee's intention to review the government's role in standard setting with a focus on collaboration across Federal agencies.

Full Committee Hearing
An Overview of the Fiscal Year 2012 Budget Proposals at the National Science Foundation and the National Institute of Standards and Technology
March 11, 2011

Department of Transportation (DOT) R&D programs

The Committee will conduct oversight with regard to surface transportation R&D programs within the federal government, particularly focused on effectiveness and redundancy.

Technology & Innovation Subcommittee Hearing
Transportation Research Priorities: Maximizing Return on Investment of Taxpayer Dollars
June 14, 2011

American economic competitiveness

The nation faces a challenge for economic and technological preeminence. The Committee will evaluate steps to reduce federal barriers to domestic and international competitiveness for U.S. companies.

Technology & Innovation Subcommittee Hearing
The Role of Small Business in Innovation and Job Creation: The SBIR and STTR Programs
March 31, 2011

Technology & Innovation Subcommittee Hearing
The Next IT Revolution? Cloud Computing Opportunities and Challenges
September 21, 2011

Technology & Innovation Subcommittee Hearing
Creating and Growing New Business: Fostering U.S. Innovation
November 2, 2011

Technology transfer

The Committee will seek recommendations for continued improvements in the technology transfer incentives built into law by the Bayh-Dole and Stevenson-Wydler acts and the Small Business Innovation Research program.

US Fire Administration

The U.S. Fire Administration is responsible for the Assistance to Firefighters grant program, and the Committee has closely monitored the direction of this program as the organizational structure of the Department has coalesced. Continuing attention is important to assure first responders have the necessary support and training.

Natural hazards monitoring and impact reduction

The Committee has supported interagency research programs to identify improvements in building and infrastructure designs to protect and provide early warning for natural disasters. Evaluating further needs for these and other hazard types is ongoing.

Technology & Innovation Subcommittee Hearing
Are We Prepared? Assessing Earthquake Risk Reduction in the United States
April 7, 2011

Cybersecurity

The Committee has continuously stressed the protection of the nation's cyber-infrastructure, underpinning economic and public services. The Committee will continue to provide oversight of how NIST and DHS address this important topic.

Joint Subcommittee Hearing
Research & Science Education and Technology & Innovation
Protecting Information in the Digital Age: Federal Cybersecurity Research and Development Efforts
May 25, 2011

Health information technology

Real improvements in the cost and accuracy of health care can be achieved through enhanced integration of health data with IT systems. NIST has a critical role to play through setting standards that will protect patient privacy and minimize private sector waste. The Committee has been active in this area and will continue to work to ensure that the Nation realizes the gains in efficiency and safety implicit in an effective roll out of Health IT.

Within the Technology and Innovation's Subcommittee's jurisdiction, there are several activities supported by the National Institute of Standards and Technology (NIST) which would be better supported by the private sector. Among them is a grant program for building construction at universities and nonprofit organizations. There are also other programs administered by the Department of Commerce and Department of Transportation which could be streamlined and refined. The Committee will ensure that all funding for these programs is awarded competitively and only renewed after performance is assessed. In the area of economic competitiveness, the Committee must ensure that the Small Business Innovation Research Program is focused on innovations that industry finds too risky to invest in and to increase oversight of outcomes of program and consider reductions. Finally, there are substantial federal funds being provided for staffing local fire personnel that need to be examined as to whether this is a more appropriate role for local communities to support.

Research and Science Education

National Science Foundation (NSF)

The Committee will continue to oversee the NSF. With the recent reauthorization of the America Creating Opportunities to Meaningfully Promote Excellence in Technology, Education, and Science (COMPETES) Act, special attention will be paid to the implementation, execution, and effectiveness of these new programs. While supportive of the overall goals of the legislation, there are concerns with several add-ons, especially those that were added to the bill without the proper legislative process. Further, the Committee will look for ways to trim duplicative and unused programs in an effort to maximize available resources.

Full Committee Hearing
An Overview of the Fiscal Year 2012 Budget Proposals at the National Science Foundation and the National Institute of Standards and Technology
March 11, 2011

Research & Science Education Subcommittee Hearing
Social, Behavioral, and Economic Science Research: Oversight of the Need for Federal Investments and Priorities for Funding
June 2, 2011

Research & Science Education Subcommittee Hearing
The Merit Review Process: Ensuring Limited Federal Resources are Invested in the Best Science
July 26, 2011

Science, Technology, Education and Mathematics (STEM) K–12 oversight

STEM education is a vital component in the evolving economy. Members of the Committee have expressed interests in improving STEM education activities from pre-K through graduate education and beyond, in order to cultivate a top-notch future scientific and technical workforce, including well-qualified teachers in STEM fields. Determining the appropriate forms of federal support to achieve these outcomes will be of great importance to the Committee.

Full Committee Hearing
STEM Education in Action: Learning Today . . . Leading Tomorrow
June 16, 2011

Full Committee Hearing
STEM in Action: Inspiring the Science and Engineering Workforce of Tomorrow
September 13, 2011

Full Committee Hearing—Field Hearing
STEM in Education In Action: Communities Preparing for Jobs of the Future
September 26, 2011

Research & Science Education Subcommittee Hearing
What Makes for Successful K–12 STEM Education: A Closer Look at Effective STEM Education Approaches
October 12, 2011

Research & Science Education Subcommittee Hearing
STEM in Action: Transferring Knowledge from the Workplace to the Classroom
November 3, 2011

Academic/Industry Partnerships

The Committee will review the effectiveness and consequences of academic/industry partnerships. Agencies and universities are again debating the level of scrutiny and control that should be applied to research in light of the possible use of new findings by adversaries. At the same time, industry questions the value of controls on technology sales and argues that such controls disproportionately limit American firms in competition for global sales. How to fairly balance these competing interests remains a perennial subject for Committee oversight.

U.S. Antarctic and Arctic Programs

The U.S. has conducted operations on the Antarctic continent under the terms of the Antarctic Treaty System since 1959, and U.S. research activities in the Arctic predate that. The NSF serves as the steward for U.S. interests in Antarctica. Research in these extreme regions is a fundamental component to understanding the Earth and its systems. The future of the icebreaker fleet that provides vital

logistical support for NSF activities in the harsh polar environments continues to be of concern.

NSF Major Research Equipment and Facilities Construction (MREFC) program

The Committee will continue to monitor and oversee NSF's MREFC program, including how priorities for projects are developed, long-term budgeting for such priorities, and decision-making with regards to ever-changing scientific community needs.

Government-wide R&D initiatives in emerging fields

The Committee will continue to oversee the collaboration and interagency process associated with emerging fields such as networking and information technology, biotechnology, cybersecurity, and nanotechnology,

Full Committee Hearing
An Overview of the Administration's Federal Research and Development Budget for Fiscal Year 2012
February 17, 2011

Research & Science Education Subcommittee Hearing
Nanotechnology: Oversight of the National Nanotechnology Initiative and Priorities for the Future
April 14, 2011

Joint Subcommittee Hearing
Research & Science Education and Technology & Innovation
Protecting Information in the Digital Age: Federal Cybersecurity Research and Development Efforts
May 25, 2011

Research & Science Education Subcommittee Hearing
Oversight of the Networking and Information Technology Research and Development Program and Priorities for the Future
September 21, 2011

The innovative work of the National Science Foundation is important to the economic prosperity and competitiveness of the United States. However, there are various activities within the Foundation that may go beyond the mission of the agency and require more scrutiny and potential cuts in order to ensure that federal investments in basic science remain primarily focused on actual research of benefit to the Nation. Likewise, while STEM education is critical to maintaining the scientific and technical workforce essential to our competitiveness, many duplicative, wasteful, or simply unused programs exist across a number of federal agencies and must be more closely examined and, where warranted, adjusted.

Investigations and Oversight

Yucca Mountain Nuclear Waste Repository closure decision

The Committee will evaluate DOE's decision to close the Yucca Mountain Nuclear Waste Repository.

Joint Subcommittee Hearing
Investigations & Oversight and Energy & Environment
Review of the Blue Ribbon Commission on America's Nuclear Future Draft Recommendations
October 27, 2011

NOAA satellite modernization

The Committee will continue its close monitoring of satellite modernization at the National Oceanic and Atmospheric Administration (NOAA). The restructuring of the National Polar-orbiting Environmental Satellite System (NPOESS), and the creation of the Joint Polar Satellite System (JPSS) will continue to draw the Committee's attention, as well as the Geostationary Operational Environmental Satellites, and the broader issues of research-to-operations planning and data continuity.

Joint Subcommittee Hearing
Investigations & Oversight and Energy & Environment
From NPOESS to JPSS: An Update on the Nation's Restructured Polar Weather Satellite Program
September 23, 2011

Critical minerals, materials, and isotopes

The Committee will provide oversight of materials, minerals, and isotopes that are critical to U.S. national interests. Recent shortages and supply concerns associated with helium-3, rare earth elements, californium-251, and plutonium-238 highlight the need to be ever vigilant in our monitoring of critical materials, mineral, and isotopes.

Investigations & Oversight Subcommittee Hearing
The Federal Perspective on a National Critical Materials Strategy
June 14, 2011

American Recovery and Reinvestment Act (ARRA) oversight

The Committee will provide oversight of funding associated with ARRA to ensure that waste, fraud, abuse and mismanagement is minimized, and to evaluate whether funding was aligned to achieve agency mission objectives through measurable outcomes.

Investigations & Oversight Subcommittee Hearing
Stimulus Oversight: An Update on Accountability, Transparency, and Performance
November 30, 2011

Risk assessment

As the number and complexity of regulations increases throughout federal and state governments, the risk assessments that inform those decisions are garnering more attention. The Committee will continue to oversee how risk assessments are developed and how they are used in the regulatory process to ensure that policies are based on the best science available.

Investigations & Oversight Subcommittee Hearing
EPA's IRIS Program: Evaluating the Science and Process Behind Chemical Risk Assessment
July 14, 2011

Scientific integrity

The Committee will continue to collect and examine allegations of intimidation of science specialists in federal agencies, suppression or revisions of scientific finding, and mischaracterization of scientific findings because of political or other pressures. The Committee's oversight will also involve the development and implementation of scientific integrity principles within the executive branch.

Full Committee Hearing
Impacts of the LightSquared Network on Federal Science Activities
September 8, 2011

Additional Science Activities

Pursuant to House Rule X, the Committee will review and study on a continuing basis laws, programs, and Government activities relating to non-military research and development. This will include agencies both in, and out, of the Committee's legislative jurisdiction.

Investigations & Oversight Subcommittee Hearing
The Endangered Species Act: Reviewing the Nexus of Science and Policy
October 13, 2011

Agency compliance with Congressional directives and requests

The Committee will be ever vigilant in its oversight to ensure that recent authorization acts, appropriation acts, and other congressional directions are complied with appropriately.

Emerging Issues

Additional matters as the need arises and as provided for under House Rule X, clause 3(k).

Investigations & Oversight Subcommittee Hearing
Behavioral Science and Security: Evaluating TSA's SPOT Program
April 6, 2011

Investigations & Oversight Subcommittee Hearing
Green Jobs and Red Tape: Assessing Federal Efforts to Encourage Employment
April 13, 2011

Joint Subcommittee Hearing
Investigations & Oversight and Energy & Environment Subcommittee Hearing
Nuclear Energy Risk Management
May 4, 2011

Collaboration

The Committee maintains a rich relationship with its Inspectors General, the Government Accountability Office (GAO), the National Academies of Science, the Congressional Research Service, the Office of Government Ethics, and the Office of Special Counsel, as well as various other independent investigative and oversight entities. The Committee will continue to work with those offices, relying on them to identify major mismanagement issues, using their reports in hearings, and working with the High Risk Series published by GAO to guide hearings and inquiries. The Committee already has several outstanding requests, many of which are bipartisan or cross-Committee, which reflects the collaborative nature of much of the Committee's oversight work.

The Committee also welcomes input from the public and whistleblowers. The Committee has developed many relationships with whistleblowers in agencies. The Committee has taken positive steps to try to protect them from retaliation and has been reasonably successful in that role. Most of the whistleblowers who come to the Committee remain anonymous—sometimes even from the Committee.

The Committee will retain its open-door policy regarding whistleblowers, whether they are contractors or government employees, and they should rest assured that we will never betray a confidence. Even if the information offered turns out not to be useful, as sometimes happens, the Committee will remain a haven for such figures and we understand the absolute necessity for citizens to feel safe in their communications with Congress.

Appendix A

HOUSE RULE X
GOVERNING JURISDICTION OF
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES
FOR THE ONE HUNDRED TWELFTH CONGRESS

COMMITTEES AND THEIR LEGISLATIVE JURISDICTIONS

1. There shall be in the House the following standing committees, each of which shall have the jurisdiction and related functions assigned by this clause and clauses 2, 3, and 4. All bills, resolutions, and other matters relating to subjects within the jurisdiction of the standing committees listed in this clause shall be referred to those committees, in accordance with clause 2 of rule XII, as follows:

(p) Committee on Science, Space, and Technology.

(1) All energy research, development, and demonstration, and projects therefor, and all federally owned or operated nonmilitary energy laboratories.

(2) Astronautical research and development, including resources, personnel, equipment, and facilities.

(3) Civil aviation research and development.

(4) Environmental research and development.

(5) Marine research.

(6) Commercial application of energy technology.

(7) National Institute of Standards and Technology, standardization of weights and measures, and the metric system.

(8) National Aeronautics and Space Administration.

(9) National Space Council.

(10) National Science Foundation.

(11) National Weather Service.

(12) Outer space, including exploration and control thereof.

(13) Science scholarships.

(14) Scientific research, development, and demonstration, and projects therefor.

SPECIAL OVERSIGHT FUNCTIONS

3(k) The Committee on Science, Space, and Technology shall review and study on a continuing basis laws, programs, and Government activities relating to nonmilitary research and development.

Appendix B

HEARINGS HELD PURSUANT TO CLAUSES 2(n), (o), OR (p) OF RULE XI

2(n) Each standing committee, or a subcommittee thereof, shall hold at least one hearing during each 120 day period following the establishment of the committee on the topic of waste, fraud, abuse, or mismanagement in Government programs which that Committee may authorize. The hearing shall focus on the most egregious instances of waste, fraud, abuse or mismanagement as documented by any report the Committee has received from a Federal Office of the Inspector General or the Comptroller General of the United States.

Investigations & Oversight Subcommittee Hearing
Stimulus Oversight: An Update on Accountability, Transparency, and Performance
November 30, 2011

On Wednesday, November 30, 2011 at 10:00am, the Subcommittee on Investigations and Oversight met to receive an update on accountability, transparency, and performance issues associated with the American Recovery and Reinvestment Act (ARRA). The hearing focused on efforts by agency Inspector General Offices, the Government Accountability Office, and the Recovery, Accountability, and Transparency Board to monitor ARRA funding. The Subcommittee previously held hearings on ARRA funding on March 19, 2009, and May 5, 2009.

Witnesses discussed lessons learned in managing ARRA funds, transparency in awarding funds, assessing risks associated with these investments, and methods for improving the management of taxpayer dollars.

The committee received testimony from: Mr. Frank Rusco, Director, Natural Resources and Environment Team, General Accountability Office; Mr. Michael Wood, Director, Recovery, Accountability, and Transparency Board; The Honorable Gregory Friedman, Inspector General, U.S. Department of Energy; The Honorable Todd Zinser, Inspector General, U.S. Department of Commerce; Ms. Allison Lerner, Inspector General, National Science Foundation; and Ms. Gail Robinson, Deputy Inspector General, National Aeronautics and Space Administration.

Investigations & Oversight Subcommittee Hearing
Behavioral Science and Security: Evaluating TSA's SPOT Program
April 6, 2011

On Wednesday, April 6, the Subcommittee on Investigations and Oversight of the Committee on Science, Space, and Technology met to examine the Transportation Security Administration's (TSA) efforts to incorporate behavioral science into its transportation security architecture. The Department of Homeland Security (DHS) has been criticized for failing to scientifically validate the Screening of Passengers by Observational Techniques (SPOT) program before operationally deploying it. SPOT is a TSA program that employs Behavioral Detection Officers (BDO) at airport terminals for the purpose of detecting behavioral based indicators of threats to aviation security.

In May 2010, GAO issued a report titled "Efforts to Validate TSA's Passenger Screening Behavior Detection Program Underway, but Opportunities Exist to Strengthen Validation and Address Operational Challenges" in response to a Congressional request to review the SPOT program. The report found a lack of scientific consensus on behavioral detection principles and a lack of justification for expanding the SPOT program. GAO also noted that TSA generally does not use all intelligence databases to identify or investigate persons referred through SPOT. In addition, TSA has no database for BDOs to record and analyze information on passengers identified under SPOT.

Witnesses discussed their views on the validity of behavioral science and their experience with SPOT and related programs.

The Committee received testimony from: Mr. Stephen Lord, Director, Homeland Security and Justice Issues, Government Accountability Office; Mr. Larry Willis, Program Manager, Homeland Security Advanced Research Projects Agency, Science and Technology Directorate, Department of Homeland Security; Dr. Paul Ekman, Professor Emeritus of Psychology, University of California, San Francisco, and President and Founder, Paul Ekman Group, LLC; Dr. Maria Hartwig, Associate Professor, Department of Psychology, John Jay College of Criminal Justice; Dr. Phil-

ip Rubin, Chief Executive Officer, Haskins Laboratories; and Lieutenant Detective Peter J. DiDomenica, Boston University Police.

2(o) Each committee or a Subcommittee thereof shall hold at least one hearing in any session in which the committee has received disclaimers of agency financial statements from auditors of any Federal agency that the committee may authorize to hear testimony on such disclaimers from representatives of such agency.

2(p) Each standing committee or subcommittee thereof shall hold at least one hearing on issues raised by reports issued by the Comptroller General of the United States indicating that federal programs or operations that the Committee may authorize are at high risk for waste, fraud, and mismanagement, known as the "high risk list" or the "high risk series."

Investigations & Oversight Subcommittee Hearing
EPA's IRIS Program: Evaluating the Science and Process Behind Chemical Risk Assessment
July 14, 2011

On Thursday, July 14, 2011 at 10:00am, the Subcommittee on Investigations and Oversight met to examine the process behind the development of EPA's IRIS assessments. The hearing was prompted in part by the National Academies' National Research Council report on EPA's formaldehyde assessment which reiterated several previous criticisms of EPA's IRIS process and provided recommendations for improvement. The goal of the hearing was to better understand the development of IRIS assessments, whether EPA plans on adopting the NAS' recommendations, and whether or not EPA assessments are based on the best available evidence and evaluated in accordance with established protocols.

Witnesses discussed problems with IRIS and methods for improving the process and science behind IRIS assessments. The Committee also heard about regulatory impacts on industry and communities.

The committee received testimony from: The Honorable Paul Anastas, Assistant Administrator, Office of Research and Development, U.S. Environmental Protection Agency; Mr. Trimble, Director, Natural Resources and Environment, U.S. Government Accountability Office; Dr. Jonathan Samet, MD, MS, Professor and Flora L. Thorton Chair, Department of Preventive Medicine, Keck School of Medicine, University of Southern California, and Chair, Committee to Review EPA's Draft IRIS Assessment of Formaldehyde, National Research Council, the National Academies; The Honorable Calvin Dooley, President and CEO, American Chemistry Council; Ms. Rena Steinzor, Professor, University of Maryland School of Law, and President, Center for Progressive Reform; Dr. Gail Charnley, Principal, HealthRisk Strategies; and The Honorable J. Christian Bollwage, Mayor, City of Elizabeth, New Jersey.

Joint Subcommittee Hearing
Investigations & Oversight and Energy & Environment
From NPOESS to JPSS: An Update on the Nation's Restructured Polar Weather Satellite Program
September 23, 2011

On September 23, 2011 at 10:00am, the Subcommittee on Investigations and Oversight met to examine the impact of the Administration's decision to restructure the National Polar-orbiting Operation Environmental Satellite System (NPOESS) and progress at NOAA and NASA in developing the Joint Polar Satellite System (JPSS) program as the replacement system for polar-orbiting civilian weather satellites and climate services.

Witnesses discussed the cost, schedule, and performance capabilities associated with the new polar-orbiting weather satellite program.

The committee received testimony from: The Honorable Kathryn Sullivan, Ph.D., Assisstant Secretary of Commerce for Environmental Observation and Prediction and Deputy Administrator, National Oceanic and Atmospheric Administration; Mr. Christopher Scolese, Associate Administrator, National Aeronautics and Space Administration; and Mr. David Powner, Director, Information Technology Management Issues, Government Accountability Office.

Full Committee Hearing
NASA's Commercial Crew Development Program: Accomplishments and Challenges
October 26, 2011

On Wednesday, October 26, 2011, the Committee held an oversight hearing to examine NASA's Commercial Crew Program (CCP) office, focusing on accomplishments achieved by the agency and industry following two rounds of grant awards

totaling $320 million (aggregate of FY10 & FY11), and the biggest programmatic and technical challenges remaining. Speaking about challenges ahead, industry witnesses and NASA officials highlighted the uncertainty of Congress' willingness to provide full funding for CCP over the next five years. Many Committee Members asked questions of the witnesses about the size of the commercial markets (i.e., spaceflight participants exclusive of NASA-sponsored astronauts, such as space tourists and/or astronauts from countries having no indigenous space industry).

The Committee received testimony from: Mr. John Elbon, Vice President and General Manager for Space Exploration, the Boeing Company; Mr. Steve Lindsey, Director of Space Exploration for the Sierra Nevada Corporation; Mr. Elon Musk, CEO and Chief Technology Officer, Space Exploration Technologies Corp. (SpaceX); Mr. Charlie Precourt, Vice President, ATK Launch Systems Group; Dr. George Sowers, Vice President, United Launch Alliance; the Honorable Paul Martin, Inspector General of NASA; and Mr. Bill Gerstenmaier, Associate Administrator, Human Exploration and Operations Mission Directorate, NASA.

