Statement of Secretary Steven Chu
U.S. Department of Energy
Before the
Committee on Science and Technology
U.S. House of Representatives

FY 2011 Budget Hearing
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Chairman Gordon, Ranking Member Hall, and Members of the Committee, thank you for the opportunity to appear before you today to discuss the President's Fiscal Year 2011 budget request for the Department of Energy.

President Obama has stated, "The nation that leads the world in creating new sources of clean energy will be the nation that leads the 21st century global economy." I fervently share this view. The President's FY 2011 budget request of $28.4 billion will help position the United States to be the global leader in the new energy economy. The budget request makes much-needed investments to harness the power of American ingenuity. This request will create clean energy jobs, expand the frontiers of science, reduce nuclear dangers, and help curb the carbon pollution that threatens our planet. As part of this Administration's commitment to fiscal responsibility, the Department of Energy is also proposing several program reductions and terminations.

American Recovery and Reinvestment Act

The FY11 budget request builds on the investments in the American Recovery and Reinvestment Act. Through the $36.7 billion the Department received from the Recovery Act, we are putting Americans to work, while helping to build a clean energy economy, spur energy innovation, and reduce our dependence on oil. We've begun to make our homes and offices more energy efficient, modernize our grid, and invest in key renewable energy projects. Getting this money out the door quickly, carefully, and transparently has been and will continue to be a top priority for me.

FY11 Budget Supports Strategic Priorities

To continue the progress we have made, the FY11 budget request supports the Department's strategic priorities of:

- Transitioning to a low-carbon economy by developing and deploying clean and efficient energy technologies, increasing generation capacity and improving our transmission capabilities;
- Investing in scientific discovery and innovation to find solutions to pressing energy challenges and maintain American economic competitiveness; and
- Enhancing national security by ensuring the safety, security and effectiveness of the nuclear stockpile without testing. The budget request also includes funds to

work with our international partners to secure vulnerable nuclear material around the world within four years, and advance our nuclear legacy cleanup.

These strategic priorities will be enabled by a continued commitment to improving the management and fiscal performance of the Department.

Energy

To transition to a low-carbon future, we must change the way we generate and use energy. The President's budget request invests in clean energy priorities, including an investment of $2.4 billion in energy efficiency and renewable sources of energy. It also promotes innovative energy efficiency and renewable energy projects through $500 million in credit subsidy that will support $3 to $5 billion in lending. It expands the Advanced Manufacturing Tax Credit by $5 billion to help build a robust domestic manufacturing capacity for clean energy technologies. Through this budget, we will increase research, demonstration, and deployment of wind, solar and geothermal energies; make buildings and homes more efficient; develop energy efficient vehicles; and pursue carbon capture and sequestration.

Nuclear energy must also be a part of our clean energy mix. During his State of the Union address, President Obama said, "To create more of these clean energy jobs, we need more production, more efficiency, more incentives. And that means building a new generation of safe, clean nuclear power plants in this country." The President and I are committed to restarting our domestic nuclear industry. Our budget request includes an additional $36 billion in loan guarantee authority for the nuclear power sector to help construct the first new nuclear plants in decades, as well as $495 million for research and development to support the competitiveness, safety and proliferation resistance of nuclear energy in the United States and abroad. On February 16, President Obama announced conditional commitments for more than $8 billion in loan guarantees for what will be the first U.S. nuclear power plant to break ground in nearly three decades.

Innovation

We have many technologies in hand today to begin the transition to a low-carbon economy, but we will need breakthroughs and better technologies to meet our long-term goals. I know that this committee is keenly interested in the Department's research agenda. Indeed, this committee has been instrumental in laying the groundwork for some of the key research and development initiatives in this budget request through its efforts to pass the America COMPETES Act. I know that the committee continues to work during this Congress to reauthorize this legislation.

The budget request invests in basic and applied research and puts us on the path to doubling funding for science, a key presidential priority. We are also requesting $55 million to start the RE-ENERGYSE initiative to help educate the next generation of scientists and engineers.

The budget request also supports the Department's three new, complementary approaches to marshalling the nation's brightest minds to accelerate energy breakthroughs.

The first approach is the **Energy Innovation Hubs**. The Hubs are multidisciplinary, goal-oriented, and will be managed by top teams of scientists and engineers with enough resources and authority to move quickly in response to new developments. They are to be modeled after laboratories such as MIT's Radiation Laboratory, which developed radar during World War II, and Bell Laboratories when it invented and developed the transistor. Ideally, this work will be conducted under one roof. The Department will continue funding the three Energy Innovation Hubs introduced in FY 2010. In addition, we are proposing a new Hub to dramatically improve batteries and energy storage.

The second approach is the **Energy Frontier Research Centers**. The EFRCs are mainly university-based, problem-oriented research. We have identified key scientific barriers to energy breakthroughs, and we believe we can clear these roadblocks faster by linking together small groups of researchers across departments, schools, and institutions. The Department proposes expanding the Energy Frontier Research Centers to capture emerging opportunities in new materials and basic research for energy needs.

The third funding approach is the **Advanced Research Projects Agency – Energy (ARPA-E)**. ARPA-E is technology-oriented. We are seeking the boldest and best ideas for potentially transformative energy technologies and funding them to see if they work. The FY 2011 budget request includes $300 million for ARPA-E. ARPA-E is also dedicated to the market adoption of these new technologies. This week, ARPA-E sponsored a very successful conference here in Washington to bring together our nation's energy innovators. I want to thank Chairman Gordon for attending this event, and for his continued leadership on ARPA-E.

Security

In addition to the health of our economy and our planet, the Department of Energy is focused on the safety and security of our people. Last April in Prague, President Obama outlined an ambitious agenda to address the greatest threat to global security – the danger of terrorists getting their hands on nuclear weapons or the material to build them. The Department is requesting a significant increase in the budget – more than $550 million in new funding – for the NNSA Defense Nuclear Nonproliferation program to help meet the President's goal of securing all vulnerable nuclear materials around the world in four years.

The President has also made clear that, as long as nuclear weapons continue to exist, it is essential that we ensure the safety, security and effectiveness of our nuclear stockpile. With the $7 billion in funds we have requested, we can upgrade our infrastructure that has been allowed to decay in the past decade, support the cutting-edge work of our National Labs, and recruit the skilled workforce we need today and in the future. Over the next five years, we intend to boost this funding by more than $5 billion. Even in a time of tough budget decisions, we must make this investment for the sake of our security.

