U.S. DEPARTMENT OF ENERGY

PERFORMANCE AND ACCOUNTABILITY REPORT




FISCAL YEAR 2006

DOE/CF – 0012

FOREWORD

The *Reports Consolidation Act of 2000* authorizes Federal agencies to consolidate various reports in order to provide performance, financial and related information in a more meaningful and useful format. In accordance with the Act, the Department of Energy (Department or DOE) has produced its fiscal year (FY) 2006 Performance and Accountability Report (PAR) in the following reporting formats that will serve multiple audiences and users with varied levels of detail:

- The PAR, as a full report that provides a thorough documentation of the stewardship of our mission-critical resources and services provided to the American people
- The PAR Highlights, an executive summary version of the full report
- The PAR CD, featuring a PDF version of the full report, and
- The PAR internet website at www.cfo.doe.gov/cf1-2/par2006.htm, featuring all PAR reporting formats.

All PAR reports are organized by the following four sections:

Management's Discussion and Analysis section provides executive-level information on the Department's history, mission, organization and performance highlights within our critical mission objectives, analysis of financial statements, systems, controls and legal compliance and other challenges facing the Department.

Performance Results section provides detailed information and an assessment of our progress on all of the Department's performance goals and targets for the past four years.

Financial Results section provides a Message from the Deputy Chief Financial Officer, the Department's consolidated and combined financial statements, and the Auditors' Report.

Other Accompanying Information section provides the Inspector General's Management and Performance Challenges, Improper Payments Information Act Reporting Details and other statutory reporting.

This report meets the following legislated reporting requirements:

- **Department of Energy Organization Act of 1977** – requires an annual report on agency activities.
- **Federal Managers' Financial Integrity Act (FMFIA) of 1982** – requires a report on the status of internal controls and the most serious problems.
- **Federal Financial Management Improvement Act (FFMIA) of 1996** – requires an assessment of the agency's financial systems for adherence to Government-wide requirements.
- **Inspector General (IG) Act of 1978 (Amended)** – requires information on management actions in response to Inspector General audits.
- **Government Performance and Results Act (GPRA) of 1993** – requires performance results achieved against all agency goals established.
- **Government Management Reform Act (GMRA) of 1994** – requires agency audited financial statements.
- **Reports Consolidation Act of 2000** – requires the consolidated reporting of performance, financial and related information in a Performance and Accountability Report.
- **Improper Payment Information Act (IPIA) of 2002** – requires reporting on agency efforts to identify and reduce erroneous payments.
- **Federal Information Security Management Act (FISMA) of 2002** – requires annual evaluations of information security programs and practices.

PAR internet website at
www.cfo.doe.gov/cf1-2/par2006.htm

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MESSAGE FROM THE SECRETARY

I am pleased to present the Department of Energy's Performance and Accountability Report for fiscal year 2006. The report describes the Department's successes and challenges over the past year and details our responsible use of taxpayer dollars as we work towards achieving our mission. I am proud of the work we accomplished and take great pride in the trust placed in us by the American people.

Reaching our long-term goals is critical to the Nation because reliable and affordable energy is central to our economic and national security. Energy not only helps drive the U.S. and global economy, but significantly impacts our quality of life and the health of our people. The Department will continue to make investments that improve America's energy security, protect our environment, foster economic growth, spur scientific innovation and discovery, and help achieve the goal of nuclear nonproliferation.

PROMOTING SCIENCE AND TECHNOLOGICAL INNOVATION

Developing revolutionary, science-driven technology is at the heart of the Department of Energy's mission. To ensure that America remains at the forefront in an increasingly competitive world, the Department is pursuing new transformational technologies in the cutting-edge scientific fields of the 21st century – areas like nanotechnology, material science, biotechnology and high-speed computing. President Bush's American Competitiveness Initiative commits to doubling the Federal investment in the most critical basic research programs in the physical sciences over the next ten years. As testimony to our outstanding research capabilities, the Department of Energy has sponsored 45 Nobel Laureates since its inception in 1977 and a total of 85 Nobel Laureates since 1934 (associated with the Department and its predecessor agencies). Most recently, in 2006, two scientists supported by the Department of Energy won Nobel Prizes - George F. Smoot, co-winner in Physics and Roger D. Kornberg in Chemistry. These achievements demonstrate the high quality and impact of the research the Department underwrites to keep the United States in the forefront of scientific discovery.