Full Committee Hearing
The Next Great Observatory: Assessing the James Webb Space Telescope
December 6, 2011

On Tuesday, December 6, 2011, the Committee held an oversight hearing to examine NASA's management and re-plan of the James Webb Space Telescope. In 2001, the James Webb Space Telescope (JWST) was ranked as the highest priority large space mission in astronomy by the National Academies of Science in their decadal survey Astronomy and Astrophysics in the New Millennium. Originally estimated by the decadal committee to cost $1 billion and to be launched in 2007, JWST was dubbed as the next Great Observatory that will be three times more powerful than the Hubble Space Telescope in the infrared and eight times more powerful than the Spitzer Space Telescope. However, after high-level scrutiny arising from years of program cost and schedule overruns, NASA recently developed a revised plan for JWST that—if fully funded—would enable completion and launch by October, 2018. The revised budget life cycle costs now total just over $8.8 billion.

The Committee received testimony from: Mr. Rick Howard, NASA Program Manager of the James Webb Space Telescope; Dr. Roger Blandford, Professor of Physics, Stanford University and Former Chair, Committee for the Decadal Survey of Astronomy and Astrophysics, National Research Council; Dr. Garth Illingworth, Professor & Astronomer, UCO/Lick Observatory, University of California, Santa Cruz; and Mr. Jeffrey D. Grant, Sector Vice President and General Manager, Space Systems Division, Northrop Grumman Aerospace Systems.

Space & Aeronautics Subcommittee Hearing
NASA's Commercial Cargo Providers: Are They Ready to
Supply the Space Station in the Post-Shuttle Era?
May 26, 2011

On Thursday, May 26, 2011, the Subcommittee on Space and Aeronautics of the Committee on Science, Space, and Technology held an oversight hearing to examine NASA's commercial cargo programs. The subcommittee reviewed the progress made by the commercial providers, as well as the budgetary and programmatic impacts of schedule delays. NASA has spent nearly $1.25 billion thus far and has yet to accomplish the goals established for the initial $500 million program, intended to demonstrate commercial cargo delivery capabilities to the International Space Station from two commercial partners, Space Exploration Technologies (SpaceX) and Orbital Science Corporation (Orbital).

The Subcommittee received testimony from Mr. William H. Gerstenmaier, Associate Administrator, Space Operations Mission Directorate, National Aeronautics and Space Administration; Ms. Cristina Chaplain, Director, Acquisition and Sourcing Management, Government Accountability Office; Ms. Gwynne Shotwell, President, Space Exploration Technologies; and Mr. Frank L. Culbertson, Jr., Senior Vice President and Deputy General Manager, Advanced Programs Group, Orbital Sciences Corporation.

Space & Aeronautics Subcommittee Hearing
Office of Commercial Space Transportation's Fiscal Year 2012 Budget Request
May 5, 2011

On Thursday, May 5, 2011, the Subcommittee on Space and Aeronautics of the Committee on Science, Space, and Technology held an oversight hearing to examine the FY 2012 budget request submitted by the FAA Office of Commercial Space Transportation and new initiatives in the request to expand the office's roles and responsibilities. The FY 2012 budget request seeks $26.625 million, a 74 percent in-

crease over the FY 2010 enacted level ($15.237 million) and a near 50 percent increase of the Office's workforce, asserting that NASA-sponsored commercial cargo flights to the International Space Station, plus the expected start-up of commercial human sub-orbital flights, places new regulatory demands on their operations.

The Subcommittee received testimony from Dr. George Nield, FAA Associate Administrator for Commercial Space Transportation, Dr. Gerald Dillingham, Director of Civil Aviation Issues at the U.S. Government Accountability Office, and Prof. Henry Hertzfeld, Research Professor of Space Policy and International Affairs at the George Washington University.

Joint Subcommittee Hearing
Research & Science Education and Technology & Innovation
Protecting Information in the Digital Age: Federal Cybersecurity Research and Development Efforts
May 25, 2011

On Wednesday, May 25, 2011 the Subcommittee on Research and Science Education and the Subcommittee on Technology and Innovation held a joint legislative hearing to examine federal agency efforts to improve our national cybersecurity and prepare the future cybersecurity talent needed for national security, as it pertains to agencies within the Committee's jurisdiction and in the context of the Administration's overall priorities in science, space, and technology.

In the 111th Congress, the House passed the Cybersecurity Enhancement Act of 2010 (H.R. 4061). The bill was referred to the Committee on Science and Technology and favorably reported on January 27, 2010. H.R. 4061 required increased coordination and prioritization of Federal cybersecurity research and development activities and the development of cybersecurity technical standards. It sought to strengthen cybersecurity education and talent development and partnership activities. Witnesses were asked to provide comments on the legislation in advance of reintroduction during the 112th Congress.

The Subcommittees received testimony from: Dr. George O. Strawn, the Director of the National Coordination Office for Networking and Information Technology Research and Development Program; Dr. Farnam Jahanian, the Assistant Director of the Directorate for Computer and Information Science and Engineering at the National Science Foundation; Ms. Cita Furlani, Director of the Information Technology Laboratory at the National Institute of Standards and Technology; and Rear Admiral Michael Brown, the Director of Cybersecurity Coordination in the National Protection and Programs Directorate for the U.S. Department of Homeland Security.

Space & Aeronautics Subcommittee Hearing
A Review of NASA's Exploration Program In Transition: Issues For Congress and Industry
March 30, 2011

On Wednesday, March 30, 2011 the Subcommittee held an oversight hearing to review the National Aeronautics and Space Administration's (NASA's) Constellation program and examine the status of the transition to the Space Launch System (SLS) and Multi Purpose Crew Vehicle (MPCV).

Issues examined included the Administration's compliance with the FY 2011 Continuing Resolution and the Authorization Act's direction to extend and modify the Constellation contracts, and the status of NASA's transition report to Congress. The Subcommittee also examined key challenges and risks to the Nation's aerospace workforce and industrial base caused by delays or other disruptions in NASA's human spaceflight program.

The Subcommittee received testimony from Mr. Douglas Cooke, Associate Administrator, Exploration Systems Mission Directorate, NASA; Dr. Scott Pace, Director, Space Policy Institute, George Washington University; and Mr. James Maser, Chairman, Corporation Membership Committee, the American Institute of Aeronautics and Astronautics.

Technology & Innovation Subcommittee Hearing
An Overview of Science and Technology Research and Development Programs and Priorities at the Department of Homeland Security
March 15, 2011

On Tuesday, March 15, 2011 the Subcommittee on Technology and Innovation of the Committee on Science, Space, and Technology held an oversight hearing to review activities at the Science and Technology Directorate of the Department of Homeland Security (DHS S&T) and the Domestic Nuclear Detection Office at the Department of Homeland Security (DNDO). The hearing focused on various elements of DHS S&T including the recent reorganization of the Directorate, the stra-

tegic planning process, stakeholder involvement in setting research priorities, and the role of research and development in the DHS S&T portfolio.

The Committee received testimony from two panels; the first panel included the Under Secretary of DHS S&T and the Director of DNDO; the second panel represented stakeholders of the DHS enterprise including the Director of the Douglas and Sarah Allison Center for Foreign Policy Studies at the Heritage Foundation; the President and Chief Executive Officer of the Homeland Security and Defense Business Council; and the Director of the Homeland Security and Justice Team at the U.S. Government Accountability Office.

Appendix C

Appendix C

Oversight Correspondence through December 2011

Date Sent	To: Agency	To: Person	From: Agency	From: Person	About
01/18/2011	DOI	Kendall	Science Committee	Hall	Report of Investigation FedMoratorium Deepwater Drilling
01/20/2011	EPA	Lisa Jackson	Science Committee	Sensenbrenner	Waxman-Markey Climate legislation
01/24/2011	NOAA	Lubchenco	Science Committee	Sensenbrenner	BP Deepwater Horizon Oil Budget
01/26/2011	USGS	Marcia McNutt	Science Committee	Sensenbrenner	BP Deepwater Horizon Oil Budget
01/26/2011	GAO	Dodaro	Science Committee	Hall/Johnson	GOES-R Acquisition
01/26/2011	GAO	Dodaro	Science Committee	Hall/Johnson	NPOES Management Transfer
02/08/2011	WH	Obama	Science Committee	Hall/ Broun/ Harris/ Sensenbrenner	Browner Document Retention
02/10/2011	NRC	Jaczko	Science Committee	Hall/Broun	Third Volume of Yucca Safety Report
02/14/2011	DOE	Chu	Science Committee	Hall/Broun/ Harris/ Edwards	Yucca Document Request
02/14/2011	WH	Browner	Science Committee	Hall/Broun/ Johnson/ Edwards	DOI IG Report on Deepwater Drilling Moratorium
02/14/2011		Locke/Papp/ Salazar/ McNutt/ Browner/ Gallagher/ Jackson/Lew/ Lubchenco	Science Committee	Hall/Broun/ Johnson/ Edwards	Oil Spill –Flow Rate
02/14/2011		Locke/Papp/ Salazar/ McNutt/ Browner/ Gallagher/ Jackson/ Lew/ Lubchenco/ Obama	Science Committee	Hall/Broun/ Johnson/ Edwards	Oil Spill – Budget
03/01/2011	GAO	Dodaro	Science Committee	Hall/Johnson	NASA Contractor surveillance and management

Date Sent	To: Agency	To: Person	From: Agency	From: Person	About
03/10/2011	NRC	Jaczko	Science Committee	Hall/ Broun/ Harris/ Sensenbrenner	Third Volume Yucca Safety Report
03/15/2011	NOAA	Lubchenco	Science Committee	Hall	Climate Service
03/16/2011		Richard G. Newell	Science Committee	Hall	CES Analysis request
05/04/2011	DOE	Steven Chu	Science Committee	Harris	DOE Stimulus spending
05/05/2011	GAO	Gene Dodaro	Science Committee	Hall/Harris	DOE solar energy program review
05/05/2011	GAO	Gene Dodaro	Science Committee	Hall/Harris	DOE battery and energy storage review
05/20/2011		Frank Wolf	Science Committee	Hall	Climate Service
06/17/2011	UN	Ban Ki Moon	I&O Subcommittee	Broun	IPCC Conflict of Interest
06/22/2011	E&E Subcommittee	Harris	DOE	Steven Chu	EERE Spending
06/30/2011	Science Committee	Hall	DOE	Jonathan Silver	ATVM
07/06/2011	House Appropriations Committee	Frank Wolf	Science Committee	Hall	NCS
07/15/2011	Science Committee	Hall	EPA	Lisa Jackson	ELAB
07/22/2011	DOE	Howard Gruensprecht	Science Committee	Hall	CES analysis request
07/25/2011	EPA	Lisa Jackson	Science Committee	Hall	Tier 3
07/27/2011	Science Committee	Hall	DOE	Kathleen Hogan	GAO report: EERE
07/28/2011	DOT/ EPA	Ray Lahood/ Lisa Jackson	Science Committee	Harris et al.	CAFÉ standards
07/28/2011	DOE	Chu	Science Committee	Hall	LightSquared Impact Assessment
07/28/2011	DOI	Salazar	Science Committee	Hall	LightSquared Impact Assessment
07/28/2011	DOT	LaHood	Science Committee	Hall	LightSquared Impact Assessment
07/28/2011	EPA	Jackson	Science Committee	Hall	LightSquared Impact Assessment
07/28/2011	DHS	Napolitano	Science Committee	Hall	LightSquared Impact Assessment
07/28/2011	NOAA	Lubchenco	Science Committee	Hall	LightSquared Impact Assessment
07/28/2011	NASA	Bolden	Science Committee	Hall	LightSquared Impact Assessment

Date Sent	To: Agency	To: Person	From: Agency	From: Person	About
07/28/2011	DOC	Gallagher	Science Committee	Hall	LightSquared Impact Assessment
07/28/2011	NSF	Suresh	Science Committee	Hall	LightSquared Impact Assessment
08/01/2011	NASA	Bolden	Science Committee	Hall	July 20th Talking Points Memorandum
08/01/2011	Science Committee	Hall	DOE	Locatis	Response to LightSquared Impact Assessment
08/02/2011	Science Committee	Hall	NSF	Suresh	Response to LightSquared Impact Assessment
08/03/2011	NASA	Bolden	Science Committee	Hall	Information Request-SLS & ISS
08/12/2011	Science Committee	Hall	DOE	Carol Matthews	High Energy Physics Advisory Panel
08/18/2011	Science Committee	Hall	DOD		Critical Materials Assessment and Strategy
08/25/2011	Science Committee	Hammond	GAO		Technology Assessment – Climate Engineering
08/31/2011	Science Committee	Hall	DOC	Scott Quehl	National Climate Assessment and Development Advisory Committee
09/01/2011	Science Committee	Hall	DOE	Ingrid Kolb	GAO report on Environmental cleanups
09/01/2011	Science Committee	Hall	Houston County	Richard Walter/ Brian Pogodzinski	Concerns regarding LightSquared GPS interference
09/02/2011	Science Committee	Hall	David Evans and Associates		Concerns regarding LightSquared GPS interference
09/02/2011	Science Committee	Hall	NSF	Suresh	Response to LightSquared Impact Assessment
09/06/2011	DOT	Ray LaHood	Science Committee	Hall	Pipeline Safety
09/08/2011	Science Committee	Hall	FCC	Genachowski	LightSquared GPS interference
09/12/2011	Science Committee	Hall	EPA	Gina McCarthy	Tier 3
09/13/2011	Science Committee	Hall	NASA OIG		Audit of Recovery Act funds
09/13/2011	Science Committee	Hall	Kapitan Engineering	Carroll	Concerns regarding LightSquared GPS interference

Date Sent	To: Agency	To: Person	From: Agency	From: Person	About
09/13/2011	Science Committee	Hall	American Lupher Land Surveyors	Lupher	Concerns regarding LightSquared GPS interference
09/13/2011	Science Committee	Hall	Marbach, Brady & Weaver	Marbach	Concerns regarding LightSquared GPS interference
09/16/2011	Science Committee	Hall	James Bernardo Land Surveying	Bernardo	Concerns regarding LightSquared GPS interference
09/16/2011	Science Committee	Hall	Luck Bros. Inc.	Luck	Concerns regarding LightSquared GPS interference
09/16/2011	Science Committee	Hall	Rooney Engineering		Concerns regarding LightSquared GPS interference
09/20/2011	OSTP	Holdren	Science Committee	Hall/ Broun/ Sensenbrenner Adams/ Benishek/ Hultgren/ Neugebauer	Follow-up letter on agency nonresponse to LSQ Impact Assessment request
09/20/2011	OMB	Lew	Science Committee	Hall/ Sensenbrenner Broun / Adams/ Benishek/ Hultgren/ Neugebauer	Follow-up letter on agency nonresponse to LSQ Impact Assessment request
09/21/2011	Science Committee	Hall	EPA	Gina McCarthy	CAFÉ and GHG
09/21/2011	NOAA	Lubchenco	Science Committee	Hall	Follow-up letter regarding National Climate Service
09/21/2011	Science Committee Minority	Johnson	Science Committee	Hall	Notification of intent to initiate formal investigation into NCS
09/22/2011	EPA	Gina McCarthy	E&E Subcommittee	Harris	CSAPR follow-up questions
09/23/2011	EPA	Gina McCarthy	Science Committee	Hall et al.	CSAPR
09/28/2011	Science Committee	Hall	NASA/ DOE		Report on plutonium 238 production
09/30/2011	Science Committee	Hall	DOE	Carol Matthews	DOE/NSF Nuclear Science Advisory Committee
10/04/2011	NOAA	Lubchenco	I&O Subcommittee	Broun	Questions regarding DOC IG report on CRU involvement

Date Sent	To: Agency	To: Person	From: Agency	From: Person	About
10/05/2011	Science Committee	Hall	Malcolm Jackson	EPA	Response to request for LightSquared Impact Assessment
10/06/2011	DHS	Napolitano	Science Committee	Hall/ Broun	Follow-up on agency nonresponse to LSQ Impact Assessment
10/06/2011	NIST	Gallagher	Science Committee	Hall/ Broun	Follow-up letter on agency nonresponse to LSQ Impact Assessment
10/06/2011	NOAA	Lubchenco	Science Committee	Hall/ Broun	Follow-up letter on agency nonresponse to LSQ Impact Assessment
10/06/2011	Science Committee	Hall	DOT	Ray Lahood	Pipeline Safety
10/07/2011	Science Committee	Hall/ Sensenbrenner Broun/ Adams/ Benishek/ Hultgren/ Neugebauer	OMB	Neill	Response to follow-up letter on agency nonresponse to LSQ Impact Assessment request
10/07/2011	Science Committee	Hall/ Sensenbrenner Broun/ Adams/ Benishek/ Hultgren/ Neugebauer	OSTP	Holdren	Response to follow-up letter on agency nonresponse to LSQ Impact Assessment request
10/17/2011	Science Committee	Hall	DOE	Steven Chu	NEAC recommendations
10/17/2011	DOC	Zinser	I&O Subcommittee	Broun	DOC OIG inquiry into CRU and NOAA correspondence
10/18/2011	I&O Subcommittee	Broun	DOC	Zinser	Response to DOC OIG inquiry into CRU and NOAA correspondence
10/19/2011	Science Committee	Hall/ Johnson	GAO	Powner	Monitoring NPOESS transition
10/21/2011	NOAA	Lubchenco	Science Committee	Broun/ Sensenbrenner	Follow-up letter to DOC OIG inquiry into CRU and FOIA compliance
10/21/2011	Science Committee	Hall	DOE	Carol Matthews	Methane Hydrate Advisory Committee
10/24/2011	OSTP	Holdren	Science Committee	Hall	Antideficiency Act and collaboration with China

Date Sent	To: Agency	To: Person	From: Agency	From: Person	About
10/26/2011	EPA	Lisa Jackson	Science Committee	Hall/ Broun/ Harris	Hydraulic Fracturing Study
10/28/2011	Science Committee	Hall	EPA	Lisa Jackson	PPDC renewal
10/31/2011	Science Committee	Hall	OSTP	Holdren	Response to Antideficiency Act and collaboration with China
110/3/2011	Science Committee	Hall	DOE	Owen Barwell	GAO report recommendations
11/04/2011	Science Committee	Hall	EPA	Lisa Jackson	SAB renewal
11/04/2011	EPA	Lisa Jackson	Science Committee	Hall et al.	Outstanding Document request
11/07/2011	OSTP	Holdren	Science Committee	Broun/ Sensenbrenner	FOIA Compliance and IPCC AR5
11/08/2011	Science Committee	Broun/ Sensenbrenner	NOAA	Gray	Response to DOC OIG inquiry into CRU and FOIA compliance
11/10/2011	Science Committee	Hall/ Broun/ Sensenbrenner	OMB	Sarri	Response to follow-up letter on agency nonresponse to LSQ Impact Assessment request
11/14/2011	OSTP	Holdren	Science Committee	Hall/ Sensenbrenner Broun/ Adams/ Benishek/ Hultgren/ Neugebauer	Response to LightSquared document request
11/15/2011	OMB	Cass Sunstein	E&E and I&O Subcommittees	Harris/ Broun	EPA Science
11/17/2011	Science Committee	Broun/ Sensenbrenner	OSTP	Holdren	Response to FOIA Compliance and IPCC AR5
11/18/2011	OMB	Lew	Science Committee	Hall/ Sensenbrenner Broun	Response to LSQ Impact Assessment request
11/21/2011	Science Committee	Hall	MIET	David Holland	Concerning the IPCC
12/02/2011	NOAA	Lubchenco	I&O Subcommittee	Broun	DOC OIG Climate Service follow-up
12/02/2011	OSTP	Holdren	Science Committee	Broun/ Sensenbrenner	FOIA compliance and IPCC AR5 follow-up

Appendix D

SUMMARY OF GAO HIGH RISK TOPICS

GAO Item Title	Possible Oversight Action
Modernizing the Outdated U.S. Financial Regulatory System	Included in GAO's "nine characteristics that should be reflected in any new regulatory system" are "[m]echanisms … for identifying, monitoring, and managing risks to the financial system." Large financial institutions' reliance on proprietary risk-assessment models to determine the adequacy of their capital has been increasing, and it is soon to be institutionalized in the U.S. under an international agreement, Basel II. Federal regulators' role will then be to "vindicate" the institutions' models, but whether they – or, in fact, anyone, anywhere – posses the mathematical expertise to perform this task is questionable. Risk assessments, modeling, and technical evaluations of those are all in the jurisdiction and expertise of the Committee.
Transforming EPA's Processes for Assessing and Controlling Toxic Chemicals	GAO reiterates in the 2009 High-Risk Series Update its 2008 finding that EPA's Integrated Risk Information System(IRIS) – a database that contains EPA's position on the potential human health effects of exposure to more than 540 chemicals – is at serious risk of becoming obsolete. EPA has not been able to complete timely, credible assessments. "Without greater attention to EPA's efforts to assess toxic chemicals, the nation lacks assurance that human health and the environment are adequately protected," The I&O Subcommittee has held hearings on IRIS in the past and would continue to oversee this important database.
Management of Federal Oil and Gas Resources	Previous work by the GAO revealed that the Department of Interior lacked consistent and reliable data on the production and sale of oil and gas from federal lands. In light of the Deepwater Horizon oil spill, GAO identified three areas of concern facing the DOI's ability to manage federal oil and gas resources, including: revenue collection, hiring, training, and retaining sufficient staff, and reorganization of the offshore oil and gas management and revenue collection functions.
Strategic Human Capital Management	GAO single out Strategic Human Planning as an area offering "ample opportunity" for organizations to improve. It says" Strategic human capital planning that

	is integrated with broader organizational strategic planning is critical to ensuring agencies have the skill and talent mix they need to address their current and emerging human capital challenges." This is an issue at many of our agencies, particularly NASA.
Protecting the Federal Government's Information Systems and the Nation's Critical Infrastructure	The U.S.'s critical infrastructure – including power distribution systems, national defense, water supply, emergency services, and telecommunications – relies extensively on computerized information systems and electronic data in normal operations. Federal Agencies have made progress in strengthening information security, yet "most agencies continue to experience significant deficiencies that jeopardize the confidentiality, integrity, and availability of their systems and information," GAO says. "Until agencies implement the hundreds of recommendations made by GAO and their own inspectors general … a broad array of federal assets and operations will remain at unnecessary risk of fraud, misuse, and disruption." The Committee is charged with overseeing NIST, which mandates federal computer security standards.
Implementing and Transforming the Department of Homeland Security	DHS remains on GAO's High-Risk List owing to numerous management challenges and problems overseeing its $40 billion annual budget that GAO has identified, particularly in DHS's acquisitions and R&D programs. The Committee has jurisdiction over the agency's Science and Technology Directorate and will continue to review its programs, focusing on its laboratories and contracts. Problems that GAO has identified at DHS also include its IT-related acquisitions, which the committee also has a role in reviewing.
Establishing Effective Mechanisms for Sharing Terrorism-Related Information to Protect the Homeland	Since 9/11 there have been significant efforts among federal, state, and local partners to share terrorism-related data. These efforts are now being developed under an overarching Information Sharing Environment (ISE). Still, GAO "found that the scope, projects, and milestones – the road map – for guiding the ISE were not fully defined and, along with OMB, observed that the expected results and metrics – the system of accountability – to insure progress were not in place." It is the Committee's role to oversee federal computer standards, including such efforts.