The budget also protects public health and safety by cleaning up the environmental legacy of the Nation's nuclear weapons program.

In 2010 the Department will discontinue its application to the Nuclear Regulatory Commission (NRC) for a license to construct a high-level waste geologic repository at Yucca Mountain, Nevada. Both the President and I have made clear that Yucca Mountain is not an option. To deal with our nuclear waste management needs, the Administration has brought together a range of experts to conduct a comprehensive review of the back end of the fuel cycle. The Blue Ribbon Commission announced recently, and co-chaired by General Brent Scowcroft and Congressman Lee Hamilton, will provide recommendations for developing a safe, long-term solution to managing the Nation's used nuclear fuel and its nuclear waste.

As part of our comprehensive strategy to restart the nuclear industry, we also propose breaking down artificial stovepipes and merging the Office of Civilian Radioactive Waste Management into the Office of Nuclear Energy.

Management

Finally, in order to transform the way Americans generate and use energy, we must transform the Department itself. As part of the Obama Administration's reform agenda, the budget request includes $2 million to establish a new Management Reform initiative to provide strategic direction, coordination and oversight of reform initiatives. This initiative will report directly to me and will receive close personal attention. We made important reforms when we began to implement the Recovery Act, and now we need to institutionalize those reforms and apply them across the Department.

Additionally, we are committed to being good stewards of the taxpayers' money. As we developed the budget, we looked to eliminate or reduce programs where we could. For example, we eliminated more than $2.7 billion in tax subsidies for oil, coal and gas industries. This step is estimated to generate more than $38.8 billion in revenue for the federal government over the next 10 years.

Building a clean energy future won't be easy, but it is necessary for our economy and our security. As a scientist, I am an optimist, and I believe that we can meet this challenge and lead the world in the 21st century.

HIGHLIGHTS OF THE FY2011 DEPARTMENT OF ENERGY BUDGET

The Department's Fiscal Year (FY) 2011 budget request of $28.4 billion, a 6.8 percent or $1.8 billion increase from FY 2010, supports the President's commitment to respond in a considered, yet expeditious manner to the challenges of rebuilding the economy, maintaining nuclear deterrence, securing nuclear materials, improving energy efficiency, incentivizing production of renewable energy, and curbing greenhouse gas emissions that contribute to climate change. Together with the American Recovery and Reinvestment Act of 2009 (Recovery Act) and FY 2010 budget, the FY 2011 budget request supports investment for a multi-year effort to address these interconnected challenges.

The FY 2011 budget builds on the $36.7 billion in Recovery Act funding. By the end of FY 2010, the Department expects to obligate 100 percent and outlay roughly 35-40 percent of Recovery Act funds. In developing the FY 2011 budget request, the Department has taken these investments into account. Recovery Act investments in energy conservation and renewable energy sources ($16.8 billion), environmental management ($6 billion), funds supporting loan guarantees for renewable energy and electric power transmission projects ($4 billion), grid modernization ($4.5 billion), carbon capture and sequestration ($3.4 billion), basic science research ($1.6 billion), and the establishment of the Advanced Research Projects Agency - Energy ($0.4 billion) will continue to strengthen the economy by providing much-needed investment, by saving or creating tens of thousands of direct jobs, cutting carbon emissions, and reducing U.S. dependence on oil.

The President's FY 2011 Budget supports our three strategic priorities:

- **Innovation:** Investing in science, discovery and innovation to provide solutions to pressing energy challenges
- **Energy:** Providing clean, secure energy and promoting economic prosperity through energy efficiency and domestic forms of energy
- **Security:** Safeguarding nuclear and radiological materials, advancing responsible legacy cleanup, and maintaining nuclear deterrence

These strategic priorities will be enabled by a continued commitment to management excellence:

- **Management:** Transforming the culture of the Department with a results-oriented approach

Innovation: Investing in Science, Discovery and Innovation to Provide Solutions to Pressing Energy Challenges

As President Obama made clear in his remarks to the National Academy of Sciences in April 2009, the public sector must invest in research and innovation not only because the private sector is sometimes reluctant to take large risks, but because the rewards will be broadly shared across the economy. Leading requires assembling a critical mass of the best scientists and engineers to engage in mission-oriented, cross-disciplinary approaches to addressing current and future energy challenges. To develop clean energy solutions and maintain nuclear security, the Department must cultivate the science, technology, engineering, and mathematics workforce of the next generation. The FY 2011 budget request of $55 million for RE-ENERGYSE (Regaining our ENERGY Science and Engineering Edge) supports K-20+ science and engineering education.

With every initiative the Department undertakes, sound science must be at the core. In FY 2011 the Department will increasingly emphasize cross-cutting initiatives to link science throughout the Department, specifically with energy and national security programs. These cross-cutting initiatives will enhance science capabilities to create knowledge and innovative technologies that can be brought to bear on national energy and security issues, leverage world-class science and

engineering expertise to establish global leadership as clean energy innovators, and employ use-inspired research to reduce the cost and time to bring technologies to market at scale. The Department believes that it will deliver solutions more quickly and efficiently through our efforts to break down the traditional stovepipes and operate in a more integrated and coordinated manner. The FY 2011 Budget continues to address the President's priorities in an integrated and efficient manner, and to deliver results for the American taxpayer.

The Department continues its strong commitment to basic research and supports the President's Plan for Science and Innovation by requesting funding for the Office of Science at $5.1 billion, a 4.4 percent or $218 million increase from FY 2010. The FY 2011 budget request will support the training of students and researchers in fields critical to national competitiveness and innovation, and will support investments in areas of research essential for a clean energy future. The President's Plan commits to doubling Federal investment in basic research at select agencies. The Department supports an overarching commitment to science by investing in basic and applied research, creating new incentives for private innovation and promoting breakthroughs in energy.

To help achieve the game-changing breakthroughs needed to continue leading the global economy, the FY 2011 budget request includes $300 million for the Advanced Research Projects Agency – Energy (ARPA-E). Introduced in FY 2009, ARPA-E is responsible for enabling specific high-risk and high-payoff transformational research and development projects. Beyond simply funding transformational research that creates revolutionary technologies, ARPA-E is dedicated to the market adoption of those new technologies to meet the Nation's long-term energy challenges. This funding, along with the $400 million made available through the Recovery Act, will provide sustained investment in this pioneering program.