ADVANCING AMERICA'S ECONOMIC AND ENERGY SECURITY

President Bush's Advanced Energy Initiative aims to increase investment in clean-energy sources that will transform our transportation sector and power our homes and businesses. The Department is focused on diversifying America's energy supply and improving our energy efficiency. We are emphasizing technologies with the potential both to reduce our growing reliance on oil imports and to produce clean electricity with reduced emissions. For example, the Department is working to increase the use and production of biomass fuels. Biomass promises to become a plentiful domestic energy resource, provide economic benefits to the agricultural sector and displace oil use.

ADVANCING AMERICA'S NATIONAL SECURITY

The security of the nuclear weapons and materials around the world has never been more important. There remains a real threat to America from terrorists and the proliferation of nuclear weapons. The Department is conducting fundamental and applied scientific research and development and is applying that science to national security. The Department is committed to the nuclear deterrence requirements of the Administration's Nuclear Posture Review and continues to fund an aggressive strategy to mitigate the threat of weapons of mass destruction. The Department works closely with nuclear countries throughout the world to ensure the safe containment of nuclear material. As a direct result of this work, material for 800 nuclear weapons has been converted into commercial nuclear reactor fuel, enough to power 22 percent of all U.S. households this past year.

ENSURING A CLEAN ENVIRONMENT

The Department is ensuring the protection of human health and the environment by cleaning up Cold War legacy waste and it is working to establish a national permanent nuclear waste repository at Yucca Mountain, Nevada. Like many of the Department's major programs, the environmental cleanup and the nuclear waste repository programs have undergone management and programmatic reforms, implementing improvement in operational effectiveness and efficiency. In fiscal year 2006, the Department finished cleanup work and closed the Rocky Flats site in Colorado, a former nuclear weapons site. This milestone represents the Department's largest cleanup and closure effort to date.

NEW STRATEGIC PLAN

In September 2006, I issued a new Strategic Plan for the Department of Energy. The Plan outlines a path forward to enhance our clean energy options and advance national security interests while protecting the health and safety of our workers and the public. Building on the Department's rich and diverse history and the President's initiatives, this plan details the steps necessary to keep our commitments, embrace innovation and work together to ensure safe, secure and environmentally responsible operations.

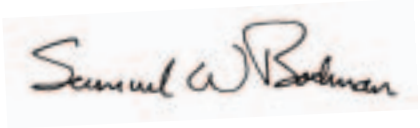
PROGRAM DATA AND FINANCIAL PERFORMANCE

This year, the independent public accounting firm KPMG LLP, conducted a review of our fiscal year 2006 financial statements which are included in this report. Based on that review, the audit opinion on our fiscal year 2006 Balance Sheet was upgraded from a disclaimer last year to a qualified opinion. The qualification was limited to problems with our internal controls surrounding undelivered orders and this issue is reported as our only material weakness. The auditors did not issue an opinion on the remaining fiscal year 2006 financial statements because of opening balance issues related to fiscal year 2005 and the disclaimer of opinion. The Department's program performance information contained in this report was also evaluated. The auditors noted several issues related to information systems security and performance measure reporting and have characterized them as reportable conditions in their audit report.

The Department has already begun to take actions to strengthen our controls and reporting processes and we expect to have them resolved during the first half of the new fiscal year. Based on our own evaluations and those of the independent auditors, I can provide reasonable assurance, except for the deficiencies identified, that the financial and performance information contained in our report is complete and reliable and accurately describes the results achieved by the Department.

CONCLUSION

As this Performance and Accountability Report demonstrates, all of us at the Department of Energy are committed to making a positive difference in the lives of Americans. We recognize the importance of our work to the country's economic and national security and are embracing our role in powering and securing America's future.