Ensuring the Effective Protection of Technologies Critical to U.S. National Security Interests	GAO calls for a "fundamental re-examination of current government programs" to determine how agencies involved in protecting "critical technologies while advancing U.S. interest" - including the Department of Commerce – can collectively achieve their mission. At stake are not only such concerns as the proliferation of nuclear weapons, but also the issue of whether the U.S. has maintained under its control the technologies and production capacity that may be critical to its defense base and economic security. Both manufacturing and competitiveness, including national technological leadership, are within the Committee's jurisdiction.
Department of Energy's Contract Management for the National Nuclear Security Administration and Office of Environmental Management	GAO found that the DOE's Office of Science has been extremely effective in completing large projects within budget and schedule requirements, which it attributes to leadership commitment, good management and technical expertise, and strict adherence to project management policies. It may be fruitful to see how DOE could copy the lessons from the Office of Science to these other divisions.
National Aeronautics and Space Administration Acquisition Management	NASA, which conducts almost all its business under contract with outside entities, appears unable to finish its projects at the cost and on the schedule it provides to Congress. GAO cautions that organizational and programmatic pressures could derail NASA's otherwise promising corrective action plan, which GAO feels might finally address many of the issues keeping NASA on the High-Risk List. Experience has shown that close and continued attention by the Committee to these management issues can increase likelihood of change at NASA. Because NASA and DOD employ the same acquisition process, there should be an opportunity of applying at NASA the changes indentified in work on the DOD High-Risk items. Similarly, lessons learned here might be applied at other agencies trying to develop and implement complex technical systems.

Appendix E

GAO PENDING REQUESTS AND ACTIVE ASSIGNMENTS AS OF 11/8/2011

Printed on 11/14/2011 (CR)

HSE COM SCIENCE, SPACE AND TECHNOLOGY

CCAR#	REQUEST DATE	SUBJECT	TEAM	DIRECTOR/ASSISTANT DIRECTOR	DEFERRED-START DATE	ALL SIGNERS OF REQUEST
PENDING REQUESTS/MANDATES						
10-1309-02	7/28/2010	ENERGY RESEARCH PROJECTS REVIEW	NRE	RUSCO, FRANKLIN W		*REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP BROUN, PAUL - HSE SUB INVESTIGATION&OVERSIGHT-SCITECH*
	(361246)					
11-0264-01	1/4/2011	FREQ:OT DUE:01/04/13 -PL 111-358-SEC.	FMA	ENGEL, GARY T	1/4/2012	*PL 111-358, AMERICAN COMPETES ACT 2010* *SEN HUTCHISON, KAY BAILEY - SEN COM COMMERCE, SCIENCE & TRANSPORT* *SEN ROCKEFELLER, JOHN D IV - SEN COM COMMERCE, SCIENCE & TRANSPORT* *REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP JOHNSON, EDDIE BERNICE - HSE COM SCIENCE, SPACE AND TECHNOLOGY*
***MANDATE**		603(D)(6)(B)-SUBSIDY ESTIMATES FOR		CARLSEN, MARCIA L		
		LOAN GUARANTEES FOR SCIENCE PARK				
		INFRASTRUCTURE				
11-0263-01	1/4/2011	FREQ:OR DUE:* -PL 111-358-SEC.602(M)(2)&(3)-FEDERAL LOAN	NRE	GAFFIGAN, MARK E		*PL 111-358, AMERICAN COMPETES ACT 2010* *RECURRING MANDATE* *SEN ROCKEFELLER, JOHN D IV - SEN COM COMMERCE, SCIENCE & TRANSPORT* *SEN HUTCHISON, KAY BAILEY - SEN COM COMMERCE, SCIENCE & TRANSPORT* *REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP JOHNSON, EDDIE BERNICE - HSE COM SCIENCE, SPACE AND TECHNOLOGY*
***MANDATE**		GUARANTEES FOR INNOVATIVE				
		TECHNOLOGIES IN MANUFACTURING				
11-0265-01	1/4/2011	FREQ:OT DUE:05/31/13 -PL 111-358-SEC.	NRE	GAFFIGAN, MARK E		*PL 111-358, AMERICAN COMPETES ACT 2010* *SEN HUTCHISON, KAY BAILEY - SEN COM COMMERCE, SCIENCE & TRANSPORT* *SEN ROCKEFELLER, JOHN D IV - SEN COM COMMERCE, SCIENCE & TRANSPORT* *REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP JOHNSON, EDDIE BERNICE - HSE COM SCIENCE, SPACE AND TECHNOLOGY*
***MANDATE**		801-STATUS OF PROGRAMS				
		AUTHORIZED UNDER AMERICA				
		COMPETES REAUTHORIZATION ACT OF 2010				

ACTIVE REQUESTS/MANDATES

09-0277-04	1/9/2009	US/EUROPE AIR SYSTEM ALIGNMENT	PI	DILLINGHAM, GERALD L		*REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP JOHNSON, EDDIE BERNICE - HSE COM SCIENCE, SPACE AND TECHNOLOGY*
				EDELSTEIN, MARIA D		
	540222	**U.S. - EUROPE COLLABORATION TO ENSURE HARMONIZED AIR TRAFFIC MANAGEMENT SYSTEMS**			***ESTIMATED***	11/3/2011
11-0459-03	3/3/2011	REVIEW OF NASA'S USE OF SPACE ACT	ASM	CHAPLAIN, CRISTINA T		*REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP JOHNSON, EDDIE BERNICE - HSE COM SCIENCE, SPACE AND TECHNOLOGY*
		AGREEMENTS		OAKLEY, SHELBY S		
	120971	**NASA'S USE OF FUNDED SPACE ACT AGREEMENTS**			***ESTIMATED***	11/16/2011
09-0913-01	6/10/2009	REVIEW OF HOW THE NEW INTEGRATED RISK INFORMATION SYSTEM (IRIS) PROCESS PERFORMS IN PRACTICE	NRE	TRIMBLE, DAVID C FISHKIN, CHRISTINE M		*REP MILLER, BRAD - HSE SUB ENERGY & ENVIRONMENT - SCITECH*
	361203	**UPDATE ON EPA'S INTEGRATED RISK INFORMATION SYSTEM (IRIS) PROGRAM**			***ESTIMATED***	11/30/2011
10-1309-01	7/28/2010	REVIEW THE DEPARTMENT OF	NRE	RUSCO, FRANKLIN W		*REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP BROUN, PAUL - HSE SUB INVESTIGATION&OVERSIGHT-SCITECH*
		ENERGY'S IMPLEMENTATION OF ADVANCED RESEARCH PROJECT AGENCY (ARPA-E)		MINELLI, TIMOTHY L		
	361246	**DOE'S ADVANCED RESEARCH PROJECTS AGENCY FOR ENERGY (ARPA-E)**			***ESTIMATED***	11/30/2011
09-0277-03	1/9/2009	NEXTGEN ACQUISITIONS	PI	DILLINGHAM, GERALD L		*REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP JOHNSON, EDDIE BERNICE - HSE COM SCIENCE, SPACE AND TECHNOLOGY*
				LAUGHLIN, EDWARD J		
	540219	**NEXTGEN ACQUISITIONS' COST AND SCHEDULE**			***ESTIMATED***	*12/14/2011*
11-0075-02	10/11/201	FREQ:OT DUE:* -PL 111-267-SEC. 503- ISS VEHICLE AND COMPONENT REVIEW	ASM	CHAPLAIN, CRISTINA T		*PL 111-267, NASA AUTHORIZATION ACT 2010* *SEN HUTCHISON, KAY BAILEY - SEN COM COMMERCE, SCIENCE & TRANSPORT* *SEN ROCKEFELLER, JOHN D IV - SEN COM COMMERCE, SCIENCE & TRANSPORT* *REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP JOHNSON, EDDIE BERNICE - HSE COM SCIENCE, SPACE AND TECHNOLOGY*
***MANDATE**				OAKLEY, SHELBY S		
	120993	**NASA INTERNATIONAL SPACE STATION**			***ESTIMATED***	*12/21/2011*

		SPARE PARTS NECESSARY TO SUPPORT OPERATIONS THROUGH 2020				
11-0560-02	3/18/2011	CO-REQUEST - PRODUCED WATER FROM OIL AND GAS AND ENERGY DEMANDS ON URBAN WATER LIFECYCLE	NRE	MITTAL, ANU K ERDMANN, ELIZABETH A		*REP JOHNSON, EDDIE BERNICE - HSE COM SCIENCE, SPACE AND TECHNOLOGY*
	361237	**RECOVERY OF WATER PRODUCED DURING ENERGY EXTRACTION ACTIVITIES**			***ESTIMATED***	*1/9/2012*
11-0559-01	3/18/2010	CO-REQUEST - EXAMINE RESEARCH & TECHNOLOGY ACTIVITIES OF U.S. DEPT. OF TRANSPORTATION IN INTELLIGENT TRANSPORTATION SYSTEMS (SEE 11-0175)	PI	WISE, DAVID J GUILLIAMSTAPIA, JUDY L		*REP JOHNSON, EDDIE BERNICE - HSE COM SCIENCE, SPACE AND TECHNOLOGY*
	542179	**DOT'S INTELLIGENT SYSTEMS RESEARCH**			***ESTIMATED***	*2/29/2012*
11-0175-01	12/6/2010	EXAMINE THE RESEARCH AND TECHNOLOGY ACTIVITIES OF THE U.S. DEPARTMENT OF TRANSPORTATION (DOT) INTELLIGENT TRANSPORTATION SYSTEM (ITS)	PI	WISE, DAVID J GUILLIAMSTAPIA, JUDY L		*REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY*
	542179	**DOT'S INTELLIGENT SYSTEMS RESEARCH**		**ESTIMATED**	**ESTIMATED**	*2/29/2012*
11-0459-01	3/3/2011	REVIEW OF NASA'S USE OF SPACE ACT ASM AGREEMENTS		CHAPLAIN, CRISTINA T OAKLEY, SHELBY S		*REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP JOHNSON, EDDIE BERNICE - HSE COM SCIENCE, SPACE AND TECHNOLOGY*
	121009	**FRAGMENTATION IN THE LEADERSHIP OF SPACE ACQUISITIONS**			**ESTIMATED**	*2/29/2012*
09-0540-04 ***MANDATE**	3/11/2009	FREQ:OR DUE:OR -PL 111-8 DIV. B. TITLE III-REPORT ON THE STATUS OF LARGE-SCALE NASA PROGRAMS, PROJECTS, AND ACTIVITIES	ASM	CHAPLAIN, CRISTINA T		*PL 111-8, OMNIBUS APPROPRIATION ACT 2009* *RECURRING MANDATE* *SEN COCHRAN, THAD - SEN COM APPROPRIATIONS* *SEN HUTCHISON, KAY BAILEY - SEN SUB COMRC, JUST & SCIENCE-APPROP* *SEN MIKULSKI, BARBARA A - SEN SUB COMRC, JUST & SCIENCE-APPROP* *SEN HUTCHISON, KAY BAILEY - SEN COM COMMERCE, SCIENCE & TRANSPORT* *SEN ROCKEFELLER, JOHN D IV - SEN COM COMMERCE, SCIENCE & TRANSPORT* *SEN BOOZMAN, JOHN - SEN SUB SCIENCE & SPACE-COM-SCI-TRA* *SEN NELSON, BEN - SEN SUB SCIENCE & SPACE-COM-SCI-TRA* *REP DICKS, NORMAN D - HSE COM APPROPRIATIONS* *REP ROGERS, HAROLD - HSE COM APPROPRIATIONS* *REP FATTAH, CHAKA - HSE SUB COM.JUSTICE & SCIENCE-APPROP* *REP WOLF, FRANK R - HSE SUB COM.JUSTICE & SCIENCE-APPROP* *REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP JOHNSON, EDDIE BERNICE - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP GIFFORDS, GABRIELLE - HSE SUB SPACE & AERONAUTICS-SCITECH* *REP PALAZZO, STEVEN - HSE SUB SPACE & AERONAUTICS-SCITECH* *SEN INOUYE, DANIEL K - SEN COM APPROPRIATIONS*
	120980	**ASSESSMENTS OF SELECTED LARGE-SCALE NASA PROJECTS**			***ESTIMATED***	*3/1/2012*
10-1508-01	9/27/2010	REVIEW OF BRITISH PETROLEUM (BP) IN THE GULF OF MEXICO	NRE	TRIMBLE, DAVID C ERDMANN, ELIZABETH A		*REP MARKEY, EDWARD J* *REP MILLER, BRAD - HSE SUB ENERGY & ENVIRONMENT – SCITECH*
	361265	**USE OF CHEMICAL DISPERSANTS FOLLOWING THE DEEPWATER HORIZON OIL SPILL**			***ESTIMATED***	*3/26/2012*
11-0731-01	5/4/2011	EXAMINE HOW DEPARTMENT OF ENERGY'S AND NATIONAL NUCLEAR SECURITY ADMINISTRATION (NNSA) MANAGE ISOTOPES	NRE	ALOISE, EUGENE E WOODWARD, EDWIN H		*REP MILLER, BRAD - HSE SUB ENERGY & ENVIRONMENT - SCITECH* *REP EDWARDS, DONNA - HSE SUB INVESTIGATION&OVERSIGHT-SCITECH*
	361311	**DOE'S MANAGEMENT OF THE PRODUCTION AND SALE OF ISOTOPES**			***ESTIMATED***	*5/23/2012*
11-0309-01	1/26/2011	EVALUATE EFFORTS OF THE NATIONAL POLAR-ORBITING OPERATIONAL ENVIRONMENTAL SATELLITE SYSTEM (NPOESS)	IT	POWNER, DAVID A PHILLIPS, COLLEEN M		*REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP JOHNSON, EDDIE BERNICE - HSE COM SCIENCE, SPACE AND TECHNOLOGY*
	311250	**POLAR SATELLITE TRANSITION, STATUS, AND RISKS**			***ESTIMATED***	*6/7/2012*

Date TBD

CCAR#	REQUEST DATE	SUBJECT	TEAM	DIRECTOR/ASSISTANT DIRECTOR	DEFERRED-START DATE	ALL SIGNERS OF REQUEST
10-1047-01	6/28/2010	STUDY THE CURRENT TRENDS IN PESTICIDE USE ON AGRICUILTURAL FOOD PRODUCTS	NRE	SHAMES, LISA R JONES JR, JAMES R		*REP MILLER, BRAD - HSE SUB ENERGY & ENVIRONMENT - SCITECH*
	361302	**PESTICIDE RESIDUES AND THE SAFETY OF FOOD SUPPLIES**			***ESTIMATED***	*TBD*
11-0010-01	10/5/2010	ASSESS WHAT FEDERAL POLICIES GOVERN THE TESTING REQUIRED TO VALIDATE THE SAFETY AND SECURITY OF IMPLANTABLE ELECTRONIC DEVICES	HC	CROSSE, MARCIA G CONAHAN, THOMAS L		*REP EDWARDS, DONNA - HSE SUB INVESTIGATION&OVERSIGHT-SCITECH*
	290949	**CYBERSECURITY OF IMPLANTABLE MEDICAL DEVICES**			***ESTIMATED***	*TBD*
11-0310-01	1/26/2011	REVIEW OF THE GEOSTATIONARY SATELLITE-R SERIES (GOES-R)	IT	POWNER, DAVID A		*REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY*
	311257	**GEOSTATIONARY WEATHER SATELLITES PROGRAM STATUS AND RISKS**			***ESTIMATED***	*TBD*
11-0457-02	3/1/2011	EARNED VALUE MANAGEMENT AT NASA	ASM	CHAPLAIN, CRISTINA T RAMOS JR, JOSE		*REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP JOHNSON, EDDIE BERNICE - HSE COM SCIENCE, SPACE AND TECHNOLOGY*
	121002	**NASA POLICIES AND PRACTICES IN USING EARNED VALUE MANAGEMENT**			***ESTIMATED***	*TBD*
11-0730-01	5/4/2011	MONITOR AND REPORT ON MANAGEMENT AND TESTING OF ADVANCED SPECTROSCOPIC PORTALS (ASP) PROGRAM	NRE	ALOISE, EUGENE E WOODWARD, EDWIN H		*REP MILLER, BRAD - HSE SUB ENERGY & ENVIRONMENT - SCITECH* *REP EDWARDS, DONNA - HSE SUB INVESTIGATION&OVERSIGHT-SCITECH*
	361322	**TESTING OF THE DOMESTIC NUCLEAR DETECTION OFFICE'S ADVANCED SPECTROSCOPIC PORTAL:STATUS, LESSONS LEARNED, AND PLANS FOR FUTURE TESTING**			***ESTIMATED***	*TBD*
11-0730-01	5/4/2011	MONITOR AND REPORT ON MANAGEMENT AND TESTING OF ADVANCED SPECTROSCOPIC PORTALS (ASP) PROGRAM	NRE	ALOISE, EUGENE E WOODWARD, EDWIN H		*REP MILLER, BRAD - HSE SUB ENERGY & ENVIRONMENT - SCITECH* *REP EDWARDS, DONNA - HSE SUB INVESTIGATION&OVERSIGHT-SCITECH*
	361322	**TESTING OF THE DOMESTIC NUCLEAR DETECTION OFFICE'S ADVANCED SPECTROSCOPIC PORTAL:STATUS, LESSONS LEARNED, AND PLANS FOR FUTURE TESTING**			***ESTIMATED***	*TBD*
11-0757-01	5/5/2011	REVIEW MANAGEMENT AND COORDINATION OF DOE SOLAR ENERGY PROGRAMS	NRE	RUSCO, FRANKLIN W SPRINGER, KARLA J		*REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP HARRIS, ANDY - HSE SUB ENERGY & ENVIRONMENT - SCITECH*
	361329	**OVERLAP AND DUPLICATION OF DOE'S SOLAR ENERGY INITIATIVES**			***ESTIMATED***	*TBD*
11-0758-01	5/5/2011	REVIEW MANAGEMENT AND COORDINATION OF DOE'S BATTERY AND ENERGY STORAGE TECHNOLOGY DEVELOPMENT EFFORTS BOTH INTERNALLY AND EXTERNALLY	NRE	RUSCO, FRANKLIN W MINELLI, TIMOTHY L		*REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP HARRIS, ANDY - HSE SUB ENERGY & ENVIRONMENT - SCITECH*
	361332	**MANAGEMENT AND COORDINATION OF DOE'S BATTERY AND ENERGY STORAGE TECHNOLOGYDEVELOPMENT EFFORTS**			***ESTIMATED***	*TBD*
11-0757-01	5/5/2011	REVIEW MANAGEMENT AND COORDINATION OF DOE SOLAR ENERGY PROGRAMS	NRE	RUSCO, FRANKLIN W SPRINGER, KARLA J		*REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP HARRIS, ANDY - HSE SUB ENERGY & ENVIRONMENT - SCITECH*
	361329	**OVERLAP AND DUPLICATION OF DOE'S SOLAR ENERGY INITIATIVES**			***ESTIMATED***	*TBD*
11-0758-01	5/5/2011	REVIEW MANAGEMENT AND COORDINATION OF DOE'S BATTERY AND ENERGY STORAGE TECHNOLOGY DEVELOPMENT EFFORTS BOTH INTERNALLY AND EXTERNALLY	NRE	RUSCO, FRANKLIN W MINELLI, TIMOTHY L		*REP HALL, RALPH M - HSE COM SCIENCE, SPACE AND TECHNOLOGY* *REP HARRIS, ANDY - HSE SUB ENERGY & ENVIRONMENT - SCITECH*
	361332	**MANAGEMENT AND COORDINATION OF DOE'S BATTERY AND ENERGY STORAGE TECHNOLOGYDEVELOPMENT EFFORTS**			***ESTIMATED***	*TBD*

Appendix

RALPH M. HALL, TEXAS
CHAIRMAN

EDDIE BERNICE JOHNSON, TEXAS
RANKING MEMBER

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
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March 18, 2011

The Honorable Paul Ryan
Chairman, Committee on the Budget
U.S. House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

Pursuant to the provisions of clause 4(f) of House Rule X of the Rules of the House of Representatives for the 112th Congress and Section 301(d) of the Congressional Budget Act of 1974, as amended, I am transmitting the Views and Estimates, including Additional and Minority Views, of the Committee on Science, Space, and Technology for Fiscal Year 2012.