The Department will continue funding the three Energy Innovation Hubs introduced in FY 2010 to focus on developing fuels that can be produced directly from sunlight, improving energy efficient building systems design, and using modeling and simulation tools to create a virtual model of an operating advanced nuclear reactor. In addition, DOE is proposing a new Hub to focus on batteries and energy storage. Each of these Hubs will bring together a multidisciplinary team of researchers in an effort to speed research and shorten the path from scientific discovery to technological development and commercial deployment of highly promising energy-related technologies.

Complementing the Hubs, the Department proposes expanding the Energy Frontier Research Centers in FY 2011 to capture new, emerging opportunities by furthering its scientific reach and potential technological impact by competitively soliciting in two categories: discovery and development of new materials critical to science frontiers and technology innovations, and basic research for energy needs.

Energy: Providing Clean, Secure Energy and Promoting Economic Prosperity through Energy Efficiency and Domestic Forms of Energy

In Copenhagen, President Obama emphasized that climate change is a grave and growing danger. The imperative now is to develop the capacity to confront the challenges climate change

poses and seize the opportunity to be the global leader in the clean energy economy. Meeting the Administration's goal to reduce carbon emissions by more than 80 percent by 2050 will be achieved by addressing supply and demand through increased energy efficiency, renewable generation, and grid modernization, as well as improvements in existing technologies and information analysis. An important tool that will continue to be used to address these issues will be loan guarantees. The Department's FY 2011 budget request, building on the FY 2010 budget and the Recovery Act, invests in the research, development, and deployment of technologies that will position the United States to lead international efforts to confront climate change now and in the future. The long-term economic recovery will be sustained by these continued investments in the new energy economy.

- **Loan Guarantees**

The Loan Guarantee Program Office (LGPO) is a vital tool for promoting innovation in the energy sector across a broad portfolio of clean and efficient energy technologies. In FY 2011, the Department is requesting funding and authority to support approximately $40 billion in additional loan authority for innovative energy technology development. During FY 2010, the LGPO streamlined the application review process. The new authority requested will help the Department to encourage and to accelerate the availability of loans to leverage private sector investment in clean energy projects.

- **Energy Efficiency**

In August 2009, President Obama said, "If we want to reduce our dependence on oil, put Americans back to work and reassert our manufacturing sector as one of the greatest in the world, we must produce the advanced, efficient vehicles of the future." In FY 2011, the Department will promote energy efficiency in vehicles technologies, at $325 million. No less important to achieving the President's stated ambitions is decreasing energy consumption through developing and advancing building technologies ($231 million) and industrial technologies ($100 million). Federal assistance for state-level programs, such as State Energy Program grants ($75 million, a 50 percent increase from FY 2010) and Weatherization Assistance grants ($300 million, a 43 percent increase from FY 2010), will help States and individuals take advantage of efficiency measures for buildings and homes, lower energy costs and greenhouse gas emissions, and develop an ever-evolving, technically proficient workforce.

- **Clean, Renewable Energy Generation**

The FY 2011 budget request will modernize the Nation's energy infrastructure by investing in a variety of renewable sources such as solar ($302 million), wind ($123 million), water ($41 million), hydrogen ($137 million), biomass ($220 million) and geothermal ($55 million). These sources of energy reduce the production of greenhouse gas emissions and continue the pursuit of a clean energy economy built on the next generation of domestic production. The Department is also continuing to promote domestic clean energy through the four Power Marketing Administrations, which market and deliver electricity primarily generated by hydroelectric dams.

- **Grid Modernization**

In support of the modernization of the electricity grid, the President's FY 2011 Budget requests $144 million for research and development to improve reliability, efficiency, flexibility, and security of electricity transmission and distribution networks. The "Smart Grid" will integrate

new and improved technologies into the energy mix, ensuring reliability, integration of renewable energy resources, and improving security.

While investing in energy efficiency, renewable energy generation, and grid modernization are fundamental steps necessary for creating a clean energy economy; investing in the improvement of existing sources of energy will provide a bridge between current and future technologies These technologies are already a major segment of the energy mix and will play a critical role in providing a solid foundation that will make possible the creation of this new economy.

- **Safe and Secure Nuclear Energy**

Nuclear energy currently supplies approximately 20 percent of the Nation's electricity and 70 percent of the Nation's clean, non-carbon electricity. The request for the Office of Nuclear Energy includes $495 million for research, development, and demonstration in addition to investments in supportive infrastructure. Work on advanced reactor technologies, fuel cycle technologies, waste management, and cross-cutting technologies and transformative concepts will help ensure that nuclear energy remains a safe, secure, economical source of clean energy. The Department will also promote nuclear energy through the Loan Guarantee Program, which is requesting an additional $36 billion in loan authority for nuclear power in FY 2011 (for a total of $54.5 billion).

- **Clean and Abundant Fossil Energy**

The world will continue to rely on coal fired electrical generation to meet energy demand. It is imperative that the United States develop the technology to ensure that base-load electricity generation is as clean and reliable as possible. The Office of Fossil Energy will invest $438 million in the research and development of advanced coal-fueled power systems and carbon capture and storage technologies. This will allow the continued use of the abundant domestic coal resources in the U.S. while reducing greenhouse gas emissions.

Accurate energy information and analysis play a critical role in promoting efficient energy markets and informing policy-making and strategic planning. This budget requests a total of $129 million for the Energy Information Administration, the statutory statistical agency within the Department, to improve energy data and analysis programs.

Security: Safeguarding Nuclear and Radiological Materials, Advancing Responsible Legacy Cleanup and Maintaining Nuclear Deterrence

- **Reduces the Risk of Proliferation**

In an April 2009 speech in Prague, the President called the threat of nuclear proliferation "the most immediate and extreme threat to global security" and announced his support for a new international effort to secure all vulnerable nuclear material around the world within four years. The FY 2011 budget for the NNSA Defense Nuclear Nonproliferation program supports this effort, recognizing the urgency of the threat and making the full commitment to global cooperation that is essential to addressing this threat. The budget provides $2.7 billion in FY 2011, and $13.7 billion through FY 2015 to detect, secure, and dispose of dangerous nuclear and radiological material worldwide. This request is an increase of 26 percent or $550 million from FY 2010. The budget supports cooperative nonproliferation initiatives with foreign governments

and the effort and expertise to forge them into durable international partnerships, achieving the objective of a world without nuclear weapons. The budget continues the installation of radiation detection equipment at international border crossings and Megaports, significantly expands materials protection and control security upgrades at selected sites in foreign countries to address outsider and insider threats, and accelerates the pace of highly enriched uranium research reactor conversions with an urgent focus to develop the capability to produce the medical isotope molybdenum-99 in the U.S. using low enriched uranium. The FY 2011 budget request provides $4.4 billion over five years for Fissile Materials Disposition including the construction of U.S. facilities for the disposition of U.S. weapons-grade plutonium in fulfillment of our commitment with the Russian Federation under the Plutonium Management and Disposition Agreement of September 2000, and provides the first $100 million of a $400 million U.S. commitment to advance the construction of plutonium disposition facilities in the Russian Federation. The FY 2011 budget request also supports a funding increase for Nonproliferation and Verification Research and Development for new technologies in support of treaty monitoring and verification.

