Statement of Spencer Abraham
Secretary, U.S. Department of Energy
Before the
House Committee on Appropriations
Subcommittee on Energy and Water Development

FY 2005 Appropriations Hearing
March 11, 2004

Introduction

Good morning Mr. Chairman and Members of the Subcommittee. I am pleased to appear before you today to discuss the President's FY 2005 budget request for the Department of Energy. At $24.3 billion in gross budget authority, the FY 2005 budget request is the largest in the history of the Department.

This budget request builds on a number of successes we have had over the past 3 years. I am very proud of what we have accomplished in terms of fulfilling the President's management vision for this Department and also what we have achieved to promote energy and economic security for the American people. We are grateful for the support and guidance that the Members of this Subcommittee have provided to the Department to assist us in accomplishing our goals.

The Office of Management and Budget recently announced that DOE has made the most progress among cabinet-level agencies in the implementation of the President's Management Agenda. OMB recognized DOE as the cabinet-level agency "leading the pack with regard to management improvement."

We have also made great progress in a number of our program areas. We have implemented changes that have fundamentally reformed DOE's Environmental Management program. Complex-wide, we have taken an approach to accelerated cleanup that says we will not allow the legacy of the work done in the weapons complex to be part of a community's burden for future generations. At the beginning of this Administration, the timetable for completing cleanup at all sites was 70 years. Today, we have implemented reforms to accelerate completion of the cleanup program by 35 years and reduce estimated program costs in excess of $50 billion.

Mr. Chairman, knowing that the Yucca Mountain project is one of your highest priorities, I would like to thank you for your support and highlight that we have made tremendous progress to ensure that the United States will have a permanent nuclear repository by 2010. Two years ago, the Administration and the Congress made the decision to move forward with the Yucca Mountain project. Thanks to the efforts of the Chairman and Members of this Subcommittee, the Yucca Mountain project is authorized and on-schedule to accept waste in 2010. There is still much work to be done – at the site, with

the Nuclear Regulatory Commission, and throughout the country – but at the end of the day, America will finally have a long-promised, safe repository for nuclear waste.

The Yucca Mountain project goes hand-in-hand with other steps we have taken to ensure nuclear energy plays an important part in our future energy mix. Our scientists are pursuing an advanced fuel cycle to significantly improve fuel performance, energy utilization, and proliferation resistance for nuclear reactors. We are also working internationally to develop the next generation of nuclear technologies to take us to the next level in terms of efficiency, reliability, and security.

We are also pursuing other new technologies to meet future energy and environmental challenges. These are transformative technologies that will change the way we think about how we use and produce energy. We are pursuing a path toward a "hydrogen economy" – with affordable zero emission fuel cell vehicles, abundant production sources, and safe storage and transportation of hydrogen. The portfolio for the hydrogen fuel initiative consists of a broad mix of energy sources ranging from renewable energy to fossil fuels and nuclear energy. The Department's investment of $227 million in this effort in FY 2005 will move us closer to achieving a long-term energy solution for our nation.

We have aggressively pursued international cooperation outside of our direct national security activities. In a variety of areas, especially those that relate to climate change, we have been able to create partnerships with other countries to enhance the Department's cutting-edge science and technology.

We have also made a lot of progress on safety at our national laboratories and shoring up the security of the DOE complex. Much of our Department's work is of a highly skilled nature and deals with dangerous materials. Many of our facilities are located near populated communities. Given these facts, it is clear that safety has to be of paramount concern for everyone at DOE. While we have done a good job of driving that message home, which is best reflected in the improved safety record at our laboratories, we realize there is much more to achieve.

The same goes for security. Our overarching Departmental mission is national security. We cannot be said to be fulfilling our mission with any confidence unless we can guarantee security at our facilities. We are attempting to do that with a request of $1.38 billion in FY 2005 for all DOE safeguards and security activities. We have revised and are implementing the Design Basis Threat, which is the post-September 11th analysis of potential threats against which we must protect DOE sites and materials across the country. We also have a high-level review of security procedures underway by some of the nation's top military and civilian experts. Lastly, we have made significant managerial changes in the security leadership at our facilities.

The FY 2005 budget proposal we are submitting to Congress seeks to continue and build on these successes. It includes unprecedented funding increases to hasten the cleanup of the Cold War environmental legacy, to construct a permanent nuclear waste repository at

Yucca Mountain, to deliver on essential nuclear-related defense requirements, to provide for energy security by exploring the promise of hydrogen and fusion, and to promote basic science research to ensure America's technological preeminence well into the future. The sections that follow provide the details of these priorities.