Samuel W. Bodman
November 15, 2006

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

MANAGEMENT'S DISCUSSION AND ANALYSIS

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

HISTORY, MISSION AND ORGANIZATION HIGHLIGHTS

— History —

The Department has one of the richest and most diverse histories in the Federal Government, with its lineage tracing back to the Manhattan Project and the race to develop the atomic bomb during World War II. Following that war, Congress created the Atomic Energy Commission in 1946 to oversee the sprawling nuclear scientific and industrial complex supporting the Manhattan Project and to maintain civilian government control over atomic research and development. During the early Cold War Years, the Commission focused on designing and producing nuclear weapons and developing nuclear reactors for naval propulsion. The creation of the Atomic Energy Commission ended the exclusive government use of the atom and began the growth of the commercial nuclear power industry, with the Commission having authority to regulate the new industry.

In response to changing needs and an extended energy crisis the Congress passed the *Department of Energy Organization Act in 1977*, creating the Department of Energy. That legislation brought together for the first time not only most of the government's energy programs, but also science and technology programs and defense responsibilities that included the design, construction and testing of nuclear weapons. The Department provided the framework for a comprehensive and balanced national energy plan by coordinating and administering the energy functions of the Federal Government. The Department undertook responsibility for long-term, high-risk research and development of energy technology, Federal power marketing, energy conservation, the nuclear weapons program, energy regulatory programs, and a central energy data collection and analysis program.

Over its history, the Department has shifted its emphasis and focus as the energy and security needs of the Nation have changed. Today, the Department contributes to the future of the Nation by ensuring our energy security, maintaining the safety and reliability of our nuclear stockpile, cleaning up the environment from the legacy of the Cold War, and developing innovation in science and technology.