Sincerely,

Ralph M. Hall

Ralph M. Hall
Chairman

Enclosure

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

VIEWS AND ESTIMATES
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
FISCAL YEAR 2012

President Obama transmitted his budget request for Fiscal Year 2012 (FY12) to Congress on February 14, 2011. The President proposes $38.9 billion in FY12 for all non-defense and non-health specific research and development, a 10.8 percent increase over the FY10 enacted level. This amount includes basic and applied research, development, and facilities and equipment.

The Committee on Science, Space, and Technology supports funding research and development activities and believes that wise investments, coupled with favorable tax cuts and reduced regulations, can lead to economic growth and innovation. However, we are mindful that in order to realize gains on investment, the nation needs to be on a sound economic footing. Our nation is currently in a challenging economic environment. The Congressional Budget Office estimates that Federal spending will rise to $3.7 trillion or 25 percent of GDP this year. We are running a deficit of $1.5 trillion and our gross Federal debt now exceeds $14 trillion. These levels are truly unsustainable. We need to begin to address this challenge by reducing spending and finding ways to cut unnecessary, duplicative, and wasteful programs so that we deliver the most efficient and effective programs for the country.

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

National Aeronautics and Space Administration (NASA)

The National Aeronautics and Space administration (NASA) is the Nation's primary civilian 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 Space Shuttle fleet, the International Space Station, 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.

The Committee supports NASA's FY12 budget request of $18.7 billion, the same amount appropriated by Congress for FY 1O and continued thus far in FY11.

NASA's budget requests also display budget assumptions for the succeeding four out-years, giving Congress an indication of near-term spending plans for programs, projects and activities. The FY12 budget request assumes a flat spending profile through FY 16, while last year's budget (and associated out-years) assumed annual increases such that by FY 16, NASA would be receiving over $20 billion annually. The potential savings indicated in the FY12 budget request would, in the aggregate, save $3.8 billion for FY 12–FY 14, compared to last year's budget request.

NASA's FY12 request qualified their out-year assumptions as "notional." However, NASA's "notional" assumptions are significantly higher than the corresponding numbers used in OMB's FY12 U.S. Budget request (OMB's Blue Books) by an aggregate of $2.3 billion. NASA officials advised the Committee that they are using their higher out-year assumptions for planning purposes. Requested funding levels for NASA's space science program are relatively flat, going up an additional $11 million between the FY11 and FY12 requests, amounting to a 0.2 percent increase. Within the Science Mission Directorate (SMD), the James Webb Space Telescope (JWST) has run into serious cost and schedule challenges. NASA is intent on finding resources within the SMD account to remedy the problem, a solution we endorse.

With respect to Earth Science, which is a program within SMD, in the FY11 budget request (including the out years) Committee Republicans took exception to significant increases in its funding profile. We were concerned that the balance of funding within the SMD was getting out of balance to the detriment of the other SMD programs. This year's request (including the out years) for Earth Science is substantially reduced. To stay within this profile, NASA is delaying start of two Earth Science missions (CLARREO and DESDynI). We support this change.

The most troubling aspect of this year's request lies within the agency's human space flight program (Exploration Systems Directorate and the Space Operations Mission Directorate). Last year Congress passed, and the President signed, the NASA Authorization Act of 2010 (P.L. 111–267). The bill directed NASA to give priority to development of a Space Launch System (SLS) and Multi-Purpose Crew Vehicle (MPCV) to replace the retiring Shuttle. The bill also authorized NASA to continue activities related to development of a commercial crew launch system. NASA's FY12 request flips the relative priority, seeking an amount higher than authorized

for commercial crew ($850 million versus $500 million authorization); and underfunding development of the SLS and MPCV ($2.8 billion versus $4 billion authorization). By doing so, NASA will be delaying development of a government-owned assured access system to the IS'S, perhaps until the end of this decade. Coupled with this is the likelihood that the yet-to-be-developed commercial crew system may fail to materialize, leaving our government with only one option: to continue buying seats from the Russians. We find this unacceptable and firmly believe NASA should give highest priority to the SLS and MPCV programs.

Finally, we note that the FY12 budget includes a new program first proposed last year: Space Technology. The FY12 request seeks $1.02 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.

National Science Foundation (NSF)

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 FY12 budget request for NSF is $7.7 billion, an increase of 13 percent, or $894.5 million over the FY10 enacted level (not including any carryover from the $3 billion NSF received from ARRA funding). The Committee recognizes the importance of making appropriate investments in science, space, and technology research, development, and STEM education in order for the United States to remain a world leader in competitiveness and innovation. While supporting a robust budget request for NSF, the Committee is concerned that the levels requested exceed what is fiscally responsible in the current economic climate. Further, new and expanded Administration priorities continue to excessively divert precious research and development (R&D) funds from other worthy endeavors.

The Committee applauds the Administration's decision to eliminate or reduce funding for six specific programs, but regrets that it did not go further in identifying areas for significant savings to the American taxpayer. This additional savings could go a long way in helping to protect the integrity of the Nation's essential basic R&D portfolio.

Research and Related Activities (RRA)

The FY12 budget request includes $6.3 billion for Research and Related Activities (RRA), an increase. of $690 million or 12.4 percent over FY10 enacted. New programs established as part of the increased research funding request for FY12 include $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. The Committee is 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.

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. The Committee recognizes the broad interdisciplinary activities within the SEES program, but is greatly concerned that 13 percent of the entire Foundation's budget request is being devoted to this issue, particularly given the strong emphasis on

these programs across all relevant federal agencies. Further, the Committee is strongly opposed to the 144.5 percent budget request increase for the NSF contribution to the Climate Change Technology Program (CCTP) and recommends 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.

In addition, the FY12 budget request also includes a plan to invest broadband spectrum receipts in a variety of areas, including $150 million to NSF in FY12 and $1 billion total over a five-year period for targeted research on experimental wireless technology test beds, more flexible and efficient use of the radio spectrum, and cyber-physical systems such as wireless sensor networks for smart buildings, roads, and bridges. NSF's participation is a piece of the $3 billion WIN fund.

Education and Human Resources (EHR)

The FY12 budget request for Education and Human Resources (EHR) is $911 million, a $38.4 million or 4.4 percent increase over FY10. The Administration continues to offer a mixed message regarding the treatment of EHR relative to the healthy increase for RRA. While calling for an investment of $3.4 billion in STEM education activities across the 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. The Committee agrees that NSF is primarily a research agency, but also strongly believes that an essential element of NSF's mission is support for STEM education; from pre-K through graduate school and beyond. Therefore, the Committee is 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.

New funding in the FY12 budget request includes an additional $20 million for a Transforming Broadening Participation through STEM (TBPS) pilot program to seek innovative solutions for broadening participation in STEM at the undergraduate level This is part of an overarching realigned program called Broadening Participation at the Core (BP AC), which also houses several underrepresented population programs. The BPAC program total request is $156 million, a $21 million or 23.3 percent increase over FY 1O. Research programs focused on gender and persons with disabilities have been moved from this Division to the Division of Research on Learning in Formal and Informal Settings and funding under the request is cut by 8.7 percent to $17 million. The Committee does not believe that a new $20 million pilot program is warranted at this time, given the budgetary constraints our country is facing. Further, the Committee is concerned that funding for the Human Resources Division has increased by more than 15 percent while the focus of the Division does not include all underrepresented populations.

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. Likewise, the Administration's budget request places a high priority on Graduate Research Fellowships (GRF) by increasing the funding to $134.6 million, a 31.2 percent increase over FY10, while essentially flat lining the Integrative Graduate Education and Research Traineeship Program (IGERT) at $30.17 million and greatly diminishing the Graduate STEM Fellows in K–12 Education (GK–I2) to $27 million, a 45 percent cut. The Committee understands the need to make cuts, but believes that Noyce Scholarships and MSP are proven and worthy programs and are not appropriate areas to be cut in order to fund a new and unproven program. Increasing the number of GRFs is a laudable goal in a better economic environment, but increasing the funding level by over 31 percent, particularly while essentially ignoring other graduate programs, is not fiscally responsible.

Department of Energy (DOE)

The Department of Energy (DOE) funds a wide range of research, development, demonstration and commercial application activities. The overall FYI2 budget request for DOE is $29.5 billion, which represents a $3.1 billion or 11.8 percent increase of FY10 levels. Approximately one third of this amount is directed to research and development programs.

President Obama made clean energy technology development a centerpiece proposal of his State of the Union. The proposal includes an 80 percent clean energy standard (CES), a $2 billion increase in "clean energy" research, and a Better Buildings Initiative. The Committee recognizes the importance of energy technology development to America's economic future, but has serious concerns with the overall spending and relative prioritization within the President's budget request.

Office of Science (SC)

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. Office of Science activities are organized into the following six major programs: Basic Energy Sciences (BES), Advanced Scientific Computing Research (ASCR), Biological and Environmental Research (BER), Fusion Energy Sciences (FES), High Energy Physics (HEP), and Nuclear Physics (NP). The FY12 budget request for SC is $5.4 billion, a 9.1 percent increase over FY 1O levels.

The Committee recognizes the unique role of the Office of Science in supporting world-class scientific research and facilities and notes its continued strong support for SC activities as a key driver of innovation and long-term economic growth. We also recognize SC's 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. However, in light of budget circumstances, we intend to continue to work to identify areas within the SC budget warranting consideration for cuts. Of particular interest in this regard are SC 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). Specifically, the Committee is 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. 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, and the value of SC spending on science education and workforce development also warrants further review.

Advanced Research Projects Agency—Energy (ARPA–E)

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." The Administration requests $650 million for ARPA–E in FY12. Of this amount, $550 million would be provided through discretionary funding. ARPA–E would also administer an additional $100 million "Wireless Innovation Fund" aimed at developing wireless communications technologies and paid for through a proposed transfer of wireless spectrum auction revenues. Initially provided with $400 million in the 2009 Recovery Act, ARPA–E did not receive a direct appropriation in FY10, though it was the beneficiary of a $15 million transfer from the Office of Science.

The Committee remains concerned with ARPA–E. In 2007, many 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 funded at the expense of priority basic research programs within the Office of Science.

These concerns appear to be 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 the Committee remains 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 do not believe the program should receive funding above existing levels necessary to oversee ongoing projects until an evaluation of the projects being funded takes place.

Nuclear Energy (NE)

The Administration request for Office of Nuclear Energy (NE) R&D programs is $447.4 million, a 8.1 percent decrease ($39.6 million) from the FY10 enacted level and ten percent decrease from the FY11 President's budget request. Approximately 74 percent of that request is dedicated to the Fuel Cycle R&D and Reactor Concepts RD&D programs.

The Committee strongly supports advancement of nuclear energy and associated research in NE. This support does not preclude Committee concern for misdirected and lower priority R&D within NE. For example, NE should focus on technology development for reactors with realistic potential for deployment, rather than continuing university research on well-studied technologies unlikely to move beyond the academic realm.

The Committee is encouraged by the proposal for two new programs, 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, still lack approval and licensing from the Nuclear Regulatory Commission (NRC). The proposed LWR SMR program intends to overcome the existing regulatory challenges. DOE must work closely with NRC to complete the SMR licensing process, at which point the LWR SMR Licensing. Technical Support program should be terminated.

Energy Efficiency and Renewable Energy (EERE)

The Office of Energy Efficiency and Renewable Energy (EERE) funds a wide array of energy efficiency and renewable energy technologies. The Administration's budget request of $3.2 billion for EERE represents a 44.4 percent ($958 million) increase from the FY10 enacted level and a 36 percent increase ($845 million) over the President's FY11 budget request. This reflects President Obama's call in his State of the Union speech for increased spending on clean energy technologies. Most EERE programs receive significant funding increases relative to the FY10 enacted level. Of note, Industrial Technologies receives a $225 million increase (239 percent), which includes the creation of an Energy Innovation Hub on critical materials. Geothermal Technology would see an increase of $58 million (125 percent) to expand the enhanced geothermal subprogram and Solar Energy would receive an additional $213 million (87.8 percent) to fund the "Sunshot" and "dollar-a-watt" initiatives.

The Committee objects to the requested $958 million (44 percent) increase in EERE's budget. This concern is based on (1) EERE's focus on incremental, low-impact technological advances through technology development, demonstration, commercialization, and deployment activities; and (2) its significant budget increases, which include 32 percent growth since FY 2008 and 93 percent growth since FY 2006. Additionally, EERE has spent only 31 percent of its appropriated $16.5 billion in Stimulus funding. Outside of specific programmatic concerns, the ability of the office to responsibly manage and effectively oversee such massive budgetary increases is questionable.

Additionally, we believe many 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 budget increase includes 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 crowd out or discourage a greater amount of private investment.

We also generally question the appropriateness and value of several other newly proposed and expanded activities within EERE. The Vehicle Technologies Program (VTP) requests a $204 million increase in vehicle technology deployment to disburse grants to cities for upgrade infrastructure to accommodate electric vehicles. Also, VTP plans to raise public awareness of vehicle technologies with "high visibility demonstration projects at national parks." The Building Technologies Program (BTP) requests a $186 million increase from FY10 levels to support a "Race to the Green" competitive grant program. The grant program would implement policies such as adopting more stringent building codes, benchmarking and disclosing building energy use, and establishing public energy-savings targets. The Race to the Green program is a component of the Administration's Better Buildings Initiative. The Committee questions the relative value of a significant increase in Federal government spending for the purpose of providing grants to select localities.

EERE conducts a multitude of outreach and education" programs encompassing projects from developing K–12 curriculums to providing energy resource assessments for governments' scattered throughout Latin American and the Caribbean. These projects call into question the merit of existing spending and demand a me-

thodical reevaluation of budget priorities before an increase of any size should even be considered.

These areas of concern are not exhaustive but rather represent examples of areas the Committee intends to further scrutinize. Rigorous examination and Committee oversight of EERE is necessary and the Committee believes EERE warrants significant and well-justified cuts to meet necessary spending reductions.

Electricity Delivery and Energy Reliability (OE)

The Office of Electricity Delivery and Energy Reliability (DE) oversees the modernization of the electric grid, the reliability of energy infrastructure, and conducts research and development for energy delivery-related technologies. Research and Development within OE would be funded at $193 million in the President's FY12 budget request. This would reflect an increase of $71.4 million (58.8 percent) from enacted FY10 levels and a $48.5 million increase (33.6 percent) from the President's FY11 budget request. Additionally, the President requests $20 million for the creation of a Smart Grid Technology and Systems Hub to be administered by OE.

This Committee asserts OE's FY12 budget request is misguided given current budgetary restraints. OE seeks an increase of $43.4 million for the Energy Storage program; however, we are concerned about potential overlap with similar programs in the Office of Science, EERE's Vehicle Technologies Program, and ARPA–E's "GRIDS" program.

The Committee supports targeted OE R&D in Cyber Security for Energy Delivery Systems, which provide basic value and is a wise and necessary investment for the Federal government. In spite of the value provided by a rigorous cyber security program, the budget request reduces cyber security funding by $9 million.

Fossil Energy (FE)

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 President's total budget request for the Office of Fossil Energy (FE) is $520 million. FE's research and development budget is reduced to $453 million, a decrease of $207 million, or 31 percent, from FY10 enacted levels. This correlates to a 23 percent decrease ($134 million) from the President's FY11 budget request.

The FY12 budget request proposes to terminate the Natural Gas Technologies and Unconventional Fossil Energy Technologies programs. Coal R&D is funded at $291 million, the bulk of which is focused on advancing carbon capture and sequestration (CCS) efforts. The Hydrogen from Coal, Coal to Coal Biomass to Liquids, and Solid Oxide Fuel Cells subprograms would all be eliminated.

The Committee continues 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 We are concerned about the budget's 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. Further, the Section 999 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.

The Committee believes the United States must develop domestic energy resources to improve America's energy security. This entails fossil fuel development, which are the backbone of energy usage today and, according to the Energy Information Administration, for the foreseeable future. Accordingly, the Administration's proposal to eliminate a number of traditional Fossil Energy R&D programs, while placing nearly exclusive emphasis on carbon capture and sequestration (CCS) technology, is misguided. The Committee recommends 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.

Loan Guarantee Program Office (LPO)

The President's FY12 budget request for DOE's Loan Guarantee Program Office (LPO) is $200 million. This funding would be used as a credit subsidy for loans authorized under Section 1703 of the Energy Policy Act of 2005. The LPO did not receive an appropriation for credit subsidies in FY 10. The credit subsidy funding would support an estimated $1 to $2 billion in loan guarantees to support energy efficiency and renewable energy activities.

The Committee does not support the budget request for $200 million to cover credit subsidies for renewable energy loan guarantees. 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. We should avoid picking "winning and losing" projects through this program and return to a privately funded model of energy innovation.

In addition to the Title 17 loan guarantees, the President is requesting $105 million to for the creation of a "Better Building Pilot Loan Guarantee Initiative for Universities, Schools, and Hospitals." This program would fund loan guarantees help retrofit commercial buildings and would be available to subsidize up to $2 billion in total loan principal.

The Committee believes the creation of the Better Buildings Initiative is not warranted. The Administration provides nominal details for the initiative, such as what entities would qualify the criteria by which terms and conditions would be decided, and why such a program is needed.

The associated costs, outside of the $100 million for credit subsidies, reveal the potentially wasteful nature of the program. For example, the detailed justification requests $1.65 million for salaries and benefits often full-time equivalent employees, or an average package of $165,000 per employee.

Energy Innovation Hubs

The FY12 budget request proposes funding of $146 million to support six Energy Innovation Hubs, which are supported through the SC, EERE, and NE accounts. This would support the three existing Hubs as well as the creation of three new Hubs, which the President highlighted in his recent State of the Union address. According to the Administration, Hubs are intended to "advance highly promising areas of energy science and engineering from the early stage of research to the point where the technology can be handed off to the private sector."

The Administration's proposal to double the number of Hubs is not warranted under current fiscal strains. The newly proposed hubs all replicate ongoing research in multiple DOE programs. For example, the request includes $34 million for a Batteries and Energy Storage Hub, in addition to $136 million ($60 million increase) for battery and energy storage R&D in EERE's Vehicle Technologies Program, thermal energy storage research conducted by the Solar Technologies Program, and two BES subprograms.

Rather than merge and consolidate programs to improve program direction and research efficiency, the request advances the complete opposite approach with new research programs in associated across-the-board increases for all programs.

National Oceanic and Atmospheric Administration (NOAA)

Within the jurisdiction of the Committee, the National Oceanic and Atmospheric Administration (NOAA) is one of the smaller operational and research agencies. NOAA's mission of science, service, and stewardship is manifested through improvement of the understanding of oceans and atmosphere and how their interactions affect 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)[1]. 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).

[1] This line office was previously termed the National Environmental Satellite, Data, and Information Service (NESDIS). However, with the movement of the data centers into the new Climate Service, the name was changed to reflect the office's narrower focus.

NOAA's FY12 budget request is 5.5 billion, an increase of $749 million or 15.8 percent above the FY10 enacted level. As part of the request, the Administration has proposed the largest reorganization of NOAA since its inception in 1970.

Climate Service (CS)

The budget request includes $346.2 million for a new line office, the Climate Service (CS), which would include assets consolidated from OAR, NWS, and NESS. The Committee does not approve this reorganization or the creation of this Climate Service. The Committee has serious concerns regarding the implications of transitioning climate-related research into an operational office. Such a movement makes research funding vulnerable to cuts during tight budgetary times in order to ensure the continued operational functionality of the service. The Committee is concerned that existing science-driven research activities would be supplanted by service-driven and mission-directed research, compromising the integrity and objectivity of NOAA research. The Committee remains open to identifying organizational changes to improve information flow between NOAA's research, service, and operational activities, but such an effort would require close review and consideration through hearings and possibly legislative action. The Committee expects that NOAA will continue operating in its current organizational structure unless explicitly authorized otherwise by Congress.

National Environmental Satellite Service (NESS)

The FY12 budget request for the NESS is $2 billion, a $698.2 million increase over FY 2010 enacted levels. This 58.2 percent increase is by far the largest increase in NOAA's total budget request. The bulk of the increase is for the Joint Polar Satellite System (JPSS)[2]. 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. The Committee strongly supports this request and believes it should receive funding priority, even if it must come at the expense of other programs at NOAA. Due to the previous delays of its predecessor program, JPSS is well behind schedule. Further significant budgetary shortfalls are very likely to result in a satellite data continuity gap, degrading the efficacy of timely weather forecasts (particularly with respect to development storms and severe weather), and potentially harming NOAA's ability to fulfill its mission to protect life arid property. However, the Committee is concerned that, since the recent reorganization of this program, JPSS has not undergone a budget re-baseline process as required under P.L. 110–161 and P.L. 109–155. The Committee believes that a base lining process should be completed before funding for FY12 is appropriated, and will continue to work to identify cost-savings within the JPSS program that do not jeopardize operational needs.

The Committee has reservations about NOAA's request of $47 million for the refurbishment of the Deep Space Climate Observatory (DSCOVR) satellite. Although supportive of funding a replacement satellite for the existing Advanced Composition Explorer (ACE) satellite that provides space weather information, NOAA's choice of replacement warrants further scrutiny. The DSCOVR satellite has been in storage for a decade. The Committee realizes that NASA has already spent money refurbishing DSCOVR for a research mission, we are concerned about using such an old satellite for a replacement of ACE, a vital resource for forecasting space weather events that have direct impacts on global positioning satellites, communication networks and the electric grid. Furthermore, we are concerned about combining an operational mission from NOAA with a research mission from NASA. Typically, specifications for research satellites differ from specifications and standards for operational satellites. The Committee will closely monitor the development of the ACE replacement and will also ensure that the Office of Science and Technology Policy follows through on the requirement laid out in P.L. 111–267 to submit a report to Congress detailing options for an ACE replacement.