- **Leverages Science to Maintain Nuclear Deterrence**

The FY 2011 budget request advances the Department's commitment to the national security interests of the United States through stewardship of a safe, secure and effective nuclear weapons stockpile without the use of underground nuclear testing. As the role of nuclear weapons in our Nation's defense evolves and the threats to national security continue to grow, the focus of this enterprise must also change and place its tremendous intellectual capacity and unique facilities in the service of addressing other challenges related to national defense. NNSA is taking steps to move in this direction, including functioning as a national science, technology, and engineering resource to other agencies with national security responsibilities. NNSA must ensure our evolving strategic posture places the stewardship of our nuclear stockpile, nonproliferation programs, counterterrorism, missile defenses, and the international arms control objectives into one comprehensive strategy that protects the American people and our allies. Through the NNSA, the Department requests $7.0 billion for the Weapons Activities appropriation, a 9.8 percent or $624 million increase from the FY 2010 appropriation. This increase provides a strong basis for transitioning to a smaller nuclear stockpile, strengthens the science, technology and engineering base, modernizes key nuclear facilities, and streamlines the enterprise's physical and operational footprint.

These investments will enable execution of a comprehensive nuclear defense strategy based on current and projected global threats that relies less on nuclear weapons, yet enhances national security by strengthening the NNSA's nuclear security programs. This improved NNSA capability base will mitigate the concerns regarding ratification of the follow-on Strategic Arms Reduction Treaty and the Comprehensive Test Ban Treaty. The FY 2011 request for Weapons Activities has four major components. The request for Stockpile Support increases, reflecting the President's commitment to maintain the safety, security and effectiveness of the nuclear deterrent without underground nuclear testing, consistent with the principles of the Stockpile Management Program outlined in Section 3113 (a)(2) of the National Defense Authorization Act of Fiscal Year 2010 (50 U.S.C. 2524). The request for Science, Technology and Engineering increases by over 10 percent, and provides the funding necessary to protect and advance the scientific capabilities at the U.S. nuclear security laboratories supporting the stockpile and

broader national security and energy issues. The budget request for Infrastructure supports the operation and maintenance of the government-owned, contractor-operated facilities in the nuclear security enterprise, as well as special capabilities for secure transportation and construction. The security and counterterrorism component of the budget provides for physical and cyber security in the NNSA enterprise, as well as emergency response assets and NNSA's focused research and development contribution to the Nation's counterterrorism efforts.

- **Advances Responsible Environmental Cleanup**

The FY 2011 budget includes $6 billion for the Office of Environmental Management to protect public health and safety by cleaning up hazardous, radioactive legacy waste from the Manhattan Project and the Cold War. This funding will allow the program to continue to accelerate cleaning up and closing sites, focusing on activities with the greatest risk reduction.

As the Department continues to make progress in completing clean-up, the FY 2011 budget request of $189 million for the Office of Legacy Management supports the Department's long-term stewardship responsibilities and payment of pensions and benefits for former contractor workers after site closure.

The Administration has determined that the Yucca Mountain repository is not a workable option and has decided to terminate the Office of Civilian Radioactive Waste Management. The core functions and staff to support efforts under the Nuclear Waste Policy Act to meet the obligation of the Government will transfer to the Office of Nuclear Energy by the end of FY 2010.

Management: Transforming the Culture of the Department with a Results-Oriented Approach

In order to transform the way Americans use and produce energy, we must transform the Department of Energy. The Department is committed to strengthening its management culture and increasing its focus on results. The implementation of the Recovery Act provided the Department with an opportunity to continue to refine best practices in management, accountability, operations, and transparency. These best practices will be applied in executing the FY 2011 budget.

To achieve our strategic priorities, the Department requests a net of $169 million for Departmental Administration. These funds, along with resources in individual program offices, will help transform key functional areas such as human, financial, project, and information technology management. The request includes $2 million for Management Reform within the Office of the Secretary, which will provide the Department with strategic direction, coordination, and oversight of reform initiatives.

DEPARTMENT OF ENERGY FY 2011 PROGRAM OFFICE HIGHLIGHTS

Office of Science: Supporting Cutting-Edge Foundational Scientific Research

The Department of Energy's Office of Science (SC) delivers discoveries and scientific tools that transform our understanding of energy and matter and advance the national, economic, and energy security of the United States. SC is a primary sponsor of basic research in the United States, leading the Nation to support the physical sciences in a broad array of research subjects in order to improve energy security and address issues ancillary to energy, such as climate change, genomics, and life sciences. In FY 2011, the Department requests $5.1 billion, an increase of 4.4 percent over the enacted FY 2010 appropriation, to invest in science research. The FY 2011 request supports the President's Plan for Science and Innovation, which encompasses the entire SC budget, as part of a strategy to double overall basic research funding at select agencies. As part of this plan, the budget request supports the training of students and researchers in fields critical to our national competitiveness and innovation economy, and supports investments in areas of research critical to our clean energy future and to making the U.S. a leader on climate change.

SC is addressing critical societal challenges and key missions of the Department of Energy through significant improvements in existing technologies and development of new energy technologies. SC will accomplish this by: (1) sustained investments in exploratory and high-risk research in traditional and emerging disciplines, including the development of new tools and facilities; (2) focused investments in high-priority research areas; and (3) investments that train new generations of scientists and engineers to be leaders in the 21st century. The FY 2011 budget request supports all three of these investment strategies.

Two of the four Energy Innovation Hubs being requested in FY 2011 are through the Office of Science; these Hubs will bring together teams of experts from multiple disciplines to focus on two grand challenges in energy: (1) Fuels from Sunlight, a Hub established in FY 2010 and (2) Batteries and Energy Storage, a new Hub in the FY 2011 request.