NATIONAL SECURITY

Representing approximately 37 percent of the Department's entire FY 2005 budget request, our national security programs have made great progress and continue to address the new challenges in a post-September 11th environment. For FY 2005, the Department requests $9 billion for the National Nuclear Security Administration programs. This level allows the NNSA programs to continue to make significant achievements in weapons readiness and reliability, nuclear nonproliferation, and naval propulsion.

We have taken measures to modernize our defense complex. Three years ago, our complex was in a seriously deteriorated condition. Many of our buildings and facilities were in such disrepair that our ability to carry out our defense responsibilities appeared jeopardized. It was clear to us that we needed to make significant investments to restore those facilities to working condition. We are doing so, with a substantial capital investment program underway to make these repairs and improvements. The FY 2005 budget includes a $77-million increase for facilities improvements within a $6.6-billion total request for weapons activities.

While we are rebuilding and modernizing the defense complex, we are also restoring its capabilities. Some of the capabilities within our weapons complex have either been allowed to deteriorate or simply have been lost. The ability to manufacture plutonium pits for nuclear weapons is one example. We produced the first certifiable pit last year, and are on a path forward now to have a new, fully certified pit ready to enter the stockpile by FY 2007. This will complete the first step for the United States to restore the capability that other nuclear weapons states already have.

In the same vein we are enhancing our nuclear test readiness. The weapons in the nuclear stockpile are of various ages and conditions. Today we are confident they will function as our nuclear deterrent if they are needed. But as these weapons age in an era in which we have a moratorium on testing, it is up to our laboratories to do the phenomenally complicated job of determining through science and technology whether or not the weapons will work effectively.

We believe we can do that. But if some day in the future it were determined that we had uncertainty, it would take us a minimum of 3 years to conduct a test to determine whether or not the stockpile was reliable. That is too long. We are in the process of reducing that timeframe by half so that this Department can protect America's national security by being able to conduct such a test in a more timely fashion.

We also continue to make great progress with Russia on nuclear nonproliferation. Of the $1.35 billion included in this budget for Defense Nuclear Nonproliferation, $999 million

is requested for nonproliferation programs with Russia and other countries. We have accelerated the material protection programs and expanded the scope of our work to ensure that dangerous materials do not fall into the wrong hands. We have increased our cooperation with Russia's Strategic Rocket Forces by initiating warhead security work at three new sites.

We have extended our International Radiological Threat Reduction Program to states that were once part of the Former Soviet Union and beyond. Working with them, with Russia, and with the International Atomic Energy Agency, we have been able to secure radiological materials in these countries.

Moreover, in this budget request we are continuing our MegaPorts program with $15 million to detect the trafficking of nuclear or radioactive materials in the world's busiest seaports. We will complete installations at three ports in FY 2004 and complete an additional three ports in FY 2005. Eventually we hope to have detection equipment in key locations all over the planet.

ENERGY

Turning to the energy budget, in FY 2005 the Department is requesting $2.7 billion for energy resource programs; of this amount $1.1 billion is within the jurisdiction of this Subcommittee. An important element of all our energy programs is to make energy use more secure, efficient, and environmentally sound. At the same time, we are preparing long-term energy solutions that will eventually make questions of supply and environmental effects obsolete. The Administration's energy portfolio takes a long-term focus through investments in hydrogen use and production, electricity reliability, and advanced nuclear energy power technologies. Investments in these pivotal areas honor a commitment to strengthen the nation's energy security for the near-term and for generations to come.

The Department's Energy Efficiency and Renewable Energy (EERE) program is at the forefront of implementing the President's Hydrogen Fuel Initiative. Hydrogen promises to help meet our nation's future energy challenges. The Department is requesting $227 million in FY 2005 for hydrogen-related activities. Within that figure, $133.5 million is requested under the jurisdiction of this Subcommittee: $95.3 million for the EERE program, $29.2 million for the Science program, and $9 million for the Nuclear Energy program.

The budget also continues strong support for research and development to reduce the cost of renewable energy technologies such as wind, solar, geothermal, and biomass, as well as to promote the deployment of renewable technologies. Including the hydrogen component of this work in EERE, the budget request is $375 million.