Office of Oceanic and Atmospheric Research (OAR)

The Committee has grave concerns regarding the impact of the proposed Climate Service on OAR. More than half the resources of OAR will move into the new line office, decimating the resources of this research agency and harming the synergistic

[2] This program was previously the National Polar-orbiting Operational Environmental Satellite System (NPOESS), a tri-agency program with the National Aeronautical and Space Administration (NASA) and the Department of Defense (DoD). As part of the FY 2011 budget request, the Administration split NPOESS into two programs. NOAA and NASA have responsibility for the JPSS program to cover the afternoon satellite orbit. DoD will have a separate polar weather satellite program for the early morning orbit.

and strategic approach of the entire NOAA science enterprise. This transfer of assets is inconsistent with what was suggested and proposed by NOAA's Science Advisory Board only six years ago. The Committee will be reviewing the effects of such a transfer, and in the meantime, has insisted to the Administrator that the existing structure is maintained.

The Committee does not agree with the proposed budget reduction of the Unmanned Aircraft Systems (UAS) program. After several successful test runs this program is prime for additional research to truly make it operational. The UAS technology appears likely to be capable of delivering improved weather and environmental data for reduced cost, alleviating operational budgets for the National Weather Service and other NOAA activities. The Committee recommends that this budget stay at the FY 2010 enacted levels of $6 million. We believe that such an investment will result in future cost savings.

The Committee supports the $10 million OAR request for R&D on Multi-function Phased Array Radar (MPAR). This next generation radar has the potential to reduce the U.S. system by 180 radars, resulting in $1.9 billion in acquisition savings and $3 billion in operational cost reductions over 30 years. MP AR would be four to five times faster than today's system, greatly enhancing public safety by allowing warnings of over one-hour versus the current 15 minute lead time.

National Weather Service (NWS)

The Committee is generally supportive of the overall National Weather Service (NWS) FY12, budget request of $988.0 million which is a 1.2 percent decrease from the FY10 enacted level. However, there are some concerns with the prioritization of the request. During some of the major storms in 2010, the NWS website went down. This is a vital resource used by emergency responders, State and local decision makers and the general public in order to deal with extreme weather events. The Committee is concerned about the requested decrease of $3.2 million for the telecommunications program at NWS; specifically, how it will affect the ability of NWS to ensure that critical information flow to the public is not hampered. With increasing concerns about the quality of the surface temperature data used for climate monitoring and prediction, the Committee is hesitant about the zeroing out of funding for the National Mesonet Network. The Mesonet Network was established in response to the National Academies of Science expressing concern about the lack of integration of distributed monitoring and observational networks. While we have confidence that NWS will be able to achieve quality forecasts using existing networks, we are concerned with the quality of the data generated by outside entities and the ability of NWS to properly integrate it into its own databases. Therefore, the Committee would support a reduction but not elimination of funding for the Mesonet Network, provided this would not increase the total proposed budgetary request. Finally, the Committee supports the NWS request of an increase of $11 million for weather and climate supercomputing. However, given the amount of funding NOAA has received for climate computing capability in the last few years, including stimulus funding, the Committee would recommend that this increase be granted only in accordance with an equal or larger decrease in the climate-related computing budget.

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.

In FY12, the Administration has requested a funding level of $1 billion or a 16.9 percent increase from FY10 enacted funding for NIST. The budget request would provide $678.9 million for NIST's Scientific and Technical Research and Services (STRS); $84.6 million for Construction of Research Facilities (CRF); $142.6 million for the Manufacturing Extension Partnership (MEP) program; and $75.0 million for the Technology Innovation Program (TIP).

Laboratories and Construction

The Committee recognizes that NIST's laboratories and internal maintenance and construction of those laboratories closely support our nation's innovation by working closely with industry to develop consensus-based voluntary standards. As a trusted arbiter regarded for its high-quality work, maintaining strong support for the laboratories is vital to our economic security. Nevertheless, the $164 million or 32 percent increase over FY10 requested for the laboratories needs to be scrutinized to ensure that these additional funds are necessary.

While state-of-the-art facilities are essential to the capabilities of NIST's intramural laboratories, the Committee supports the Administration for requesting no funds for the extramural construction grant program. The grants awarded to external entities do not directly support NIST's mission and were not an authorized activity. Members believe NIST should remain focused on its primary mission and concur with the Administration that this program should not be funded in FY12.

Industrial Technology Services

The Committee is concerned about the proposed expansion of the industrial technology services programs requested by the Administration. In particular, the Technology Innovation Program (TIP) is requested to receive a $5 million increase. Though the three-year-old program has had limited time to prove itself, the Committee wants to ensure that this program is successfully supporting the development of technologies to meet critical national needs. The Committee also notes that this program was not reauthorized in the 2010 *America COMPETES Act.*

The Committee is pleased with the Administration's reduced request for the Baldrige Performance Excellence Program (BPEP). While the program plays an important role in recognizing and perpetuating high quality practices across industry, it is an appropriate time in the program's maturity to explore other sustainable mechanisms of running the program.

The Committee questions the creation of the new Advanced Manufacturing Technology Consortia (AMTech) Program, with a $12.3 million request in FY12. The program would fund facilities, equipment, and research at universities and government laboratories to address long-term research needs of the manufacturing industry. A thorough review of the plans for this program is necessary.

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. The Committee commends the Administration for recognizing NIST's history of working closely with industry on interoperability standards.

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. The Domestic Nuclear Detection Office (DNDO), whose transformative research program is transferred to DHS S&T in 'the FY12 request, is dedicated to both the development and enhancement of the global nuclear detection architecture, the coordination of nuclear detection research and development, and the establishment of procedures and training for end users of nuclear detection equipment.

The FY12 budget request for DHS S&T is $1.2 billion, an increase of 16.9 percent, or $170 million over the FY10 enacted level. Most of this increase reflects the transfer of R&D' , programs from the DNDO to DHS S&T; Within DNDO, the FY12 budget drops by $51.3 million or 13.4 percent.

The Committee is concerned that if the DNDO transfer and proposed funding for the construction of the National Bio and Agro-Defense Facility is removed, the DHS S&T budget request represents a net 11 percent decrease from FY10 funding levels. The Committee recognizes that robust research and development is necessary to support DHS's mission, and wants to ensure that the S&T Directorate has the resources it needs to keep our nation safe and, borders secure.

Finally, the Committee recognizes the value of both Assistance to Firefighter Grants (AFG) and Staffing for Adequate Fire and Emergency Response (SAFER) grants to our Nation's fire departments. However, the Committee remains concerned that SAFER grant program continues to expand while the FY 12 request for AFG reflects a 36 percent decrease below FY10 funding.

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 at the Office of Research and Development (ORD) represent about 70 percent of the S&T budget. The FY12 budget request for S&T is $825.6 million, a 2.6 percent reduction from FY10 enacted levels. The budget request for ORD is $584.1 million, a 2.1 percent decrease from FY10 levels.

Due to EPA's disturbing pattern of regulating based on insufficient or faulty scientific evidence, the Committee feels 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 include 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 seem to be more driven by policy advocacy, which is not an appropriate use of research dollars.

The Committee does not support the 56 percent increase in STAR fellowships. Although fellowships are important for the training and education of the next generation of scientists, the Committee feels that the budgetary constraints we are currently operating under do not afford this type of expenditure.

The Committee has reservations about $0.5 million requested decrease in the Human Health Risk Assessment research program. This program supports 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, the Committee has grave concerns about the quality of the assessments produced. Furthermore, the Committee has serious reservations about how this system is being used for ulterior purposes. EPA decision makers for IRIS are focusing on chemicals that a very small percentage of the overall population is exposed to. Given the backlog of chemicals IRIS is assessing, the Committee feels it would make more sense to assess chemicals that potentially affect a much greater percentage of the population. Finally, the Committee does 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.

Department of Transportation

Federal Aviation Administration (FAA)—Research, Development and Technology

The FY12 budget request provides $394.4 million for FAA research and development activities, plus an additional $28.4 million for related facilities, adding to a total request of $422.8 million, a $22.2 million increase (5.5 percent) above the FY11 request. Agency R&D is spread among four accounts:

1. Office of Commercial Space Transportation (OCST)—Safety. The FY12 budget request is $566,000 for OCST Safety, a $401,000 or 243 percent increase over FY11. Among other activities, the additional funds would be used for research and development of the, technical expertise needed to certify human space flight launch systems and capsules now, under development that would be used to carry non-government passengers (astronauts) to orbit.
2. The Research, Engineering and Development account (Aviation Trust Fund), with a FY12 request of $190 million, is $500,000 less than the amount requested in FY11. 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 and Equipment account (Aviation Trust Fund) dedicated to engineering, development, test and evaluation, with an FY12 request of $177.5 million, a $22.3 million or 14 percent increase over the FY11 request.
4. A portion of the Airport Improvement Program account (Aviation Trust Fund) with an FY12 request of $44.3 million, an increase of $2.1 million over five percent over FY11.

At a programmatic level we support the FAA's budget request for development and implementation of NextGen, to modernize our nation's air traffic control 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.

Office of Commercial Space Transportation (OCST)

The FY12 budget request for OCST (operations) is $26.6 million, an increase of $10.9 million or 70 percent over the FY11 request. OCST is responsible for licensing and regulating commercial space launches and reentries to ensure compliance with standards designed to protect public safety. For FY I2, OCST proposes to hire 32 additional FTE staff to develop and implement additional safety processes and requirements specifically for commercial human spaceflight and space traffic manage-

ment. Our committee intends to hold hearings prior to reauthorizing OCST later this year.

Research and Innovative Technology Administration (RITA)

The FY12 Administration research request for RITA is $17.6 million, or $4.6 million above the FY10 enacted. RITA is tasked with coordinating and reviewing all of DOT's research and development programs, representing more than $1 billion across the Department.

The proposed funding levels for research and development for the Federal Highway Administration is $661 million and for the Federal Transit Administration is $30 million. Both of these accounts support portions of the research and development conducted by University Transportation Centers across the country.

The Committee is concerned about long-term, rigorous transportation research and development remaining a high priority, and believes that we must provide realistic and sustainable funding for these programs 'in the future. Furthermore, the Committee is 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.

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17. Representative Andy Harris
18. Representative W. Todd Akin
19. Representative Dan Benishek
20. Representative Chip Cravaack
21. Representative Sandy Adams

ADDITIONAL VIEWS
OF HON. DANA ROHRABACHER
COMMITTEE ON SCIENCE, SPACE AND TECHNOLOGY
FISCAL YEAR 2012 BUDGET REQUEST

As we get deeper and deeper into ever more deficit spending, with crushing debt threatening our nation's prosperity, it is more critical than ever that we pay extreme attention to every federal expense. American investments into science and technology have always provided the basis for new industries, which have, in turn, increased the private sector workforce and improved the lives of millions of Americans. These investments have enabled our economy to consistently be the strongest in the world.

We must make every dollar count because we are borrowing 40 cents of every dollar the federal government spends. We must show restraint. We must not duplicate efforts across agencies and departments. And we must not continue to spend by mortgaging the futures of our children by borrowing from our friends and from our enemies. Although I agree with much of the 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." For FY 2011 the Administration requested a 20.7% increase over the FY 2010 enacted funding. For FY 2012 the Administration has asked for even more. These funds are requested directly in the budgets of NASA, NSF, NOAA, NIST, DOE, and other departments.

I have been blunt before, and I still strongly believe that the entire budget for this program should be zeroed out. Federal global warming research is not reducing uncertainties in climate science. The research is not changing minds. If we spend $2.6 billion in FY 2012, 40% of which we borrow from overseas, it will change zero minds about global warming. Every dollar spent on this is a dollar wasted. The path we are on is irrational and reckless.

National Aeronautics and Space Administration The budget request for Fiscal Year 2012 for the National Aeronautics and Space Administration (NASA) funds every component authorized under the NASA Authorization Act of 2010 (P.L. 111-267) within the same funding level as appropriated for FY 2010 of $18.7 billion, which is $730 million less than authorized. The budget request also includes $548 million for the Space Shuttle Pension Liability commitment, which was not included in that authorization.

NASA is to be commended for proposing to fund every component in the authorization, while absorbing this $1.3 billion reduction in expected funding flexibility.

It is of note that, whatever our space policy will be from this point forward, we will not be able to achieve continued success solely on the backs of our taxpayers. For far too long our space funding has not matched our space mission, creating a dangerous, frustrating situation with no clear path to success. With the 2010 NASA Authorization Act, we have identified the path forward: America's space goals can only be achieved by partnering with other nations and by bringing in funds from the private sector, creating sustainable launchers and vehicles that can serve both public and private markets. This budget request reflects that reality.

This FY 2012 budget request identifies the development of commercial crew services as one of the key short-term components that will help us make use of the $100 billion spent to date on constructing the International Space Station. $850 million to help incentivize the private sector to develop and demonstrate critical technologies leading to multiple, independent, sustainable systems that can bring people safely to orbit and return them to Earth is an investment worth making. The increase of $350 million in this program above authorized levels is small relative to the potential gain for NASA, America, and humanity. The companies involved in the commercial crew services program include both new startups and long-established companies who have been NASA's partners on every human spaceflight mission.

The FY 2012 budget request also seeks funding of $2.8 billion for the SLS and MPCV programs. These vehicles are being developed primarily for exploration beyond Earth orbit, expected to start in 2020, and can also serve as a backup system for Earth-to-orbit transportation in the unlikely event that none of the other systems in development are successful. It would obviously be ill-advised to fund a back-up system at 330% of the cost of the primary system if there were no additional purpose for it. The funding level for these programs is $1.2 billion less than authorized for FY 2012, due mostly to the overall reduction in the NASA request, the required pension liability commitment, and the ongoing process of architecture selection. This reduction is one of those difficult choices that need to be made in our current fiscal environment, and I think it is the correct one.

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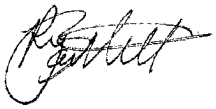

UNITED STATES
HOUSE OF REPRESENTATIVES

COMMITTEES:
ARMED SERVICES
SUBCOMMITTEES:
CHAIRMAN
TACTICAL AIR AND LAND FORCES
SEAPOWER AND EXPEDITIONARY FORCES

SCIENCE, SPACE, AND TECHNOLOGY
SUBCOMMITTEES:
ENERGY AND ENVIRONMENT
RESEARCH AND SCIENCE EDUCATION

SMALL BUSINESS
SUBCOMMITTEE:
AGRICULTURE, ENERGY AND TRADE

Additional Views and Estimates

Congressman Roscoe G. Bartlett

Committee on Science, Space and Technology

Fiscal Year 2012

Department of Energy (DOE)

The Committee objects to significant increases in the requested budgets for research, development and demonstration projects by DOE. These increases must be considered not only in the context of the past several fiscal years and our fiscal challenges which I agree must be addressed, but in a broader historical context. As I indicated in charts I shared during my question and answer period with Secretary Chu, the threat to the economic and national security of the United States posed by global peak oil argues for significantly greater, not less funding for research, development and demonstration projects to develop alternative liquid fuels for our most dependent and vulnerable transportation sector.

The United States is now 40 years past our peak crude oil production in 1970-71. The U.S. is producing 5 mpd, half of what we produced in 1970-71 despite production from Alaska and the Gulf of Mexico and new technologies, such as seismic 3-D and horizontal drilling, recently applied to the Bakken shale formation that underlies Montana, North Dakota and Wyoming.

The International Energy Agency (IEA) lowered its estimate of potential global crude oil output in 2035 by 10 mpd between its 2009 and 2010 World Energy Outlook reports from @100 mbd to 90 mbd. In its World Energy Outlook 2010, the IEA asserted that global peak oil has already occurred. Specifically, the IEA said, "Crude oil output reaches an undulating plateau of around 68 - 69 mb/d by 2020, but never regains its all - time peak of 70 mb/d reached in 2006." Furthermore, the IEA projected growing influence in the global oil market by OPEC oil producing countries. "The increasing share of OPEC contributes to the growing dominance of national oil companies: as a group, they account for all of the increase in global production between 2009 and 2035." These countries are governed by predominantly authoritarian regimes, many hostile to the United States, such as Iran and Venezuela. Popular protests that began in Tunisia and Egypt in the Middle East have spread to Bahrain and Saudi Arabia, the key swing and largest producer, contributing to oil price spikes over $100/barrel in the last three months.

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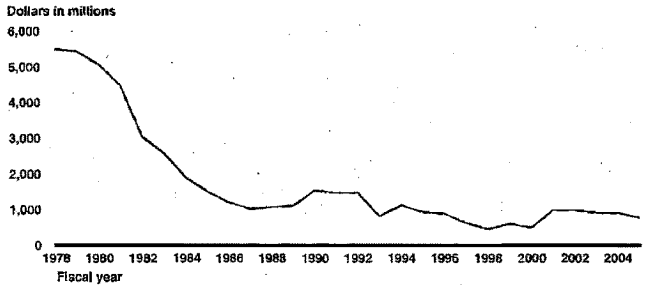
The vulnerability of the U.S. is increasing because we have been producing, that is depleting, our small and declining 2-3 percent share of world oil reserves at a rate four times faster than OPEC. U.S. oil geologist and executive, Ray Leonard, President and CEO, Hyperdynamics Corporation, at the Muehlberger Symposium in Austin, Texas August 2010 reported that, "Present yearly production consumes 1.5% of OPEC reserves, 3.5% of [the Former Soviet Union] FSU, and 7% of the rest of the world (ROW). Extending this trend into the future with current reserve base increases OPEC's reserve share to 80% by 2020. Meanwhile, the rest of the world's share reduces to less than 10% by 2015."

Despite repeated instances and increasing vulnerability of the United States to oil-fueled price spike economic disruptions, funding for research, development and demonstration on energy has declined dramatically. The General Accounting Office (GAO) analyzed the trends of U.S. federal government expenditures on research, development and demonstration projects by DOE in two relevant reports, "Advanced Energy Technologies: Budget Trends and Challenges for DOE's Energy R&D Program," (GAO-08-556) and "Department of Energy: Key Challenges Remain for Developing and Deploying Advanced Energy Technologies to Meet Future Needs" (GAO-07-106). GAO reported to Congress that "DOE's total budget authority for renewable, fossil, and nuclear energy R&D dropped by over 85 percent (in inflation-adjusted dollars) from 1978 to 2005—from about $5.5 billion in fiscal year 1978 to $793 million in fiscal year 2005. (Fig. 2)

Figure 2: DOE's Budget Authority for Renewable, Fossil, and Nuclear R&D, Fiscal Years 1978-2005



Source: GAO analysis of DOE data.

Committee on Science, Space and Technology
Fiscal Year 2012
Additional Views

The Majority Views and Estimates for the Committee on Science, Space and Technology incorporate many positions that I support regarding the future of the various agencies under the Committee's jurisdiction. However, I must 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 imperative that the Committee not let the taxpayer down. The federal government cannot be all things to all people; it cannot afford to do everything. We must continue to ask ourselves, "What is the appropriate role of the federal government in science, research and development?"

The American people sent a strong message to Congress last fall; we need to get our financial house in order. They expect us to make the tough financial decisions and make the federal government smaller and more efficient. I am very concerned that much of the massive increases in spending proposed by the Administration for Fiscal Year 2012, coupled with the previous years' increases in spending and massive outlays in 2009 with the American Recovery and Reinvestment Act are unsustainable and in many cases unwarranted. The Administration continues to fund agencies and programs that are often duplicative, wasteful and better done in the private sector.

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, I continue to be alarmed that 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 C. Broun, M.D.
Member of Congress

Rep. Hultgren - Additional Views and Estimates of President Obama's Budget Request for issues within the Jurisdiction of the Committee on Science, Space and Technology.
March 16, 2011

While I'm encouraged by the support for the Office of Science, I'm troubled by the Administration's priorities within the Office of Science. The 2012 budget request is essentially a freeze at FY2010 levels for High Energy Physics, while other programs within the Office of Science are slated for increases of 21 to 24 percent. The Administration must not lose sight of the importance of basic research in high energy physics and I strongly disagree with the funding disparity in the FY2012 budget.

Additionally, Fermi National Accelerator Laboratory in my district is the only single purpose high energy particle physics lab in the US, and I'm concerned by the lack of clear, long-term support for the Lab and its mission. This is a critical time for Fermilab as it transitions from the highly successful running of the Tevatron and transitions to new projects and programs at the Intensity Frontier, including the Long Baseline Neutrino Experiment (LBNE) at the Deep Underground Science and Engineering Laboratory (DUSEL). There needs to be greater stress on both keeping the National Science Foundation working as strong a partner in the operation of the DUSEL (which serves as a critical component of Fermi Lab's LBNE) and the future of the lab as a competitive global leader in basic research and high energy physics.

MINORITY VIEWS OF THE DEMOCRATIC CAUCUS OF THE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY ON THE FY 2012 BUDGET REQUEST

The nation's research and development agencies have a long history of investing in research and education programs that return very significant economic payoffs to the American people. The President's FY 2012 budget request continues the commitment to investing in our future while at the same time acknowledging the difficult fiscal environment in which we find ourselves. While we can disagree with some of the specific choices and priorities contained in the Administration's FY 2012 budget request, we share the President's goals of maintaining a strong science and technology enterprise and ensuring that our young people are prepared for the technical careers of the future. The choice before us as a nation is stark: we can focus on the need to create jobs now and in the coming years by making sure that we are taking the necessary steps to ensure that we remain economically strong and competitive in a challenging international marketplace, or we can engage in shortsighted cutting of our capabilities for innovation and education to meet arbitrary budgetary targets. If the past is any guide, it is clear that investments in science, technology and STEM education must be a cornerstone of any serious long-term strategy to keep America competitive.

The budget resolution that these Views and Estimates are intended to inform is being developed even while the FY 2011 budget remains in play. The House consideration of the FY 2011 budget has been marked by severe cuts to important research and development (R&D) initiatives in order to meet arbitrary fiscal goals. The end result of those cuts, if enacted into law, would be thousands of layoffs and furloughs among the best and brightest of our scientists and engineers; curtailment of critical research activities to protect the public from environmental hazards; fewer innovative technologies to enable the industries of the future; and serious damage to our core scientific and technological capabilities.

The President's FY 2012 budget request, on the other hand, recognizes that even in these challenging economic times, we need not—and should not—sacrifice our future for the sake of crippling cuts to a small fraction of the total federal budget. With vision and perseverance, we can be both fiscally responsible and make the necessary investments to keep the American economy competitive in the coming decades while keeping our people and our environment healthy.