The Energy Frontier Research Centers (EFRC) program will be expanded in the FY 2011 request to capture new, emerging opportunities by furthering its scientific reach and potential technological impact. New EFRCs will be competitively solicited in two categories: discovery and development of new materials that are critical to both science frontiers and technology innovations, and basic research for energy needs in a limited number of areas that are underrepresented in the 46 original EFRC awards.

The FY 2011 request for the U.S. ITER Project ($80 million, a decrease of $55 million from FY 2010) is a reflection of the pace of ITER construction as of the end of 2009. The Administration is engaged in a range of efforts to implement management reforms at the ITER Organization and accelerate ITER construction while minimizing the overall cost of the Construction Phase for the U.S. and the other ITER members.

The Office of Science supports investigators from more than 300 academic institutions and from all of the DOE laboratories. The FY 2011 budget request will support approximately 27,000 Ph.D.s, graduate students, undergraduates, engineers, and technicians. Nearly 26,000 researchers from universities, national laboratories, industry, and international partners are expected to use SC scientific user facilities in FY 2011.

Advanced Research Projects Agency – Energy: Transformational Research and Development

The FY 2011 budget request includes $300 million for the Advanced Research Projects Agency – Energy (ARPA-E), a program launched in FY 2009 that sponsors specific high-risk and high-payoff transformational research and development projects that overcome the long-term technological barriers in the development of energy technologies to meet the Nation's energy challenges, but that industry will not support at such an early stage. An essential component of ARPA-E's culture is an overarching focus on accelerating science to market. Beyond simply funding transformational research creating revolutionary technologies, ARPA-E is dedicated to the market adoption of those new technologies that will fuel the economy, create new jobs, reduce energy imports, improve energy efficiency, reduce energy-related emissions, and ensure that the U.S. maintains a technological lead in developing and deploying advanced energy technologies.

Office of Energy Efficiency and Renewable Energy: Developing and Deploying Clean, Reliable Energy

The Office of Energy Efficiency and Renewable Energy (EERE) strengthens the energy security, environmental quality, and economic vitality of the U.S. through the research, development, demonstration and deployment (RDD&D) of clean energy technologies and generation and advances in energy efficiency. EERE's activities are critical to creating a low carbon economy and sustaining strong economic growth and job creation while dramatically reducing greenhouse gas emissions and energy imports. EERE programs link advances in basic research and the creation of commercially successful products and services to ensure delivery to the marketplace for general use and implementation.

The FY 2011 budget request of $2.4 billion, an increase of 5 percent over FY 2010, is aimed at accelerating revolutionary change in the Nation's energy economy. The request includes programs associated with meeting the President's goals of investing in the next generation of clean energy technologies, vehicles and fuels, and energy efficiency measures that reduce energy use in Federal agencies and the industrial and building sectors.

<u>Clean, Renewable Energy Generation</u>
The FY 2011 budget request continues to work to transform the Nation's energy infrastructure by investing over $650 million in a variety of renewable sources of electrical generation such as solar ($302 million, a 22 percent increase over FY 2010), and wind ($123 million, a 53 percent increase over FY 2010), as well as deploy clean technologies to reduce our dependence on oil. The request includes expansions on Concentrating Solar Power, biopower and off-shore wind, which will provide new, additional avenues for clean energy development and deployment.

These technologies will reduce the production of greenhouse gas emissions and revitalize an economy built on the next generation of domestic production.

Energy Efficiency

The Department implements a number of efforts to increase energy efficiency and conservation in homes, transportation, and industry. The FY 2011 budget requests $758 million to accelerate deployment of clean, cost-effective, and rapidly deployable energy conservation measures in order to reduce energy consumption in residential and commercial buildings, and the industrial and Federal sectors. The Department will invest $231 million in the Building Technologies program, a 16 percent increase over FY 2010 for built environment R&D. Federal assistance for state-level programs such as State Energy Program grants ($75 million) and Weatherization Assistance Program ($300 million), will continue to help citizens implement energy conservation measures, lower energy costs and greenhouse gas emissions, and build a technical workforce. The FY 2011 request also includes $545 million to accelerate research, development and deployment of advanced fuels and vehicles to reduce the use of petroleum and greenhouse gas emissions. The FY 2011 budget complements the Recovery Act funding for these programs ($3.1 billion for State Energy Programs, $5 billion for Weatherization Assistance, $2 billion for Advanced Battery Manufacturing and $400 million for Transportation Electrification).

Office of Electricity Delivery and Energy Reliability: Moving Toward a More Intelligent Grid to Power the Digital Economy

The FY 2011 budget request for the Office of Electricity Delivery and Energy Reliability (OE) budget is $186 million, an increase of 8 percent over FY 2010. These funds will build on the "Smart Grid" investments and other activities.

The ability of the United States to meet the growing demand for reliable electricity is challenged by an aging power grid under mounting stress. Despite the increasing demand for reliable power brought on by the modern digital economy, the power grid in the U.S. has suffered from a long period of underinvestment. Much of the power delivery system was built on technology developed over 50 years ago and thus responds to disturbances with speed limited by the technology of that period. This limitation increases the vulnerability of the power system to outages that can spread quickly and impact whole regions. Breakthroughs in digital network controls, transmission, distribution, and energy storage will make the power grid more efficient, alleviating the stress on the system, as well as enable greater use of clean and distributed energy sources. The return on these investments will come from a reduction in economic losses caused by power outages and the delay or avoidance of costly investment in new generation and transmission infrastructure.

The budget request provides $144 million for research and development, which supports development of technologies that will improve the reliability, efficiency, flexibility, functionality, and security of the Nation's electricity delivery system. It accelerates investment in energy storage capabilities and funds two new research initiatives: Advanced Modeling Grid Research, to develop grid-modeling capabilities using the large volumes of data generated by advanced sensors deployed on the grid; and Power Electronics, to develop new power control

devices in collaboration with universities. The proposal also continues to support the development of "Smart Grid" technologies and cyber security systems for the power grid.

The budget request continues support for Permitting, Siting, and Analysis ($6.4 million) to assist States, regional entities, and other federal agencies in developing policies and programs aimed at modernizing the power grid; and for Infrastructure Security and Energy Restoration ($6.2 million) to enhance the reliability and resiliency of U.S. critical infrastructure and facilitate its recovery from energy supply disruptions.

Office of Environmental Management: Reducing Risks and Making Progress

The mission of the Office of Environmental Management (EM) is to complete the safe cleanup of the environmental legacy brought about from over six decades of nuclear weapons development, production, and Government-sponsored nuclear energy research. This cleanup effort is the largest in the world, originally involving two million acres at 107 sites in 35 states, dealing with some of the most dangerous materials known to man.