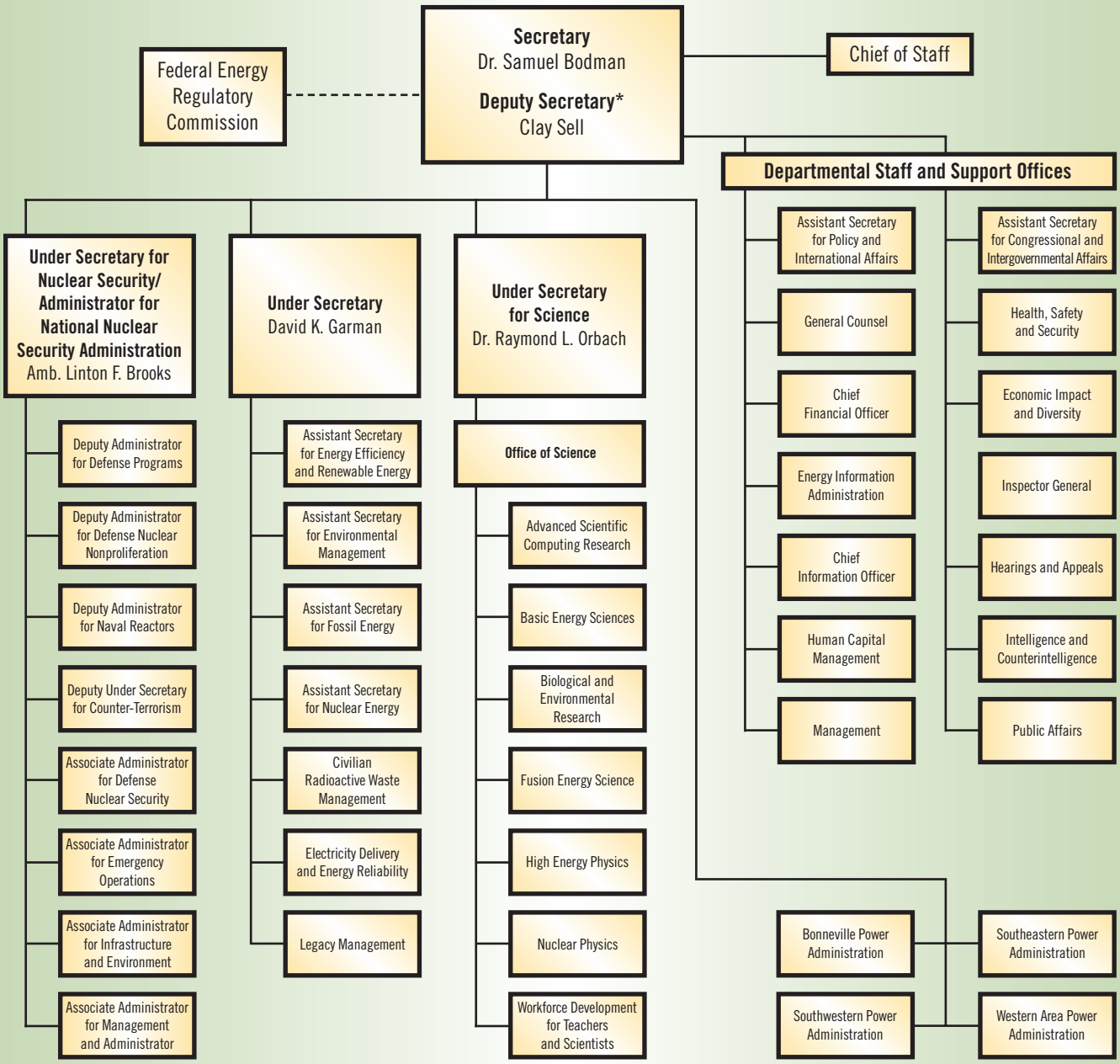
— Mission —

To advance the national economic and energy security of the United States;

To promote scientific and technological innovation in support of that mission;

To ensure the environmental cleanup of the national nuclear weapons complex.

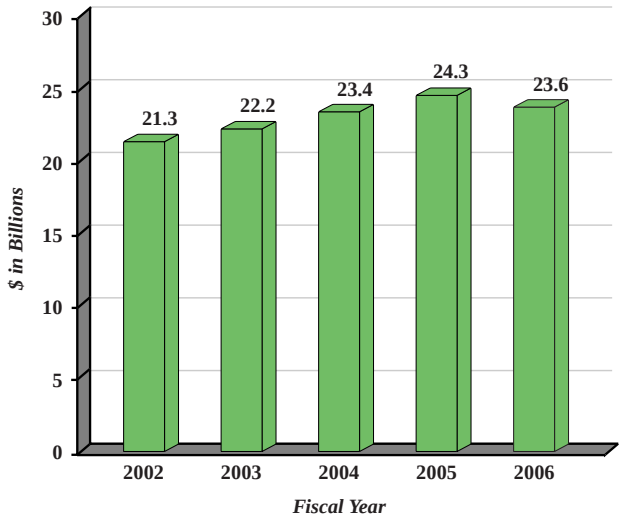
— Organization Structure —



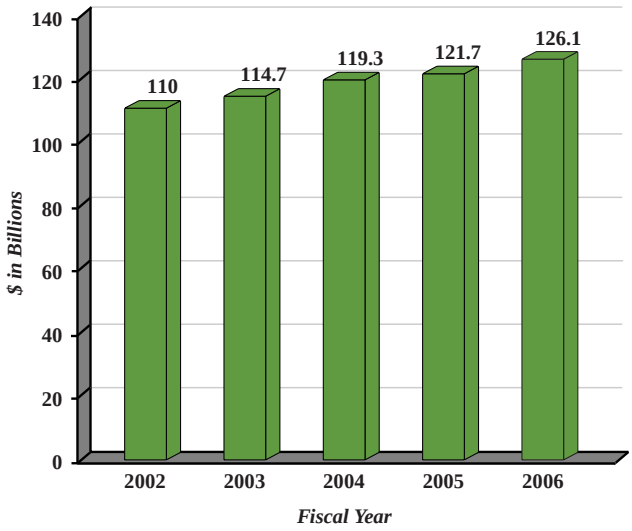
* The Deputy Secretary also serves as the Chief Operating Officer