Thus, while there are findings in the Majority's Views and Estimates with which we can agree, it is clear that the overall thrust of those Views and Estimates is in the direction of advocating substantial cuts to important research and development programs and initiatives. While there are undoubtedly areas of savings that could be found by careful examination of programs and projects, the broad-brush notion that whole areas of science and technology are not needed to prepare for an uncertain future does not have a credible basis in either fact or analysis. Thus, vague and unsupported claims that agencies like the Environmental Protection Agency are regulating "based on insufficient or faulty science"—and thus should have their funding cut—do little to advance the debate over appropriate R&D funding priorities nor do they provide thoughtful guidance to the Budget Committee as it attempts to construct an overall federal budget blueprint.

That is not to say that there is nothing of value that can be said about the choices before us as a nation. For example, one need only look at the cuts that were adopted in H.R. 1 to realize that the path advocated in that legislation and in the Majority's Views and Estimates would lead thousands of the most promising scientists and engineers in the nation to lose their jobs and abandon their research. After years of bipartisan calls for young people to come into science and math and engineering, the outcome of enacting H.R. 1 or the policies in the Majority's Views and Estimates would be the same as posting a big "Help Not Needed" sign on every National Laboratory and university throughout the country. That would be a tragedy—and one that the President's FY 2012 budget request seeks to avoid.

Every family understands that there are consumption expenditures and investment expenditures. We sacrifice to make sure our children have shoes, medical care, and a good education. When money is tight, we cut back on restaurant dinners, new clothes for ourselves, and vacation trips—those things that might be nice to have, but are not necessary to keep a roof over our heads today or build a better life for our family tomorrow. Even when times are tough, however, we are willing to take (out loans or take on a second job to help cover the costs of college. People understand that shortchanging our children's education will leave them less prepared for what will come. In our private lives we understand that the investments we make today, even when times are hard, will pay dividends in the future. This same logic applies to meeting our public responsibilities.

In short, Democratic members of the Committee on Science, Space, and Technology believe that if we do not invest in education, in new ideas, and in new processes, we will deny our children the capacity to deal effectively with the crises that their generation will have to tackle. It is irresponsible not to invest in the future, whether you are talking about your own children or speaking of the legacy we as a society leave the generations that will succeed us.

The Democratic Members of the Committee thus endorse the President's budget request for FY 2012 in the area of research and development. While we might make slightly different recommendations across specific program areas, taken as a whole, the Administration has worked hard to find savings to balance their continuing commitment to investing in our nation's future. We endorse the Administration's approach of guarding from cuts those investments in innovation, education and infrastructure that contribute to the conditions that allow Americans to continue to do what we have done time and again since the founding of the Republic:

- invest to keep America economically competitive and strong and to create good jobs now and in the future;
- build opportunities for every citizen to unleash their potential to be creative, productive and actively contribute to this great democracy; and
- leave for our children a world that is better than the one we inherited.

We should add that these investments will build not just a better society, but also make this country a better place to do business and develop a workforce with the skills to excel, the ambition to create, and the means to succeed.

Programmatic Guidance

While programmatic guidance is of limited utility to the Budget Committee, what follows are specific observations, agency-by-agency, where the agreement or disagreement with the Majority Views and Estimates is significant enough to justify comment.

National Aeronautics and Space Administration (NASA)

While supportive of the President, Democratic members are disappointed with the NASA request, especially in light of the work that Congress undertook last year to forge a constructive path forward for the nation's space program. The compromise that was enacted into law is not reflected in the proposed NASA budget request. The request cuts NASA's overall budget plan and its human exploration budget even further than before, delays the development of the next generation vehicle, and eliminates any concrete destinations or milestones beyond the International Space Station that can inform decisions on needed investments in space technology. We agree with the Majority's view that NASA's FY 2012 request is not reflective of the priorities established in the NASA Authorization Act of 2010 as the Administration has placed a relative higher priority on commercial crew and underfunded development of the Space Launch Vehicle (SLV) and Multiple Purpose Crew Vehicle (MPCV).

Contrary to the Majority's position on Earth Science, Democratic members have been supportive of the higher funding accorded this area in last year's request. NASA has indicated that reduced out-year funding for Earth Sciences will necessitate delaying the start of two missions, CLARREO and DESDynI. While this is unfortunate, Democratic members acknowledge the budgetary challenges facing NASA's Science program. However, we are concerned that delays in initiating these missions could lead to higher development costs and also delay the collection of data. This data would provide significant utility in observing, understanding, and addressing key environmental challenges including complete EI Nino/ La Nina cycles, reflected solar radiation and Earth thermal radiation, earthquakes, volcanic eruptions, landslides as well as new observational information for monitoring forests, agricultural resources, and mountain glaciers.

National Science Foundation (NSF)

Democratic Members strongly support fully funding NSF at the levels requested by the President. There is no record to support the Republican views that " . . . new and expanded Administration priorities continue to excessively divert precious research and development funds from other worthy endeavors." Innovation in science and the creation of cross-disciplinary science initiatives that tie basic research to technology innovation, at agencies that fund research and development both reflect and help drive creativity across the nation's colleges and universities.

Department of Energy (DOE)

Democratic Members strongly reject the Republican preferences for cuts to programs at the DOE. The cuts outlined in the FY 2011 Continuing Resolution would lead to job losses in the thousands spread across the National Labs in California, New Mexico, Washington, Colorado, Illinois, Tennessee, New York, and Virginia, and many thousands more at universities and companies all across the country. Not only would some of the country's best and brightest find their careers interrupted or ended, but the Nation would also lose the fruits of their hard work and creativity. DOE programs and the National Labs fill a void in the U.S. innovation pipeline that industry and universities cannot or will not do alone, tackling some of our most important national challenges at the cutting edge of questions about material sciences, energy sciences, emerging sources of energy, and conservation.

Democratic Members believe that we must take a comprehensive approach to assure a safer, more sustainable energy future for our children, and this includes supporting activities from basic to applied research, and beyond. Assuming that the current level of private investment in energy technologies is sufficient, that companies will do all of the necessary cutting-edge research on their own, or that the marketplace will naturally pick cleaner technologies, grossly oversimplifies the complexity and scale of the energy and environmental challenges that we face today, and threatens our future international competitiveness. With the U.S. accounting for roughly eight percent of global oil reserves and a quarter of global oil demand, we cannot drill our way to energy independence. If the country is to have any hope of developing a long-term solution to the depletion of fossil fuels, or of reducing pollution from our need to continue to use fossil fuels in many applications for generations to come, those answers will likely be found through research by the National Labs, universities, and companies supported by DOE. However, those answers will be much harder to find if we undercut DOE's vital research efforts.

National Oceanic and Atmospheric Administration (NOAA)

Democratic Members endorse the President's request for NOAA. We are particularly concerned that funds sufficient to launch the full array of weather and climate sensors and satellites be made available in the FY 2012 budget. National Institute of Standards and Technology (NIST)

Democratic Members are pleased that the President's request provides support for the NIST lab complex as well as the Industrial Technology Services. The budget request is consistent with COMPETES Act goals and continues the Manufacturing Extension Program (MEP) on its doubling path. The MEP remains a very effective tool for supporting small businesses. This program's focus on improving manufacturing capabilities is almost unique across the Federal government.

Department of Homeland Security (DHS)

The Democratic Members are supportive of the President's request for DHS Science and Technology. We are particularly pleased with the strong support shown in that budget for the Staffing for Adequate Fire and Emergency Response (SAFER) grants which support our Nation's emergency response community. However, the cuts to the Assistance to Firefighter Grants (AFG) program are troubling, and we would prefer that this program be fully funded at the FY 2010 level.

Environmental Protection Agency (EPA)

The Majority's Views and Estimates state that: "Due to EPA's disturbing pattern of regulating based on insufficient or faulty scientific evidence, the Committee feels that it is unnecessary to continue EPA's research at existing levels until reforms are undertaken." Democratic Members strongly reject this view and support the President's request for EPA science.

The Majority make specific reference to the Integrated Risk Information System (IRIS). The Majority's characterization of the program is unrecognizable to anyone who has studied the record. EPA is currently trying to gain greater control over the IRIS process, an effort that the Majority describes as resulting in "decreased transparency" so that they can begin adding entries at a pace greater than two or three a year. The assertion that the IRIS "system is being used for ulterior purposes" is not buttressed by analysis. The problem with science at EPA is not that they do not do it well or that they abuse it, but that it is used by those who fear regulation to postpone risk assessments. IRIS entries go through multi-year reviews and some have even been forced to National Academy Assessments, and these endless efforts go on more than a decade without ever leading to an entry. That is not EPA's doing, but rather reflects the efforts of those who use the argument of scientific uncertainty to demand just one more study, one more literature review, one more outside

panel before any regulation can ever be approved for action. IRIS has been the subject of multiple hearings by the Investigations and Oversight Subcommittee in the 110th and 111th Congresses as well as multiple reports by the Government Accountability Office (GAO)—the facts are available for anyone to review.

Department of Transportation (DOT)

Democratic Members of the Committee support DOT's continuing research into ways to build and maintain infrastructure in a manner that is energy efficient and reduces impacts on the environment; to identify and address deterioration and other potential safety problems with new and existing infrastructure; and to find efficient, sensible ways to reduce traffic congestion. We particularly support programs that would successfully transition research findings to state and local transportation planners. Regarding the Federal Aviation Administration (FAA), Democratic Members are supportive of FAA's Research, Development and Technology initiatives, including NextGen, and urge funding of such initiatives in FY 2012 at the level requested by the Administration. In addition, Democratic Members look forward to receiving additional information at an upcoming hearing before finalizing our views on the proposed increase for the FAA's Office of Commercial Space Transportation.

Minority Views of the Democratic Caucus of the Committee on Science, Space, and Technology On the FY2012 Budget Request

Eddie Bernice Johnson

Donna F. Edwards

Ben Ray Luján

Jerry F. Costello

Lynn Woolsey

Hansen Clarke

Brad Miller

Marcia L. Fudge

Daniel Lipinski

Frederica S. Wilson

Paul D. Tonko

J. R. Sc

Terri Sewell

Zoe Lofgren

Jerry McNerney

Minority Views of the Democratic Caucus of the Committee on Science, Space, and Technology On the FY2012 Budget Request

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Jerry McNerney

Additional Views of Representative Zoe Lofgren
On the FY2012 Budget Request

The President's proposed budget for fiscal year 2012 includes strategic investments in science and research and development. I agree and join with my Democratic colleagues on the Committee in the Minority Views that "if we do not invest in education, in new ideas, and in new processes, we will deny our children the capacity to deal effectively with the crises that their generation will have to tackle."

I would like to further discuss the proposed National Aeronautics and Space Administration (NASA) budget. While I agree with my colleagues that the President's budget should align with the priorities established by Congress in the NASA Authorization Act of 2010 (P.L. 111-267), I do not share my colleagues' belief that the budget proposal conflicts with the Authorization Act or concerns regarding the budget's funding for commercial space. With the end of the NASA space shuttle program, we all agree that we need to ensure our ability to access the International Space Station (ISS). SpaceX, which is headquartered in Hawthorne, California, became the first commercial company to successfully re-enter a spacecraft from low-Earth orbit and recover that spacecraft with their Dragon demonstration in December. The robust funding provided for commercial in the President's budget would help to leverage private sector investments, like SpaceX, to accelerate the commercial sector's capacity to access the ISS. Further, President's budget includes important funding for technology research that will help ensure the United States remains a leader in space.

Zoe Lofgren
Member of Congress

Additional Views on the FY2012 Budget
Representative Marcia L. Fudge

Though I agree, in large part, with the Minority Views of the Democratic Caucus of the Committee on Science, Space, and Technology on the FY2012 Budget Request, I must state my opposition to the stated views on the proposed NASA budget. I believe that the President's Budget Request sets forth the plan needed to develop a robust space and aeronautics industry in the United States. By leveraging private sector funds with federal investments, we will increase our national competition and progress.

However, what is most important to me and my constituents is the proposal's focus on research and development (R&D) within the agency. I believe that we are at a critical time in our history where technology and innovation represent the future of our country. It is the role of the federal government to invest in a diverse portfolio of basic R&D that will carry our space and aeronautics industry forward. If we truly want to build the vehicles of the future, we must make these investments now. I urge my colleagues to protect all R&D funding in the proposal for the sake of our global leadership and future prosperity.

Marcia L. Fudge

Marcia L. Fudge
Member of Congress

Additional Views Submitted by Mr. Tonko for the
FY2012 Budget Request

The President's leadership on science, clean energy, research, and development is once again on display with the FY 2012 budget request. His goal is clear: we must out-innovate our competitors in a global clean energy race to win the future. We cannot win the future, however, if we pull the rug out from under our nation's feet. We cannot afford to go backward. And yet, it seems as though that is exactly what the new majority in the House of Representatives intends for our country to do. H.R. 1 and recent short-term Continuing Resolutions for FY2011 funding have repeatedly made drastic cuts to scientific programs. These cuts would not only stop innovative research from taking place, but would fire some of the nation's leading scientists. Doing so destroys our ability to lead the innovation economy now, and in the future. Cuts of this magnitude will ensure that our country will lose its leadership role and will jeopardize the recovery from our worst economic crisis since the Great Depression.

While I agree with the Minority's Views and Estimates, I want to also highlight programs related to nanotechnology and their importance to our nation's economic future. I hope this guidance will help show the importance of these investments.

Programmatic Guidance

National Institute of Standards and Technology (NIST)

I support the NIST budget level as proposed by the President to continue to support research in nanotechnology, including additional funds for developing measurements to support the manufacture and production of nanotechnology-based products. These increases will support NIST's programs in user facility instrumentation, and increase the support for measurement research necessary to enable the development of nanomanufacturing technologies in support of the Nanotechnology Signature Initiatives. This focus will help bring our remaining manufactures into the innovation economy by enabling them to manufacture new nanotechnologies here at home. Congress should support this effort as an investment in American technology manufacturing.

National Science Foundation (NSF)

The programs outlined below build on the success of past research and their budget requests reflect an attempt by the Obama Administration to meet the overwhelming demand from industry for assistance.

NSF Nanomanufacturing. The full 2012 request is $57.2 million, which is aimed at enabling scaled-up, reliable, and cost-effective manufacturing of nanoscale materials, structures, devices, and systems. More specifically, the increased funding will support new concepts for high-rate synthesis and processing of nanostructures, nanostructured catalysts, nanobiotechnology methods, surface engineering, design and fabrication methods for devices, and assembly of

devices into nanosystems to be incorporated into larger-scale structures of relevance in industry, sustainability, and medicine. Partnerships between research centers and small businesses in the areas of manufacturing and commercialization will be strengthened while maintaining the same level of NSF investment. Creating partnerships is the most effective way to use taxpayer money and the President's budget should be commended for supporting these efforts.

Major Research Facilities & Instrumentation Acquisition. The 2012 request includes $31.5 million, supporting funding for user facilities, acquisition of major instrumentation, and other activities that develop, support, or enhance the scientific infrastructure for the conduct of nanoscale science, engineering, and technology research and development. Partnerships of research centers with small businesses in the areas of nanomanufacturing and commercialization will be strengthened while maintaining the same level of NSF investment.

Sincerely,

Paul D. Tonko
Member of Congress

HISTORY OF APPOINTMENTS
COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY
U.S. HOUSE OF REPRESENTATIVES
FOR THE ONE HUNDRED TWELFTH CONGRESS

January 6, 2011—H. Res. 6

Ralph M. Hall, Texas, named Chair of the Science, Space, and Technology Committee.

January 5, 2011—H. Res. 7

Eddie Bernice Johnson, Texas, named Ranking Member of the Science, Space, and Technology Committee.

January 18, 2011—H. Res. 37

Republican Members assigned to the Committee on Science, Space, and Technology:

F. James Sensenbrenner, Jr., Lamar S. Smith of Texas, Dana Rohrabacher, Roscoe G. Bartlett, Frank D. Lucas, Judy Biggert, W. Todd Akin, Randy Neugebauer, Michael T. McCaul, Paul C. Broun of Georgia, Sandy Adams, Benjamin Quayle, Charles J. "Chuck" Fleischmann, E. Scott Rigell, Steven M. Palazzo, Mo Brooks, Andy Harris.

January 19, 2011—H. Res. 39

Democratic Members assigned to the Committee on Science, Space, and Technology:

Jerry F. Costello, Lynn C. Woolsey, Zoe Lofgren of California, David Wu, Brad Miller of North Carolina, Daniel Lipinski, Gabrielle Giffords, Donna F. Edwards, Marcia L. Fudge, Ben R. Lujan, Paul D. Tonko, Jerry McNerney, John P. Sarbanes, Terri A. Sewell, Frederica S. Wilson, Hansen Clarke.

February 9, 2011—H. Res. 78

Randy Hultgren, Chip Cravaack, Larry Bucshon, and Dan Benishek appointed to the Committee on Science, Space, and Technology.

August 3, 2011

Mr. Wu resigned from the United States House of Representatives.

SUBCOMMITTEE SELECTION

February 9, 2011—Republican Subcommittee Assignments

ENERGY & ENVIRONMENT:

Andy Harris (Chair), Dana Rohrabacher, Roscoe G. Bartlett, Frank D. Lucas, Judy Biggert, W. Todd Akin, Randy Neugebauer, Paul C. Broun, Charles J. "Chuck" Fleischmann, Ralph M. Hall (Ex Officio)

INVESTIGATIONS & OVERSIGHT:

Paul C. Broun (Chair), F. James Sensenbrenner, Jr., Sandy Adams, Randy Hultgren, Larry Bucshon, Dan Benishek, Ralph M. Hall (Ex Officio)

RESEARCH & SCIENCE EDUCATION:

Mo Brooks (Chair), Roscoe G. Bartlett, Benhamin Quayle, Steven M. Palazzo, Andy Harris, Randy Hultgren, Larry Bucshon, Dan Benishek, Ralph M. Hall (Ex Officio)

SPACE & AERONAUTICS:

Steven M. Palazzo (Chair), F. James Sensenbrenner, Lamar S. Smith, Dana Rohrabacher, Frank D. Lucas, W. Todd Akin, Michael T. McCaul, Sandy Adams, E. Scott Rigell, Mo Brooks, Ralph M. Hall (Ex Officio)

TECHNOLOGY & INNOVATION:

Benjamin Quayle (Chair), Lamar S. Smith, Judy Biggert, Randy Neugebauer, Michael T. McCaul, Charles J. "Chuck" Fleischmann, E. Scott Rigell, Randy Hultgren, Chip Cravaack, Ralph M. Hall (Ex Officio)

February 9, 2011—Democratic Subcommittee Assignments

ENERGY & ENVIRONMENT:

Brad Miller (Ranking Member), Lynn C. Woolsey, Ben R. Lujan, Paul D. Tonko, Zoe Lofgren, Jerry McNerney, Eddie Bernice Johnson (Ex Officio)

INVESTIGATIONS & OVERSIGHT:

Donna F. Edwards (Ranking Member), Zoe Lofgren, Brad Miller, Jerry McNerney, Eddie Bernice Johnson (Ex Officio)

RESEARCH & SCIENCE EDUCATION:

Daniel Lipinski (Ranking Member), Hansen Clarke, Paul D. Tonko, John P. Sarbanes, Terri A. Sewell, Eddie Bernice Johnson (Ex Officio)

SPACE & AERONAUTICS:

Gabrielle Giffords (Ranking Member), Marcia L. Fudge, Jerry F. Costello, Terri A. Sewell, David Wu, Donna F. Edwards, Frederica S. Wilson, Eddie Bernice Johnson (Ex Officio)

TECHNOLOGY & INNOVATION:

David Wu (Ranking Member), John P. Sarbanes, Frederica S. Wilson, Daniel Lipinski, Gabrielle Giffords, Ben R. Lujan, Eddie Bernice Johnson (Ex Officio)

October 26, 2011—Democratic Subcommittee Assignments

Ms. Edwards assigned as Ranking Member of the Subcommittee on Technology Innovation.

Mr. Tonko assigned as Ranking Member on the Subcommittee on Investigations and Oversight.

Mr. Clarke assigned to the Subcommittee on Space and Aeronautics.

RULES GOVERNING PROCEDURE, COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY FOR THE 112TH CONGRESS

RULE 1. GENERAL PROVISIONS

(a) IN GENERAL.—The Rules of the House of Representatives, so far as applicable, shall govern the Committee and its Subcommittees, except that a motion to recess from day to day, or a motion to recess subject to the call of the chair (within 24 hours), or a motion to dispense with the first reading (in full) of a bill or resolution, if printed copies are available, is a non-debatable motion of privilege in the Committee. [House Rule XI 1(a)]

(b) SUBCOMMITEES.—Each Subcommittee is a part of the Committee and is subject to the authority and direction of the Committee and its rules so far as applicable. Written rules adopted by the Committee, not inconsistent with the Rules of the House, shall be binding on each Subcommittee of the Committee. [House Rule XI 1(a)]

(c) COMMITTEE RULES.—The Committee's rules shall be publicly available in electronic form and published in the Congressional Record not later than 30 days after the Chair of the Committee is elected in each odd-numbered year. [House Rule XI 2(a)(2)]

(d) AVAILABILITY OF PUBLICATIONS.—To the maximum extent feasible, the Committee shall make its publications available in electronic form, including on the Committee website. [House Rule XI 2(e)(4)]

(e) COMMITTEE WEBSITE.—The Chair of the Committee shall maintain an official Committee website for the purpose of furthering the Committee's legislative and oversight responsibilities, including communicating information about the Committee's activities to Committee Members and other Members of the House. The Ranking Minority Member of the Committee may maintain a similar website for the same purpose, including communicating information about the activities of the minority to Committee Members and other Members of the House.