Nuclear energy remains a critical component of the nation's energy portfolio and a significant part of America's energy future. The FY 2005 budget request for the Department's nuclear energy programs is $410 million. These programs work to address

essential requirements to develop advanced nuclear power technologies for deployment. The FY 2005 nuclear energy budget request also reflects the establishment of the Idaho National Laboratory. This new laboratory will serve as the nation's primary center for strategic nuclear energy research, development, demonstration, and education. It will lead the Department's investigation of a new type of nuclear power plant that is proliferation-resistant and melt-down proof – the next generation nuclear power plant. It is our objective that the Idaho National Laboratory will become the world's premier nuclear energy technology center within a decade.

The widespread blackout of August 2003 – affecting an area encompassing 50 million people, eight states, and one Canadian province – was a strong reminder that our nation's electricity grid has vulnerabilities and weaknesses which need to be addressed. Energy reliability is imperative. To this end, DOE requests $91 million to modernize and expand our national electricity transmission grid. Included within this request are $5.5 million for a new Gridworks program and $5 million for a Gridwise program. These initiatives will improve electricity reliability by bringing innovation in information technology and transmission hardware into operational electric systems. The budget request for Other Defense Activities includes $10.6 million for Energy Security and Assurance activities to complement the efforts undertaken by the Office of Electric Transmission and Distribution and the activities of the Department of Homeland Security.

SCIENCE

Every one of the programs and activities requested in this budget depends heavily upon advanced research and development (R&D). The work we do would not be possible were it not for the scientific and engineering capability available in the Department's national laboratories and at universities across the nation. Our $3.4 billion request for science-related programs and activities supports work in areas like nanoscience, fusion, advanced scientific computing, and microbial genomes, which hold enormous promise for scientific discoveries over the next decade. Combined with the significant science expenditures included in the nonproliferation and weapons budgets, this amount makes the Department of Energy the largest federal supporter of the physical sciences, and will help enable us to maintain America's position as the world leader in scientific research and development.

Nanoscience – the study of particles at the atomic and molecular level – has nearly unlimited potential. From the life sciences, to building materials that repair themselves, to giving us the tools to boost the potential of solar power, this new science will be a powerful force for solving a host of challenges. For FY 2005, the Department requests $211 million to continue revolutionary nanoscience research.

The FY 2005 budget also supports our continuing pursuit of scientific understanding of matter and energy. It includes $80.5 million for construction and $33.1 million for operation of the Spallation Neutron Source; and $50 million for design and procurement activities for the Linac Coherent Light Source, which will truly give us a new window on nature. Both facilities are expected to advance significantly the understanding of

materials that will benefit applied R&D across a wide range of disciplines.
This budget also continues our investment in the pursuit of fusion energy power. When the President announced that the United States would join in the International Thermonuclear Experimental Reactor (ITER) project, he noted that "the results of ITER will advance the effort to produce clean, safe, renewable, and commercially available fusion energy by the middle of this century." In order to support the President's commitment, funding for ITER-related activities has increased by $30 million from last year.

The FY 2005 budget includes $204 million for Advanced Scientific Computing Research to further U.S. leadership in high performance supercomputing, networking, and software development. The request includes $38 million for the Next Generation Computer Architecture to acquire additional advanced computing capability for existing users, and for longer term R&D on new architectures for scientific computers.

The request for our Genomics:GTL program is $67.5 million. This program will attempt to use genetic techniques to harness microbes to consume pollution, create hydrogen, and absorb carbon dioxide.

New in FY 2005 is the addition of targeted basic research activities within the President's Hydrogen Fuel Initiative, a $29-million program within Basic Energy Sciences to advance the fundamental understanding of the properties of hydrogen and fuel cells. This work will complement the applied investigation underway elsewhere in the Department on hydrogen production, storage, and infrastructure development.

ENVIRONMENT

All of our scientific research is designed in part to meet our nation's environmental challenges. In that regard, DOE's work on hydrogen or next generation nuclear technology comes as readily to mind as our renewable energy research. This commitment to the environment includes taking action to address the environmental legacy of our past work, particularly building the nuclear weapons complex that helped win the Cold War. That means cleaning up the contamination caused by the production of nuclear weapons. It also means doing right by former weapons employees who may have become ill as a result of their work at nuclear facilities. We are also working to ensure our nation is equipped to safely handle future high-level nuclear waste generated by the use of conventional nuclear power as well as the continued production of nuclear weapons.