EM continues to pursue its cleanup objectives within the overall framework of achieving the greatest comparative risk reduction benefit and overlaying regulatory compliance commitments and best business practices to maximize cleanup progress. To support this approach, EM has prioritized its cleanup activities:

- Activities to maintain a safe and secure posture in the EM complex
- Radioactive tank waste stabilization, treatment, and disposal
- Used nuclear fuel storage, receipt, and disposition
- Special nuclear material consolidation, processing, and disposition
- High priority groundwater remediation
- Transuranic and mixed/low-level waste disposition
- Soil and groundwater remediation
- Excess facilities deactivation and decommissioning

The FY 2011 budget request for $6.0 billion will fund activities to maintain a safe and secure posture in the EM complex and make progress against program goals and compliance commitments, including reduction of highest risks to the environment and public health, use of science and technology to reduce life cycle costs, and reduction of EM's geographic footprint by 40 percent by 2011. EM continues to move forward with the development of the capability for dispositioning tank waste, nuclear materials, and used nuclear fuel. The budget request includes the construction and operation of three unique and complex tank waste processing plants to treat approximately 88 million gallons of radioactive tank waste for ultimate disposal. It will also fund the solid waste disposal infrastructure needed to support disposal of transuranic and low-level wastes generated by high-risk activities and the footprint reduction activities. In addition to the FY 2011 budget request, EM will continue to expend the $6 billion in Recovery Act funding provided by Congress to complete lower-risk footprint reduction and near-term completion cleanup activities.

EM carries out its cleanup activities with the interests of stakeholders in mind. Most importantly, EM will continue to fulfill its responsibilities by conducting cleanup within a "Safety First" culture that integrates environment, safety, and health requirements and controls into all work activities to ensure protection to the workers, public, and the environment, and adheres to sound project and contract management principles. EM is also strengthening its project and planning analyses to better assess existing priorities and identify opportunities to accelerate cleanup work. Working collaboratively with the sites, EM continues to seek aggressive but achievable strategies for accelerating cleanup of discrete sites or segments of work. In addition, functional and cross-site activities such as elimination of specific groundwater contaminants, waste or material processing campaigns, or achievement of interim or final end-states are being evaluated.

After the EM program completes cleanup and closure of sites that no longer have an ongoing DOE mission, post closure stewardship activities are transferred to the **Office of Legacy Management (LM)**. LM also receives sites remediated by the U.S. Army Corps of Engineers (Formerly Utilized Sites Remedial Action Program) and private licensees (Uranium Mill Tailings Radiation Control Act, Title II sites). Post closure stewardship includes long-term surveillance and maintenance activities such as groundwater monitoring, disposal cell maintenance, records management, and management of natural resources at sites where active remediation has been completed. At some sites the program includes management and administration of pension and post-retirement benefits for contractor retirees.

The Administration has determined that developing a repository at Yucca Mountain, Nevada, is not a workable option and has decided to terminate the **Office of Civilian Radioactive Waste Management (RW)**. The Nation needs a different solution for nuclear waste disposal. As a result, in 2010, the Department will discontinue its application to the U.S. Nuclear Regulatory Commission for a license to construct a high-level waste geologic repository at Yucca Mountain and establish a Blue Ribbon Commission to inform the Administration as it develops a new strategy for nuclear waste management and disposal. All funding for development of the Yucca Mountain facility and RW will be eliminated by the end of FY 2010. The Administration remains committed to fulfilling its obligations under the Nuclear Waste Policy Act. The Office of Nuclear Energy will develop an integrated approach to improve the waste management options for the Nation and support the Blue Ribbon Commission. Ongoing responsibilities under the Nuclear Waste Policy Act, including administration of the Nuclear Waste Fund and the Standard Contract, will continue under the Office of Nuclear Energy, which will lead future waste management activities.

Innovative Technology Loan Guarantee Program and Advanced Technology Vehicle Manufacturing Program: Supporting Investment in Innovation and Manufacturing

To encourage the early commercial production and use of new or significantly improved technologies in energy projects, the Department is requesting an additional $36 billion in authority to guarantee loans for nuclear power facilities and $500 million in appropriated credit subsidy for the cost of loan guarantees for renewable energy systems and efficient end-use energy technology projects under section 1703 of the Energy Policy Act of 2005. The additional loan authority for nuclear power projects will promote near-term deployment of new plants and

support an increasing role for private sector financing. The additional credit subsidy will allow for investment in the innovative renewable and efficiency technologies that are critical to meeting the Administration's goals for affordable, clean energy, technical leadership, and global competitiveness.

The FY 2011 budget also requests $58 million to evaluate applications received under the eight solicitations released to date and to ensure efficient and effective management of the Loan Guarantee Program. This request will be offset by collections authorized under Title XVII of the Energy Policy Act of 2005 (P.L. 109-8).

The **Advanced Technology Vehicle Manufacturing** program requests $10 million to support ongoing loan and loan monitoring activities associated with the program mission of making loans to automobile and automobile part manufacturers for the cost of re-equipping, expanding, or establishing manufacturing facilities in the United States to produce advanced technology vehicles or qualified components, and for associated engineering integration costs.

Office of Nuclear Energy: Investing in Energy Security and Technical Leadership

The Department is requesting $912 million for the Office of Nuclear Energy (NE) in FY 2011 – an increase of 5 percent over the FY 2010 enacted level. NE's funding supports the advancement of nuclear power as a resource capable of meeting the Nation's energy, environmental, and national security needs by resolving technical, cost, safety, proliferation resistance, and security barriers through research, development, and demonstration as appropriate.

Currently, nuclear energy supplies approximately 20 percent of the Nation's electricity and over 70 percent of clean, non-carbon producing electricity. Over 100 nuclear power plants are offering reliable and affordable baseload electricity in the United States, and they are doing so without air pollution and greenhouse gas emissions. NE is working to develop innovative and transformative technologies to improve the competitiveness, safety and proliferation resistance of nuclear energy to support its continued use.

The FY 2011 budget supports a reorganized and refocused set of research, development, and demonstration (RD&D) activities. This program is built around exploring, through RD&D: technology and other solutions that can improve the reliability, sustain the safety, and extend the life of current reactors; improvements in the affordability of new reactors to enable nuclear energy to help meet the Administration's energy security and climate change goals; understanding of options for nuclear energy to contribute to reduced carbon emissions outside the electricity sector; development of sustainable nuclear fuel cycles; and minimization of risks of nuclear proliferation and terrorism.