(f) VICE CHAIR; PRESIDING MEMBER.—The Chair shall designate a member of the majority party to serve as Vice Chair of the Committee, and shall designate a majority member of each Subcommittee to serve as Vice Chair of each subcommittee. The vice chair of the Committee or subcommittee, as the case may be, shall preside at any meeting or hearing during the temporary absence of the Chair. If the Chair or Vice Chair of the Committee or Subcommittee are not present at any meeting or hearing, the ranking member of the majority party who is present shall preside at the meeting or hearing. [House Rule XI 2(d)]

(g) MOTION TO GO TO CONFERENCE.—The Chair is directed to offer a motion under clause l of Rule XXII of the Rules of the House whenever the Chair considers it appropriate. [House Rule XI 2(a)(3)]

(h) CONFERENCE COMMITEES.—Recommendations of conferees to the Speaker shall provide a ratio of majority party Members to minority party Members which shall be no less favorable to the majority party than the ratio of the Committee.

(i) USE OF HEARING ROOMS.—In consultation with the Ranking Minority Member, the Chair of the Committee shall establish guidelines for the use of Committee hearing rooms.

(j) NATIONAL SECURITY INFORMATION.—All national security information bearing a classification of secret or higher which has been received by the Committee or a Subcommittee shall be deemed to have been received in Executive Session and shall be given appropriate safekeeping. The Chair of the Committee may establish such regulations and procedures as in the Chair's judgment are necessary to safeguard classified information under the control of the Committee. Such procedures shall, however, ensure access to this information by any Member of the Committee or any other Member of the House of Representatives who has requested the opportunity to review such material.

(k) OTHER PROCEDURES.—The Chair of the Committee, after consultation with the Ranking Minority Member of the Committee, may establish such

other procedures and take such actions as may be necessary to carry out these rules or to facilitate the effective operation of the Committee.

Rule 2. REGULAR, ADDITIONAL, AND SPECIAL MEETINGS

(a) REGULAR MEETINGS.—Unless dispensed with by the Chair of the Committee, the Committee shall meet on the second (2nd) Wednesday of each month at 10:00 a.m. if the House is in session. If the House is not in session on that day and the Committee has not met during such month, the Committee shall meet at the earliest practicable opportunity when the House is again in session. [House Rule XI 2(b)]

(b) ADDITIONAL MEETINGS.—The Chair of the Committee may call and convene, as the Chair considers necessary and in accordance with Rule 4(b), additional meetings of the Committee for the consideration of any bill or resolution pending before the Committee or for the conduct of other Committee business. The Committee shall meet for such purpose under that call of the Chair. [House Rule XI 2(c)(1)]

(c) SPECIAL MEETINGS.—Rule XI 2(c) of the Rules of the House of Representatives is hereby incorporated by reference. [House Rule XI 2(c)(2)]

Rule 3. MEETINGS AND HEARINGS GENERALLY

(a) IN GENERAL.—Meetings and hearings of the Committee shall be called to order and presided over by the Chair, or in the Chair's absence, by the Vice Chair of the Committee or by the ranking majority member of the Committee present as Acting Chair. [House Rule XI 2(d)]

(b) OPENING STATEMENTS.—Insofar as is practicable, the Chair, after consultation with the Ranking Minority Member, shall limit the total time of opening statements by Members to no more than 10 minutes, the time to be divided equally between the Chair and Ranking Minority Member.

(c) ADDRESSING THE COMMITTEE.—The time any one (1) Member may address the Committee on any bill, motion, or other matter under consideration by the Committee or the time allowed for the questioning of a witness at hearings before the Committee will be limited to five (5) minutes, and then only when the Member has been recognized by the Chair. This time limit may be waived by the Chair pursuant to unanimous consent. [House Rule XI 2(j)(2)]

(d) REQUESTS FOR WRITTEN MOTIONS.—Any motion made at a meeting of the Committee and which is entertained by the Chair of the Committee or the Subcommittee shall be presented in writing upon the demand of any Member present and a copy made available to each Member present.

(e) OPEN MEETINGS AND HEARINGS.—Each meeting for the transaction of business, including the markup of legislation, and each hearing of the Committee or a Subcommittee shall be open to the public, including to radio, television, and still photography coverage, unless closed in accordance with clause 2(g) or 2(k)(5) of rule XI of the Rules of the House of Representatives.

(f) AUDIO AND VISUAL COVERAGE.——

(1) Whenever a hearing or meeting conducted by the Committee is open to the public, these proceedings shall be open to coverage by audio and visual means, except as provided in Rule XI 4(f)(2) of the House of Representatives.

(2) To the maximum extent practicable the audio and video coverage shall be in a manner that allows the public to easily listen to and view the proceedings.

(3) Operation and use of any Committee internet broadcast system shall be fair and nonpartisan and in accordance with all other applicable rules of the Committee and the House.

(4) To the maximum extent practicable, the Committee shall maintain the recordings of the coverage of such hearings or meetings in a manner easily accessible to the public.

(5) The Chair of the Committee or Subcommittee may not limit the number of television, or still cameras to fewer than two (2) representatives from each medium (except for legitimate space or safety considerations, in which case pool coverage shall be authorized).

(6) Radio and television tapes, television films, and Internet recordings of any Committee hearings or meetings that are open to the public may

not be used, or made available for use, as partisan political campaign material to promote or oppose the candidacy of any person for elective public office.

(7) It is, further, the intent of this rule that the general conduct of each meeting or hearing covered under authority of this rule by audio or visual means, and the personal behavior of the Committee Members and staff, other government officials and personnel, witnesses, television, radio, and press media personnel, and the general public at the meeting or hearing, shall be in strict conformity with and observance of the acceptable standards of dignity, propriety, courtesy, and decorum traditionally observed by the House in its operations, and may not be such as to:

(A) distort the objects and purposes of the meeting or hearing or the activities of Committee Members in connection with that meeting or hearing or in connection with the general work of the Committee or of the House; or

(B) cast discredit or dishonor on the House, the Committee, or a Member, Delegate, or Resident Commissioner or bring the House, the Committee, or a Member, Delegate, or Resident Commissioner into disrepute.

(8) The coverage of Committee meetings and hearings by audio and visual means shall be permitted and conducted only in strict conformity with the purposes, provisions, and requirements of this rule.

(9) The following shall apply to coverage of Committee meetings or hearings by audio or visual means:

(A) If audio or visual coverage of the hearing or meeting is to be presented to the public as live coverage, that coverage shall be conducted and presented without commercial sponsorship.

(B) The allocation among the television media of the positions or the number of television cameras permitted by a Committee or Subcommittee Chair in a hearing or meeting room shall be in accordance with fair and equitable procedures devised by the Executive Committee of the Radio and Television Correspondents' Galleries.

(C) Television cameras shall be placed so as not to obstruct in any way the space between a witness giving evidence or testimony and any member of the Committee or the visibility of that witness and that member to each other.

(D) Television cameras shall operate from fixed positions but may not be placed in positions that obstruct unnecessarily the coverage of the hearing or meeting by the other media.

(E) Equipment necessary for coverage by the television and radio media may not be installed in, or removed from, the hearing or meeting room while the Committee is in session.

(F) (i) Except as provided in subdivision (ii), floodlights, spotlights, strobe lights, and flashguns may not be used in providing any method of coverage of the hearing or meeting.

(ii) The television media may install additional lighting in a hearing or meeting room, without cost to the Government, in order to raise the ambient lighting level in a hearing or meeting room to the lowest level necessary to provide adequate television coverage of a hearing or meeting at the current state of the art of television coverage.

(G) If requests are made by more of the media than will be permitted by a Committee or Subcommittee Chair for coverage of a hearing or meeting by still photography, that coverage shall be permitted on the basis of a fair and equitable pool arrangement devised by the Standing Committee of Press Photographers.

(H) Photographers may not position themselves between the witness table and the members of the Committee at any time during the course of a hearing or meeting.

(I) Photographers may not place themselves in positions that obstruct unnecessarily the coverage of the hearing by the other media.

(J) Personnel providing coverage by the television and radio media shall be currently accredited to the Radio and Television Correspondents' Galleries.

(K) Personnel providing coverage by still photography shall be currently accredited to the Press Photographers' Gallery.

(L) Personnel providing coverage by the television and radio media and by still photography shall conduct themselves and their coverage activities in an orderly and unobtrusive manner. [House Rule XI (4)]

Rule 4. CONSIDERATION OF MEASURE OR MATTER

(a) IN GENERAL.—Bills and other substantive matters may be taken up for consideration only when called by the Chair of the Committee, except those matters which are the subject of special call meetings outlined in Rule 2(c).

(b) NOTICE.——

(1) (A) The Chair of the Committee shall announce the date, place, and subject matter of a committee meeting, which may not commence earlier than the third day on which members have notice thereof. [House Rule XI 2(g)(3)]

(B) A committee meeting may begin sooner than specified in subdivision (A) (in which case the Chair shall make the announcement specified in subdivision (A) at the earliest possible time) if——

(i) the Chair of the Committee, with the concurrence of the ranking minority member, determines there is good cause to do so; or

(ii) the Committee so determines by majority vote, a quorum being present. [House Rule XI 2(g)(3)]

(2) (A) At least 24 hours prior to the commencement of a meeting for the consideration of a measure or matter, or at the time of the announcement under (b)(1)(B) made within 24 hours before such meeting, the Chair shall cause the text of such measure or matter to be made publicly available in electronic form. [House Rule XI 2(g)(4)]

(B) To the maximum extent practicable, a written copy of the measure or matter to be considered and the original text of the measure to be considered for purposes of markup shall be made publicly available in electronic form for at least 48 hours in advance of consideration, excluding Saturdays, Sundays and legal holidays.

(3) A notice provided shall be published promptly in the Daily Digest and made publicly available in electronic form. [House Rule XI 2(g)(3)]

(c) SUBMISSION OF AMENDMENTS.—To the maximum extent practicable, amendments to a measure or matter shall be submitted in writing to the Clerk of the Committee at least 24 hours prior to the consideration of the measure or matter.

(d) INVESTIGATIVE OR OVERSIGHT REPORTS.—A proposed investigative or oversight report shall be considered as read in Committee if it has been available to the Members for at least 24 hours (excluding Saturdays, Sundays, or legal holidays except when the House is in session on such a day). [House Rule XI 1(b)(2)]

(e) PRIVATE BILLS.—No private bill will be scheduled by the Chair of the Committee if there are two (2) or more Members who object to its consideration.

Rule 5. POWER TO SIT AND ACT; SUBPOENA POWER

(a) IN GENERAL.——

(1) Notwithstanding paragraph (2), a subpoena may be authorized and issued in the conduct of any investigation or series of investigations or activities to require the attendance and testimony of such witnesses and the production of such books, records, correspondence, memoranda, papers and documents as deemed necessary, only when authorized by majority vote of the Committee or Subcommittee (as the case may be), a majority of the Committee or Subcommittee being present. Authorized subpoenas shall be signed only by the Chair of the Committee, or by any Member designated by the Chair. [House Rule XI 2(m)(3)(A)]

(2) The Chair of the Committee, after consultation with the Ranking Minority Member of the Committee, or, if the Ranking Member cannot be reached, the Ranking Minority Member of the relevant Subcommittee, may authorize and issue such subpoenas as described in paragraph (1) during any period in which the House has adjourned for a period longer than three (3) days. [House Rule XI 2(m)(3)(A)]

(3) A subpoena duces tecum may specify terms of return other than at a meeting or a hearing of the Committee. [House Rule XI 2(m)(3)(B)]

(4) The Chair, or any Member of the Committee designated by the Chair, may administer oaths to witnesses before the Committee. [House Rule XI 2(m)(2)]

(b) SENSITIVE OR CONFIDENTIAL INFORMATION.—Unless otherwise determined by the Committee or Subcommittee, certain information received by the Committee or Subcommittee pursuant to a subpoena not made part of the record at an open hearing shall be deemed to have been received in Executive Session when the Chair of the Committee, in the Chair's judgment and after consultation with the Ranking Minority Member of the Committee, deems that in view of all of the circumstances, such as the sensitivity of the information or the confidential nature of the information, such action is appropriate.

Rule 6. QUORUMS AND VOTING

(a) QUORUMS.——

(1) One-third (1/3) of the Members of the Committee shall constitute a quorum for all purposes except as provided in paragraphs (2) and (3) of this Rule. [House Rule XI 2(h)(3)]

(2) A majority of the Members of the Committee shall constitute a quorum for the purposes of reporting any measure or matter, authorizing a subpoena, closing a meeting or hearing pursuant to clause 2(g) of Rule XI of the House, releasing executive session material pursuant to clause 2(k)(7) of Rule XI of the Rules of the House, or where required by any other Rule of the House.

(3) Two (2) Members of the Committee shall constitute a quorum for taking testimony and receiving evidence, which, unless waived by the Chair of the Committee after consultation with the Ranking Minority Member of the Committee, shall include at least one (1) Member from each of the majority and minority parties. [House Rule XI 2(h)(2)]

(b) VOTING BY PROXY.—No Member may authorize a vote by proxy with respect to any measure or matter before the Committee. [House Rule XI 2(f)]

(c) REQUESTS FOR RECORD VOTE.—A record vote of the Members may be had at the request of three (3) or more Members or, in the apparent absence of a quorum, by anyone (1) Member.

(d) POSTPONEMENT OF PROCEEDINGS.—The Chair of the Committee, or of any Subcommittee, is authorized to postpone further proceedings when a record vote is ordered on the question of approving a measure or matter or on adopting an amendment, and to resume proceedings on a postponed question at any time after reasonable notice. Upon resuming proceedings on a postponed question, notwithstanding any intervening order for the previous question, an underlying proposition shall remain subject to further debate or amendment to the same extent as when the question was postponed. [House Rule XI 2(h)(4)]

Rule 7. HEARING PROCEDURES

(a) ANNOUNCEMENT OF HEARING.—The Chair shall make a public announcement of the date, place, and subject matter of a hearing, and to the extent practicable, a list of witnesses at least one (1) week before the commencement of the hearing. If the Chair, with the concurrence of the Ranking Minority Member, determines there is good cause to begin the hearing sooner, or if the Committee so determines by majority vote, a quorum being present for the transaction of business, the Chair shall make the announcement at the earliest possible date. Any announcement made under this Rule shall be promptly published in the Daily Digest, and made available in electronic form. [House Rule XI 2(g)(3)]

(b) WITNESS STATEMENT; TESTIMONY.——

(1) Insofar as is practicable, no later than 48 hours in advance of his or her appearance, each witness who is to appear before the Committee shall file in printed copy and in electronic form a written statement of his or her proposed testimony and a curriculum vitae. [House Rule XI 2(g)(5)]

(2) Each witness shall limit his or her presentation to a five (5) minute summary, provided that additional time may be granted by the Chair of the Committee or Subcommittee when appropriate.

(3) In the case of a witness appearing in a nongovernmental capacity, a written statement of proposed testimony shall include a disclosure of the amount and source (by agency and program) of each Federal grant (or subgrant thereof) or contract (or subcontract thereof) received during the current fiscal year or either of the two previous fiscal years by the witness or by an entity represented by the witness. Such statements, with appropriate redactions to protect the privacy of the witness, shall be made publicly available in electronic form not later than one day after the witness appears. [House Rule XI 2(g)(5)]

(c) QUESTIONING WITNESSES.—The right to interrogate a witness before the Committee shall alternate between Majority and Minority Members. Each Member shall be limited to five (5) minutes in the interrogation of witnesses until such time as each Member present who wishes to be recognized has been recognized once for that purpose. No member may be recognized for a second period of interrogation until each Member present has been recognized at least once. [House Rule XI 2(j)(2)]

(d) EXTENDED QUESTIONING OF WITNESSES BY MEMBERS.—Notwithstanding Rule 3(c), upon a motion, the Chair, in consultation with the Ranking Minority Member, may designate an equal number of Members from each party to question a witness for a period of time equally divided between the majority party and the minority party, not to exceed one (1) hour in the aggregate or, upon a motion, may designate staff from each party to question a witness for equal specific periods that do not exceed one (1) hour in the aggregate. [House Rule XI 2(j)(2)]

(e) MINORITY WITNESSES.—Whenever any hearing is conducted by the Committee on any measure or matter, the minority Members of the Committee shall be entitled, upon request to the Chair by a majority of them before the completion of the hearing, to call witnesses selected by the minority to testify with respect to the measure or matter during at least one (1) day of hearing thereon. [House Rule XI 2(j)(1)]

(f) ADDITIONAL QUESTIONS FOR THE RECORD.—Members of the Committee have two (2) weeks from the date of a hearing to submit additional questions for the record to be answered by witnesses who have appeared in person. The letters of transmittal and any responses thereto shall be printed in the hearing record.

(g) ADDITIONAL HEARING PROCEDURES.—Rule XI 2(k) of the Rules of the House of Representatives is hereby incorporated by reference.

Rule 8. PROCEDURES FOR REPORTING MEASURES OR MATTERS

(a) FILING OF REPORTS.——

(1) It shall be the duty of the Chair of the Committee to report or cause to be reported promptly to the House any measure approved by the Committee and to take or cause to be taken the necessary steps to bring the matter to a vote. To the maximum extent practicable, the written report of the Committee on such measures shall be made available to the Committee membership for review at least 24 hours in advance filing. [House Rule XIII 2(b)(1)]

(2) The report of the Committee on a measure which has been approved by the Committee shall be filed within seven (7) calendar days (exclusive of days on which the House is not in session) after the day on which there has been filed with the Clerk of the Committee a written request, signed by the majority of the Members of the Committee, for the reporting of that measure. Upon the filing of any such request, the Clerk of the Committee shall transmit immediately to the Chair of the Committee notice of the filing of that request. [House Rule XIII 2(b)(2)]

(b) CONTENTS OF REPORT.—The report of the Committee on a measure or matter that has been approved by the Committee shall include the matters required by clauses 2(c) and 3 of rule XIII of the Rules of the House.

(c) SUPPLEMENTAL; MINORITY, OR ADDITIONAL VIEWS.—Clause 2(I) of House Rule XI is hereby incorporated by reference.

(d) IMMEDIATE PRINTING; SUPPLEMENTAL REPORTS.—This Rule does not preclude——

(1) the immediate filing or printing of a Committee report unless a timely request for the opportunity to file supplemental, minority, or additional views has been made as provided by this Rule; or

(2) the filing by the Committee of any supplemental report upon any measure or matter which may be required for the correction of any technical error in a previous report made by that Committee upon that measure or matter.

(e) REPORT LANGUAGE ON USE OF FEDERAL RESOURCES.—No legislative report filed by the Committee on any measure or matter reported by the Committee shall contain language which has the effect of specifying the use of federal resources more explicitly (inclusively or exclusively) than that specified in the measure or matter as ordered reported, unless such language has been approved by the Committee during a meeting or otherwise in writing by a majority of the Members.

Rule 9. OTHER COMMITTEE PUBLICATIONS

(a) HOUSE REPORTS.——

(1) Any document published by the Committee as a House Report, other than a report of the Committee on a measure which has been approved by the Committee, shall be approved by the Committee at a meeting, and Members shall have the same opportunity to submit views as provided for in Rule 8(c).

(2) Not later than the 30th day after June 1 and December 1, the Committee shall submit to the House a semiannual report on the activities of the Committee.

(b) OTHER DOCUMENTS.——

(1) Subject to paragraph (2) and (3), the Chair of the Committee may approve the publication of any document as a Committee print which in the Chair's discretion the Chair determines to be useful for the information of the Committee.

(2) Any document to be published as a Committee print which purports to express the views, findings, conclusions, or recommendations of the Committee or any of its Subcommittees, other than a report of the Committee on a measure which has been approved by the Committee, must be approved by the Committee or its Subcommittees, as applicable, in a meeting or otherwise in writing by a majority of the Members, and such Members shall have the right to submit supplemental, minority, or additional views for inclusion in the print within at least 48 hours after such approval.

(3) Any document to be published as a Committee print, other than a document described in subsection (2) of this Rule, shall——

(A) include on its cover the following statement: "This document has been printed for informational purposes only and does not represent either findings or recommendations adopted by this Committee;" and

(B) not be published following the sine die adjournment of a Congress, unless approved by the Chair of the Committee after consultation with the Ranking Minority Member of the Committee.

(c) JOINT INVESTIGATION OR STUDY.—A report of an investigation or study conducted jointly by the Committee and one (1) or more other Committee(s) may be filed jointly, provided that each of the Committees complies independently with all requirements for approval and filing of the report. [House Rule XI 1(b)(2)]

(d) POST ADJOURNMENT FILING OF COMMITTEE REPORTS.——

(1) After an adjournment of the last regular session of a Congress sine die, an investigative or oversight report approved by the Committee may be

filed with the Clerk at any time, provided that if a Member gives notice at the time of approval of intention to file supplemental, minority, or additional views, that Member shall be entitled to not less than seven (7) calendar days in which to submit such views for inclusion with the report. [House Rule XI 1(b)(4)]

(2) After an adjournment sine die of a regular session of a Congress or after December 15, whichever occurs first, the Chair of the Committee may file the second and fourth semiannual Activity Report for that Congress with the Clerk of the House at anytime and without the approval of the Committee, provided that a copy of the report has been available to each Member of the Committee for at least seven (7) calendar days and that the report includes any supplemental, minority, or additional views submitted by a Member of the Committee. [House Rule XI 1(d)]

Rule 10. GENERAL OVERSIGHT AND INVESTIGATIVE RESPONSIBILITIES

(a) OVERSIGHT.——

(1) IN GENERAL.—The Committee shall conduct oversight of matters within the jurisdiction of the Committee in accordance with House Rule X, clause 2 and shall review and study on a continuing basis laws, programs, and Government activities relating to nonmilitary research and development. [House Rule X 3(k)]

(2) OVERSIGHT PLAN.—Not later than February 15 of the first session of a Congress, the Committee shall meet in open session, with a quorum present, to adopt its oversight plan for that Congress for submission to the Committee on Oversight and Government Reform and the Committee on House Administration, in accordance with the provisions of clause 2(d) of Rule X of the House of Representatives. [House Rule X 2(d)]

(b) INVESTIGATIONS.——

(1) IN GENERAL.—The Chair of the Committee may undertake any formal investigation in the name of the Committee after consultation with the Ranking Minority Member of the Committee.