DOE is addressing these responsibilities through our Environmental Management program and the work at Yucca Mountain. Our FY 2005 budget requests $8.6 billion to meet our various environmental-related objectives. Within that, we are seeking over $7.4 billion for the Environmental Management (EM) program – the most funding ever requested for this program, reflecting the peak year of DOE's investment strategy for accelerated cleanup. The budget also includes a proposal to reserve $350 million in EM funds. These funds will be requested pending the satisfactory resolution associated with

a recent court ruling dealing with our authority to classify certain lower activity waste from reprocessing (Waste Incidental to Reprocessing).

This budget reflects several program shifts from Environmental Management to other programs within the Department in FY 2005. The program shifts more focus to EM's mission of Cold War cleanup and supports the Environmental Management program initiative to accelerate cleanup and risk reduction while providing the responsible and accountable mission programs with the resources and the tools necessary to achieve their objectives.

The budget includes $66 million for the Office of Legacy Management to manage post-environmental-cleanup activities. This organization demonstrates the Department's long-term commitment to manage requirements relevant to closure sites beyond the completion of remediation.

The budget also includes $8 million for a new Office of Future Liabilities, a planning office to be established to address various future cleanup activities at sites with continuing missions. The FY 2005 budget provides funds to plan for environmental liabilities not currently assigned within the Department.

The FY 2005 budget includes $43 million within the Environment, Safety and Health program to accelerate the processing of applications from contractors who may have become ill as a result of their work at DOE facilities. This is a matter of doing what's right and taking care of those whose labors helped secure our safety. With this budget request, we are making good on implementing a 3-year program to eliminate completely the backlog of applications by the end of 2006.

One of the most significant and long-standing commitments addressed in this budget is funding to establish a permanent nuclear waste repository at Yucca Mountain. In order to remain on schedule to begin operation in 2010, the FY 2005 budget requests $880 million for Yucca Mountain repository activities. This is key to ensuring the future use of nuclear power in this nation. It is also important to help us complete the cleanup of our weapons facilities and consolidate high-level nuclear waste in one safe, secure location. This request enables us to finalize and defend the license application for construction of the permanent repository – which we are planning to submit to the Nuclear Regulatory Commission by December 2004 – as well as other activities associated with repository design and safety upgrades and with developing a transportation system to the Yucca Mountain site.

The Yucca Mountain project is moving toward a second phase, one which will require a significant financial commitment to accomplish. The FY 2005 budget request includes a proposal to use utility company contributions to establish a new funding mechanism that will ensure that adequate funds are available to begin accepting waste in 2010. In FY 2005, the Department proposes that $749 million in fees collected from utilities for purposes of the Nuclear Waste Fund be used to offset FY 2005 non-defense appropriations in support of design and other Yucca Mountain activities.

SAFEGUARDS AND SECURITY

Throughout the entire budget request is funding for one of our highest priorities, safeguarding and securing DOE's sites and facilities. The FY 2005 budget includes $1.38 billion for all DOE safeguards and security programs to address additional requirements identified as a result of the revised Design Basis Threat.

Within the total amount requested for safeguards and security activities, approximately $707 million will support activities to safeguard nuclear weapons facilities. About $265 million will support activities that protect the Cold War nuclear waste material being cleaned up at our environmental cleanup sites.

In addition, we are committing approximately $73 million to support the continued safeguards and security activities at our scientific laboratories and facilities. We are requesting $255 million to support the development of DOE-wide security policies as well as to provide physical security for DOE headquarters. The FY 2005 budget request also includes $58 million to support safeguards and security activities at the new Idaho National Laboratory for nuclear energy research and development. Moreover, $25 million will fund the Department's cyber security activities administered by the Department's Chief Information Officer, while an additional $109 million within the amounts mentioned above will fund DOE-wide cyber security measures.

CONCLUSION

The Department's FY 2005 request reflects the accomplishments of the last 3 years, the successes and the many changes. This request charts a focused course of investment for the nation's future – one guided by a cohesive mission and targeted performance metrics. Making all of this work are the extremely talented men and women of the Department of Energy which include the world's top engineers and scientists. It is a privilege to work alongside them on a common mission. It is an honor to serve a President who has provided this vision of what this Department can – and will – accomplish in FY 2005 and beyond.

Thank you. This concludes my formal statement. I would be pleased to answer any questions you may have at this time.