NE is requesting $195 million for Reactor Concepts Research, Development and Deployment. This program seeks to develop new and advanced reactor designs and technologies. Work will continue on design, licensing and R&D for the Next Generation Nuclear Plant to demonstrate gas-cooled reactor technology in the United States. The program also supports research on Generation IV and other advanced designs and efforts to extend the life of existing light water

reactors. In FY 2011, NE will initiate a new effort focused on small modular reactors, a technology the Department believes has promise to help meet energy security goals.

The FY 2011 request includes $201 million for Fuel Cycle Research and Development to perform long-term, results-oriented science-based R&D to improve fuel cycle and waste management technologies to enable a safe, secure, and economic fuel cycle. The budget also requests $99 million to support a new R&D program, Nuclear Energy Enabling Technologies, focused on the development of cross-cutting and transformative technologies relevant to multiple reactor and fuel cycle concepts. The Crosscutting Technology Development activity provides crosscutting R&D support for nuclear energy concepts in areas such as reactor materials and creative approaches to further reduce proliferation risks. The Transformative Nuclear Concepts R&D activity will support, via an open, competitive solicitation process, investigator-initiated projects that relate to any aspect of nuclear energy generation including, but not limited to, reactor and power conversion technologies, enrichment, fuels and fuel management, waste disposal, and nonproliferation, to ensure that good ideas have sufficient outlet for exploration. The Energy Innovation Hub for Modeling and Simulation will apply existing modeling and simulation capabilities to create a "virtual" reactor user environment to simulate an operating reactor. NE will also continue its commitments to investing in university research, international cooperation, and the Nation's nuclear infrastructure – important foundations to support continued technical advancement.

Office of Fossil Energy: Abundant and Affordable Energy for the 21st Century

The FY 2011 budget request of $760 million for the Office of Fossil Energy (FE) will help ensure that the United States can continue to rely on clean, affordable energy from traditional domestic fuel resources. The United States has 25 percent of the world's coal reserves, and fossil fuels currently supply 86 percent of the Nation's energy.

The Department is committed to advancing Carbon Capture and Storage (CCS) technologies in order to promote a cleaner and more efficient use of fossil fuels. In addition to significant Recovery Act funds, Advanced CCS with $438 million requested in FY 2011 is the foundation of the Department's clean coal research program which seeks to establish the capability of producing electricity from coal with near-zero atmospheric emissions.

In addition, $150 million of FE's $760 million request will be used to promote national energy security through the continued operations of both the Strategic Petroleum Reserve and Northeast Home Heating Oil Reserve programs. These programs protect the Nation and the public against economic damages from potential disruptions in foreign and domestic petroleum supplies.

Energy Information Administration: Providing Independent Statistics and Analysis

The FY 2011 request for the Energy Information Administration (EIA) is $128.8 million, which is an $18.2 million increase over the FY 2010 current appropriation. EIA conducts a comprehensive data collection program through more than 60 surveys that cover the full spectrum of energy sources, end uses, and energy flows; generates short- and long-term domestic and international energy projections; and performs informative energy analyses. EIA

disseminates its data products, analyses, reports, and other information services to customers and stakeholders primarily through its website.

The increased funding improves EIA's capability to close energy information gaps, strengthen analysis, and address significant data quality issues. It provides for an expanded survey of energy consumption in commercial buildings that will provide more baseline information critical to understanding energy use. That survey also is a basis for benchmarking and performance measurement for energy efficiency programs. The budget request also provides for: expanded analysis of energy market behavior and data to address the increasingly important interrelationship of energy and financial markets; continued implementation of improvements in data coverage, quality and integration; upgrades to the National Energy Model; and initiation of efforts to track and analyze the adoption of "Smart Grid" technologies and dynamic electricity pricing plans.

The National Nuclear Security Administration: Ensuring America's Nuclear Security and Reducing the Global Threat of Nuclear Proliferation

The National Nuclear Security Administration (NNSA) continues significant efforts to meet Administration priorities, leveraging science to promote U.S. national security objectives. The FY 2011 President's budget request is $11.2 billion, an increase of 13 percent from the enacted FY 2010 appropriation. The FY 2011-2015 President's Request for the NNSA is a significant funding increase over FY 2010 levels, reflecting the President's priorities on global nuclear nonproliferation and for strengthening the nuclear security posture of the United States to meet defense and homeland security-related objectives:

- Broaden and strengthen the NNSA's science, technology and engineering mission to meet national security needs
- Work with global partners to secure all vulnerable nuclear materials around the world within four years
- Work towards a world with no nuclear weapons. Until that goal is achieved, ensure the U.S. nuclear deterrent remains safe, secure and effective
- Transform the Nation's Cold-War era weapons complex into a 21st century national security enterprise
- Provide safe and effective nuclear propulsion for U.S. navy warships

The FY 2011 budget request of $7.01 billion for the Weapons Activities appropriation provides funding for a wide range of programs. Some activities provide direct support for maintaining the nuclear weapon stockpile, including stockpile surveillance, annual assessments, life extension programs, and warhead dismantlement. Science, Technology and Engineering programs are focused on long-term vitality in science and engineering, and on performing R&D to sustain current and future stockpile stewardship capabilities without the need for underground nuclear testing. These programs also provide a base capability to support scientific research needed by other elements of the Department, to the federal government national security community, and the academic and industrial communities. Infrastructure programs support facilities and operations at the government-owned, contractor-operated sites, including activities to maintain

and steward the health of these sites for the long term. Security and counterterrorism activities leverage the unique nuclear security expertise and resources maintained by NNSA to other Departmental offices and to the Nation.

The Weapons Activities request is an increase of 9.8 percent over the FY 2010 enacted level. This level is sustained and increased in the later outyears. The multi-year increase is necessary to reflect the President's commitment to maintain the safety, security and effectiveness of the nuclear deterrent without underground nuclear testing, consistent with the principles of the Stockpile Management Program outlined in Section 3113 (a)(2) of the National Defense Authorization Act of Fiscal Year 2010 (50 U.S.C. 2524). Increases are provided which directly support of the nuclear weapon stockpile, for scientific, technical and engineering activities related to maintenance assessment and certification capabilities, and for recapitalization of key nuclear facilities. The President's Request provides funding necessary to protect the human capital base at the national laboratories —including the ability to design and certify nuclear weapons — through a stockpile stewardship program that fully exercises these capabilities. Security and nuclear counterterrorism activities decrease about 3 percent from the FY 2010 appropriated levels, leveraging the continuing efficiencies in the Defense Nuclear Security budget.