(2) SUBCOMMITEE INVESTIGATIONS.—The Chair of any Subcommittee shall not undertake any formal investigation in the name of the Committee or Subcommittee without formal approval by the Chair of the Committee, in consultation with other appropriate Subcommittee Chairs, and after consultation with the Ranking Minority Member of the Committee. The Chair of any Subcommittee shall also consult with the Ranking Minority Member of the Subcommittee before undertaking any investigation in the name of the Committee.

Rule 11. SUBCOMMITTEES

(a) ESTABLISHMENT AND JURISDICTION OF SUBCOMMITEES.—The Committee shall have the following standing Subcommittees with the jurisdiction indicated.

(1) SUBCOMMITTEE ON ENERGY AND ENVIRONMENT.—Legislative jurisdiction and general oversight and investigative authority on all matters relating to energy research, development, and demonstration and projects therefor, commercial application of energy technology, and environmental research, including:

(A) Department of Energy research, development, and demonstration programs;

(B) Department of Energy laboratories;

(C) Department of Energy science activities;

(D) energy supply activities;

(E) nuclear, solar and renewable energy, and other advanced energy technologies;

(F) uranium supply and enrichment, and Department of Energy waste management and environment, safety, and health activities, as appropriate;

(G) fossil energy research and development;

(H) clean coal technology;

(I) energy conservation research and development;

(J) energy aspects of climate change;

(K) pipeline research, development, and demonstration projects;

(L) energy and environmental standards;

(M) energy conservation, including building performance, alternate fuels for and improved efficiency of vehicles, distributed power systems, and industrial process improvements;

(N) Environmental Protection Agency research and development programs;

(O) the National Oceanic and Atmospheric Administration, including all activities related to weather, weather services, climate, the atmosphere, marine fisheries, and oceanic research;

(P) risk assessment activities; and

(Q) scientific issues related to environmental policy, including climate change.

(2) SUBCOMMITEE ON TECHNOLOGY AND INNOVATION.—Legislative jurisdiction and general oversight and investigative authority on all matters relating to competitiveness, technology, standards, and innovation, including:

(A) standardization of weights and measures, including technical standards, standardization, and conformity assessment;

(B) measurement, including the metric system of measurement;

(C) the Technology Administration of the Department of Commerce;

(D) the National Institute of Standards and Technology;

(E) the National Technical Information Service;

(F) competitiveness, including small business competitiveness;

(G) tax; antitrust, regulatory and other legal and governmental policies as they relate to technological development and commercialization;

(H) technology transfer, including civilian use of defense technologies;

(I) patent and intellectual property policy;

(J) international technology trade;

(K) research, development, and demonstration activities of the Department of Transportation;

(L) surface and water transportation research, development, and demonstration programs;

(M) earthquake programs (except for NSF) and fire research programs, including those related to wildfire proliferation research and prevention;

(N) biotechnology policy;

(O) research, development, demonstration, and standards-related activities of the Department of Homeland Security;

(P) Small Business Innovation Research and Technology Transfer; and

(Q) voting technologies and standards.

(3) SUBCOMMITEE ON RESEARCH AND SCIENCE EDUCATION.—Legislative jurisdiction and general oversight and investigative authority on all matters relating to science policy and science education, including:

(A) the Office of Science and Technology Policy;

(B) all scientific research, and scientific and engineering resources (including human resources), science, technology, engineering and mathematics education;

(C) intergovernmental mechanisms for research, development, and demonstration and cross-cutting programs;

(D) international scientific cooperation;

(E) National Science Foundation, including earthquake programs;

(F) university research policy, including infrastructure and overhead;

(G) university research partnerships, including those with industry;

(H) science scholarships;

(I) computing, communications, networking, and information technology;

(J) research and development relating to health, biomedical, and nutritional programs;

(K) research, development, and demonstration relating to nanoscience, nanoengineering, and nanotechnology;

(L) to the extent appropriate, agricultural, geological, biological and life sciences research;

(M) and materials research, development, and demonstration and policy.

(4) SUBCOMMITTEE ON SPACE AND AERONAUTICS.—Legislative jurisdiction and general oversight and investigative authority on all matters relating to astronautical and aeronautical research and development, including:

(A) national space policy, including access to space;

(B) sub-orbital access and applications;

(C) National Aeronautics and Space Administration and its contractor and government-operated labs;

(D) space commercialization, including commercial space activities relating to the Department of Transportation and the Department of Commerce;

(E) exploration and use of outer space;

(F) international space cooperation;

(G) the National Space Council;

(H) space applications, space communications and related matters;

(I) earth remote sensing policy;

(J) civil aviation research, development, and demonstration;

(K) research, development; and demonstration programs of the Federal Aviation Administration; and

(L) space law.

(5) SUBCOMMITTEE ON INVESTIGATIONS AND OVERSIGHT.—General and special investigative authority on all matters within the jurisdiction of the Committee on Science, Space, and Technology.

(b) RATIOS.—A majority of the majority Members of the Committee shall determine an appropriate ratio of majority to minority Members of each Subcommittee and shall authorize the Chair of the Committee to negotiate that ratio with the minority party; Provided, however, that the ratio of majority Members to minority Members on each Subcommittee (including any ex-officio Members) shall be no less favorable to the majority party than the ratio for the Committee.

(c) EX-OFFICIO MEMBERS.—The Chair of the Committee and Ranking Minority Member of the Committee shall serve as ex-officio Members of all Subcommittees and shall have the right to vote and be counted as part of the quorum and ratios on all matters before the Subcommittee.

(d) REFERRAL OF LEGISLATION.—The Chair of the Committee shall refer all legislation and other matters referred to the Committee to the Subcommittee or Subcommittees of appropriate primary and secondary jurisdiction within two (2) weeks of the matters being referred to the Committee, unless the Chair of the Committee deems consideration is to be by the Committee. Subcommittee Chairs may make requests for referral of specific matters to their Subcommittee within the two (2) week period if they believe Subcommittee jurisdictions so warrant.

(e) PROCEDURES.——

(1) No Subcommittee shall meet to consider for markup or approval any measure or matter when the Committee or any other Subcommittee of the Committee is meeting to consider any measure or matter for markup or approval.

(2) Each Subcommittee is authorized to meet, hold hearings, receive testimony or evidence, mark up legislation, and report to the Committee on all matters referred to it. For matters within its jurisdiction, each Subcommittee is authorized to conduct legislative, investigative, forecasting, and general oversight hearings; to conduct inquiries into the future; and to undertake budget impact studies.

(3) Subcommittee Chairs shall set meeting dates after consultation with the Chair of the Committee and other Subcommittee Chairs with a view toward avoiding simultaneous scheduling of Committee and Subcommittee meetings or hearings wherever possible.

(4) Any Member of the Committee may have the privilege of sitting with any Subcommittee during its hearings or deliberations and may participate in such hearings or deliberations, but no Member who is not a Member of the Subcommittee shall vote on any matter before such Subcommittee, except as provided in subsection (c) of this Rule.

(5) During consideration of any measure or matter for markup or approval in a Subcommittee proceeding, a record vote may be had at the request of one (1) or more Members of that Subcommittee.

(6) Each Subcommittee of the Committee shall provide the Full Committee with copies of such records of votes taken in the subcommittee and such other records with respect to the subcommittee as the Chair deems necessary for the Committee to comply with the rules and regulations of the House.

(f) CONSIDERATION OF SUBCOMMITTEE REPORTS.—After ordering a measure or matter reported, a Subcommittee shall issue a Subcommittee report in such form as the Chair of the Committee shall specify. To the maximum extent practicable, reports and recommendations of a Subcommittee shall not be considered by the Committee until after the intervention of 48 hours, excluding Saturdays, Sundays and legal holidays, from the time the report is submitted and made available to the Members of the Committee and printed hearings thereon shall be made available, if feasible, to the Members of the Committee, except that this Rule may be waived at the discretion of the Chair of the Committee after consultation with the Ranking Minority Member of the Committee.

Rule 12. COMMITTEE RECORDS

(a) TRANSCRIPTS.—The transcripts of those hearings conducted by the Committee and Subcommittees shall be published as a substantially verbatim account of remarks actually made during the proceedings, subject only to technical, grammatical, and typographical corrections authorized by the person making the remarks involved. Transcripts of markups shall be recorded and published in the same manner as hearings before the Committee and shall be included as part of the legislative report unless waived by the Chair of the Committee. [House Rule XI 2(e)(1)(A)]

(b) KEEPING OF RECORDS.——

(1) The Committee shall keep a complete record of all Committee action, which shall include a record of the votes on any question on which a record vote is demanded. The result of each record vote shall be included in the report of the Committee, made available by the Committee for inspection by the public at reasonable times in the offices of the Committee and shall be made publicly available in electronic form within 48 hours of such record vote. [House Rule XI 2(e)(1)(B)]

(2) Information made available for public inspection shall include a description of the amendment, motion, order, or other proposition and the name of each Member voting for and each Member voting against such amendment, motion, order, or proposition, and the names of those Members present but not voting. [House Rule XI 2(e)(1)(B)]

(3) Not later than 24 hours after the adoption of any amendment to a measure or matter considered by the Committee, the Chair shall cause the text of each such amendment to be made publicly available in electronic form. [House Rule XI 2(e)(6)]

(c) AVAILABILITY OF ARCHIVED RECORDS.—The records of the Committee at the National Archives and Records Administration shall be made available for public use in accordance with Rule VII of the Rules of the House of Representatives. The Chair of the Committee shall notify the Ranking Minority Member of the Committee of any decision, pursuant to Rule VII 3(b)(3) or clause 4(b) of the Rules of the House of Representatives, to withhold a record otherwise available, and the matter shall be presented to the Committee for a determination on the written request of any Member of the Committee. [House Rule XI 2(e)(3)]

(d) PROPERTY OF HOUSE.——

(1) Except as provided for in paragraph (2), all Committee hearings, records, data, charts, and files shall be kept separate and distinct from the congressional office records of the Member serving as its Chair. Such records shall be the property of the House, and each Member, Delegate, and Resident Commissioner, shall have access thereto.

(2) A Member, Delegate, or Resident Commissioner, other than Members of the Committee on Standards of Official Conduct, may not have access to the records of the Committee respecting the conduct of a Member, Delegate, Resident Commissioner, officer, or employee of the House without the specific prior permission of the Committee. [House Rule XI 2(e)(2)]

Date	Committee on Science and Technology List of Hearings with Publication Numbers plus List of Legislative Reports filed in the 112th Congress	Publication Number
Feb. 10, 2011	Organizational Meeting of the Committee on Science, Space, and Technology (Meeting held by the Committee on Science, Space, and Technology)	Business Meeting–1
Feb. 16, 2011	A Review of the Federal Aviation Administration's Research and Development Programs. (Hearing held by the Subcommittee on Space and Aeronautics)	112–1*
Feb. 17, 2011	An Overview of the Administration's Federal Research and Development Programs. (Hearing held by the Committee on Science and Technology).	112–2*
Mar. 2, 2011	The National Aeronautics and Space Administration Fiscal Year 2012 (Hearing held by the Committee on Science and Technology).	112–3*
Mar. 3, 2011	The Department of Energy Fiscal Year 2012 Research and Development Budget Request. (Hearing held by the Subcommittee on Research and Science Education).	112–4*
Mar. 10, 2011	An Overview of the Fiscal Year 2012 Research and Development Budget Proposals at the National Oceanic and Atmospheric Administration and the Environmental Protection Agency. (Hearing held by the Committee on Science, Space, and Technology)	112–5*
Mar. 11, 2011	An Overview of the Fiscal Year 2012 Budget Proposals at the National Science Foundation and the National Institute of Standards and Technology. (Hearing held by the Committee on Science, Space, and Technology)	112–6*

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Mar. 15, 2011	An Overview of Science and Technology Research and Development Programs and Priorities at the Department of Homeland Security. (Hearing held by the Subcommittee on Technology and Innovation)	112–7*
Mar. 17, 2011	H. R. 970, the Federal Aviation Research and Development Reauthorization Act of 2011 (Markup held by the Committee on Science, Space, and Technology)	H. Rept. 112–52**
Mar. 30, 2011	A Review of NASA's Exploration Program in Transition: Issues for Congress and Industry. (Hearing held by the Subcommittee on Space and Aeronautics)	112–8
Mar. 31, 2011	Climate Change: Examining the Processes Used to Used to Create Science and Policy. (Hearing held by the Committee on Science, Space, and Technology)	112–9
Mar. 31, 2011	The Role of Small Business in Innovation and Job Creation: The SBIR and STTR Program. (Hearing held by the Subcommittee on Investigations and Oversight).	112–10*
Apr. 6, 2011	Behavioral Science and Security: Evaluating TSA's SPOT Program. (Hearing held by the Subcommittee on Investigations and Oversight)	112–11
Apr. 6, 2011	Offshore Drilling Safety and Response Technologies. (Hearing held by the Subcommittee on Energy and Environment)	112–12*

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Apr. 7, 2011	Are We Prepared? Assessing Earthquake Risk Reduction Reduction in the United States. (Hearing held by the Subcommittee on Technology and Innovation)	112–13*
Apr. 13, 2011	Green Jobs and Red Tape: Assessing Federal Efforts to Encourage Employment. (Hearing held by the Subcommittee on Investigations and Oversight)	112–14*
Apr. 13, 2011	The Creating Jobs Through Small Business Innovation Act of 2011 (Markup held by the Subcommittee on Technology and Innovation)	H. R. 1425
Apr. 14, 2011	Nanotechnology: Oversight of the National Nanotechnology Initiative and Priorities for the Future. (Hearing held by the Subcommittee on Research and Science Education)	112–15*
May 4, 2011	H. R. 1425, Creating Jobs Through Small Business Innovation Act of 2011 (Markup held by the Committee on Science, Space, and Technology)	H. REPT. 112–90 PT. 1**
May 5, 2011	Office of Commercial Space Transportation's Fiscal Year 2012 Budget Request.	112–16*
May 11, 2011	(Hearing held by the Subcommittee on Space and Aeronautics) Review of Hydraulic Fracturing Technology and Practices (Hearing held by the Committee on Science, Space, and Technology).	112–17
May 13, 2011	Nuclear Energy Risk Management (Joint Hearing held by the Subcommittees on Investigations and Oversight and Energy and Environment)	112–18*

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May 25, 2011	Protecting Information in the Digital Age: Federal Cybersecurity Research and Development Efforts. (Joint Hearing held by Subcommittees on Research and Science Education and Technology and Innovation)	112–19*
May 26, 2011	NASA's Commercial Cargo Providers: Are They Ready to Supply the Space Station in the Post Shuttle Era? (Hearing held by the Subcommittee on Space and Aeronautics)	112–20*
June 1, 2011	Harmful Algal Blooms: Action Plans for Scientific Solutions. (Hearing held by the Subcommittee on Energy and Environment)	112–21
June 2, 2011	Social, Behavioral and Economic Science Research: Oversight of the Need for Federal Investments and Priorities for Funding. (Hearing held by the Subcommittee on Research and Science Education)	112–22
June 14, 2011	Transportation Research Priorities: Maximizing Return on Investment of Taxpayer Dollars. (Hearing held by the Subcommittee on Technology and Innovation)	112–23
June 14, 2011	The Federal Perspective on a National Critical Materials Strategy. (Hearing held by the Subcommittee on Investigations and Oversight)	112–24
June 15, 2011	An Examination of DOE's Clean Technology Programs. (Hearing held by the Subcommittee on Energy and Environment)	112–25

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June 16, 2011	STEM Education in Action: Learning Today. Leading Tomorrow. (Hearing held by the Full Committee on Science, Space and Technology)	112–26
June 22, 2011	First Semiannual Report of Activities of the Committee on Science, Space, and Technology.	Business Meeting–2/ 112–112**
June 22, 2011	Examining NOAA's Climate Service Proposal. (Hearing held by the Full Committee on Science, Space, and Technology)	112–27
July 7, 2011	Hitting the Ethanol Blend Wall: Examining the Science on E15. (Hearing held by the Full Committee on Science, Space, and Technology)	112–28
July 12, 2011	A Review of NASA's Space Launch System. Oversight of the Need for Federal Investments and Priorities for Funding. (Hearing held by the Subcommittee on Research and Science Education)	112–29
July 13, 2011	Border Security Technology Innovation Act of 2011. (Markup held by the Subcommittee on Technology and Innovation)	H. R. 2463
July 14, 2011	Harmful Algal Blooms and Hypoxia Research and Control. Amendments Act of 2011 (Markup held by the Subcommittee on Energy and Environment)	H. R. 2484
July 14, 2011	EPA's IRIS Program: Evaluating the Science and Process Behind Chemical Risk Assessment. (Hearing held by the Subcommittee on Investigations and Oversight)	112–30

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July 21, 2011	Cybersecurity Enhancement Act of 2011. (Markup held by the Full Committee on Science, Space, and Technology)	H. REPT. 112–264**
July 26, 2011	The Merit Review Process: Ensuring Limited Federal Resources are Invested in the Best Science. (Hearing held by the Subcommittee on Research and Science Education)	112–31
July 28, 2011	Harmful Algal Blooms and Hypoxia Research and Control Amendments Act of 2011. Harmful Algal Blooms and Hypoxia Research and Control Amendments Act of 2011. (Markup held by the Full Committee on Science, Space, and Technology)	H. REPT. 112–333, PART I**
September 8, 2011	Empowering Consumers and Promoting Innovation Through the Smart Grid. (Hearing held by the Subcommittee on Technology and Innovation)	112–32
September 8, 2011	Impacts of the LightSquared Network on Federal Science Activities. (Hearing held by the Full Committee on Science, Space, and Technology)	112–33
September 13, 2011	STEM in Action: Inspiring the Science and Engineering Workforce of Tomorrow. (Hearing held by the Full Committee on Science, Space, and Technology)	112–34
September 15, 2011	Out of Thin Air: EPA's Cross-State Air Pollution Rule. (Hearing held by the Full Committee on Science, Space, and Technology)	112–35

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September 21, 2011	The Next IT Revolution: Cloud Computing Opportunities and Challenges. (Hearing held by the Subcommittee on Technology and Innovation)	112–36
September 21, 2011	Oversight of the Networking and Information Technology Research and Development Program and Priorities for the Future. (Hearing held by the Subcommittee on Research and Science Education)	112–37
September 22, 2011	NASA Human Spaceflight Past, Present, and Future: Where Do We Go From Here? (Hearing held by the Full Committee on Science, Space, and Technology)	112–38
September 23, 2011	From NPOESS to JPSS: An Update on the Nation's Restructured Polar Weather Satellite Program. (Joint Hearing held by the Subcommittee on Investigations and Oversight and the Subcommittee on Energy and Environment)	112–39
September 26, 2011	STEM Education in Action: Communities Preparing for Jobs of the Future. (Field Hearing—Hearing held by the Full Committee)	112–40
October 4, 2011	Quality Science for Quality Air. (Hearing held by the Subcommittee on Energy and Environment)	112–41
October 12, 2011	What Makes for Successful K–12 STEM Education: A Closer Look at Effective STEM Education Approaches. (Hearing held by the Subcommittee on Research and Science Education)	112–42
October 12, 2011	The International Space Station: Lessons from the Soyuz Rocket Failure and Return to Flight. (Hearing held by the Subcommittee on Space and Aeronautics)	112–43

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October 13, 2011	The Endangered Species Act: Reviewing the Nexus of Science and Policy. (Hearing held by the Subcommittee on Investigations and Oversight)	112–44
October 13, 2011	Advancing Coal Research and Development for a Secure Energy Future. (Hearing held by the Subcommittee on Energy and Environment)	112–45
October 26, 2011	NASA's Commercial Crew Development Program: Accomplishments and Challenges. (Hearing held by the Committee on Science, Space, and Technology)	112–46
October 27, 2011	Review of the Blue Ribbon Commission on America's Nuclear Future Draft Recommendations. (Joint Hearing held by Subcommittee on Investigations and Oversight and Subcommittee on Energy and Environment)	112–47
November 2, 2011	Creating and Growing New Business: Fostering U.S. Innovation. (Hearing held by Subcommittee on Technology and Innovation)	112–48
November 2, 2011	Conflicts and Unintended Consequences of Motor Fuel Standards. (Hearing held by Subcommittee on Energy and Environment)	112–49
November 3, 2011	STEM In Action: Transferring Knowledge from the Workplace to the Classroom. (Hearing held by the Subcommittee on Research and Science Education)	112–42
November 15, 2011	Natural Hazards Risk Reduction Act 2011 Committee Print (Markup held by Subcommittee on Technology and Innovation)	

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November 15, 2011	Exploring Mars and Beyond: What's Next for U.S. Planetary Science? (Hearing held by Subcommittee on Space and Aeronautics)	112–51
November 17, 2011	Fostering Quality Science at EPA: The Need for Common Sense Reform. (Hearing held by Subcommittee on Energy and Environment)	112–52
November 30, 2011	Stimulus Oversight: An Update on Accountability, Transparency, and Performance. (Hearing held by Subcommittee on Investigations and Oversight)	112–53
November 30, 2011	Fostering Quality Science at EPA: Perspectives on Common Sense Reform. (Hearing held by Subcommittee on Investigations and Oversight)	112–54
December 1, 2011	Natural Hazards Risk Reduction Act of 2011. (Markup held by Full Committee on Science, Space, and Technology)	H.R. 3479
December 6, 2011	The Next Great Observatory: Assessing the James Webb Space Telescope. (Hearing held by Full Committee)	112–55
December 7, 2011	Energy Critical Elements: Identifying Research Needs and Strategic Priorities. (Hearing held by Subcommittee on Energy and Environment)	112–56

*** Hearings that have been printed.**
**** Reports that have been printed.**

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