The FY 2011 request for Defense Nuclear Nonproliferation is $2.7 billion, an increase of 25.8 percent over the FY 2010 appropriation. The increase is driven by the imperative for U.S. leadership in nonproliferation initiatives both here and abroad. In addition to the programs funded solely by the NNSA, our programs support the Department of Energy mission to protect our national security by preventing the spread of nuclear weapons and nuclear materials to terrorist organizations and rogue states. These efforts are implemented in part through the Global Partnership against the Spread of Weapons and Materials of Mass Destruction, formed at the G8 Kananaskis Summit in June 2002, and the Global Initiative to Combat Nuclear Terrorism, launched in Rabat, Morocco, in October 2006.

The FY 2011 President's request for International Nuclear Materials Protection and Cooperation reflects selective new security upgrades to buildings and areas that were added to the cooperation after the Bratislava Summit, additional Second Line of Defense sites, and sustainability support for MPC&A upgrades. The Global Threat Reduction Initiative increases by 68 percent in support of the international effort to secure vulnerable nuclear materials around the world within four years. The Fissile Materials Disposition program increases by 47 percent reflecting continuing domestic construction of the MOX Fuel Fabrication Facility and the Waste Solidification Building, as well as design documentation for a related pit disassembly and conversion capability. A portion of the funding increase results from the transfer of funding associated with the latter activity from the Weapons Activities appropriation starting in 2011.

The President's request of $1.1 billion for Naval Reactors is an increase of 13.3 percent over the FY 2010 appropriated level. The program supports the U.S. Navy's nuclear fleet, comprised of all of the Navy's submarines and aircraft carriers, including 52 attack submarines, 14 ballistic missile submarines, 4 guided missile submarines, and 11 aircraft carriers. These ships are relied on every day, all over the world, to protect our national interests. Starting in FY 2010, there are major new missions for the NNSA Naval Reactors program. A significant funding increase is

requested for the OHIO Class submarine replacement and for the related activity which will demonstrate new submarine reactor plant technologies as part of the refueling of the land-based prototype reactor. R&D is underway now, and funding during this Future Years Nuclear Security Program is critical to support the long manufacturing spans for procurement of reactor plant components in 2017, and ship procurement in 2019. Resources are also included in FY 2011 to support commencement of design work for the recapitalization of used nuclear fuel infrastructure.

The Office of the Administrator appropriation provides for federal program direction and support for NNSA's Headquarters and field installations. The FY 2011 request is $448.3 million, a 6.5 percent increase over the FY 2010 appropriation. This provides for well-managed, inclusive, responsive, and accountable organization through the strategic management of human capital, enhanced cost-effective utilization of information technology, and integration of budget and performance through transparent financial management practices.

Management: Transforming the Culture of the Department with a Results-Oriented Approach

To transform the way Americans use and produce energy, we need to transform the Department of Energy. Because the mission of the Department is vital and urgent, it must be pursued using a results-oriented approach that is safe, fiscally responsible, and legally and ethically sound. The Department has developed strong management and oversight capabilities during implementation of the Recovery Act, and these lessons will be applied to the FY 2011 budget. The budget request of $337 million for corporate management includes $75 million for the Office of Management, $102 million for the Office of the Chief Information Officer, $43 million for the Inspector General's office, $62.7 million for the Office of the Chief Financial Officer, $37 million for the Office of General Counsel, and $2 million for Management Reform within the Office of the Secretary. The Management Reform effort will provide the Department with strategic direction, coordination, and oversight of management initiatives. The primary mission of this new office is to identify operational efficiencies to free up resources for priority mission activities. The Department is also requesting $12 million for a new Acquisition Workforce Improvement initiative which will be utilized to increase the size and improve the training of our acquisition professionals.

The Department's human capital management efforts are focused on an integrated approach that ensures human capital programs and policies are linked to the Department's missions, strategies, and strategic goals, while providing for continuous improvement in efficiency and effectiveness. To accomplish this goal, the Department will develop different strategies to attract, motivate and retain a highly skilled and diverse workforce to meet the future needs of the Nation in such vital areas as scientific discovery and innovation.

To improve stewardship of taxpayer dollars, the Department will continue to issue audited financial statements in an accelerated timeframe and provide assurance that the Department's financial management meets the highest standards of integrity. The Department's FY 2009 financial statements were reviewed by independent auditors and received an unqualified opinion. This was made possible by implementing an aggressive plan to mitigate and remediate a number

of financial management challenges that were identified by the Department and its independent auditors. In addition, the Department continues to strengthen the execution of program funding dollars by having regular execution reviews that will ensure funding is processed, approved and spent quickly and responsibly. The Department in FY 2011 will continue its effort to build and improve its integrated business management system.

The Department is continuing to make progress in improving project management and is implementing an action plan with scheduled milestones and aggressive performance metrics. The focus of the action plan is to successfully address the root causes of the major challenges to planning and managing Department projects. The action plan identifies eight measures that, when completed, will result in significant, measurable, and sustainable improvements in the Department's contract and project management performance and culture.

To improve financial performance in project management, the Department has increased the use of Earned Value Management (EVM) techniques within program offices. These techniques objectively track physical accomplishment of work and provide early warning of performance problems. A certification process was instituted for contractors' EVM systems to improve the definition of project scope, communicate objective progress to stakeholders and keep project teams focused on achieving progress. Currently, 70 percent of the Department's capital asset projects have certified EVM systems.

The Department continues to strengthen information technology management by consistent execution of robust IT Capital Planning and Investment Control oversight and reporting processes designed to ensure successful investment performance, including the use of EVM Systems as appropriate, and the remediation of poorly performing investments. Through the establishment and use of an Enterprise Architecture that aligns to the Federal Enterprise Architecture, the Department has ensured that all IT investments follow a comprehensive Modernization Roadmap.

The Department continues to take significant actions to improve its cyber security posture by implementing its Cyber Security Revitalization Plan to address long-standing, systemic weaknesses in the Department's information and information systems. Specifically, the Department seeks to ensure that 100 percent of operational information technology systems are certified and accredited as secure and that the Department's Inspector General has rated the certification and accreditation process as "satisfactory." Additional steps will be taken to ensure that electronic classified and personally identifiable information are secure.