— Financial Resources —

Funding

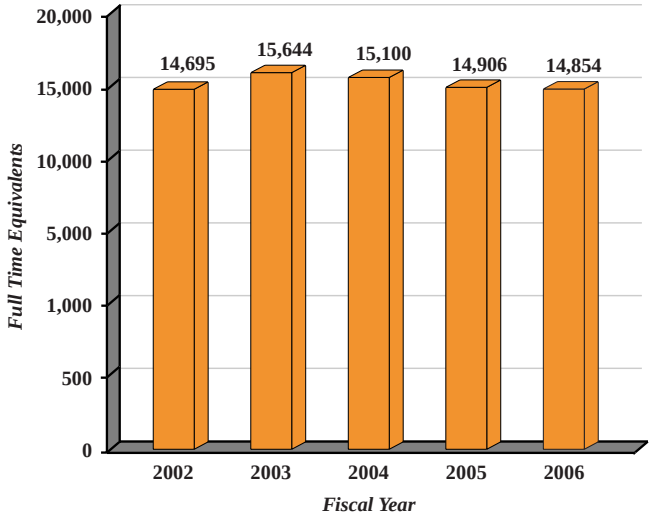


Assets

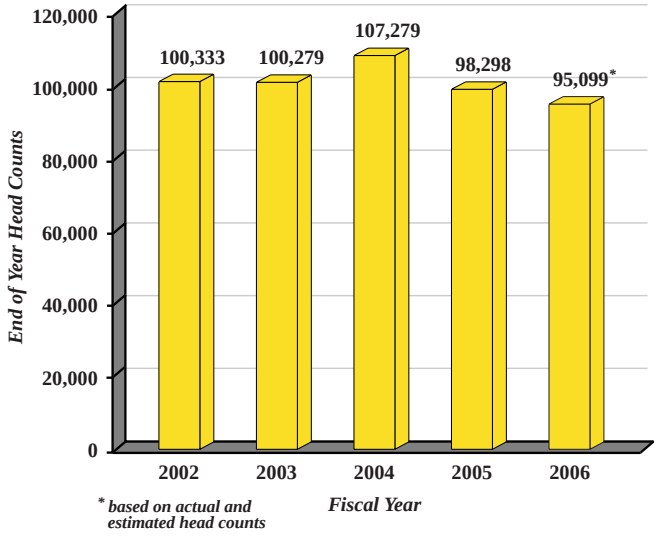


— Human Capital Resources —

Federal Employees



Contractor Employees



— Strategic Goals —

The Department pursues the following four strategic goals and seven supporting general goals to achieve its mission. The performance, financial and other related information presented in this report is structured around these goals. In fiscal year (FY) 2006, the Department renewed and extended its commitment to the DOE mission by updating its Strategic Plan. The new plan will serve as our roadmap in FY 2007 and beyond, addressing five strategic themes: Energy Security, Nuclear Security, Scientific Discovery and Innovation, Environmental Responsibility and Management Excellence. The plan can be viewed at http://energy.gov/about/strategicplan.htm.

Strategic and General Goals	Federal Employees	Resources Applied ($ in millions) Program Costs
Strategic Goal: DEFENSE To protect our national security by applying advanced science and nuclear technology to the Nation's defense. **General Goals** 1 – Maintain nuclear weapons stockpile 2 – Detect and prevent nuclear proliferation 3 – Support nuclear power needs of the U.S. Navy	2,636*	$ 8,833
Strategic Goal: ENERGY To protect our national and economic security by promoting a diverse supply and delivery of reliable, affordable and environmentally sound energy. **General Goal** 4 – Enhance energy security	6,593*	$ 6,832
Strategic Goal: SCIENCE To protect our national and economic security by providing world-class scientific research capacity and advancing scientific knowledge. **General Goal** 5 – Maintain a world-class scientific research capacity	949*	$ 3,720
Strategic Goal: ENVIRONMENT To protect the environment by providing a responsible resolution to the environmental legacy of the Cold War and by providing for the permanent disposal of high-level radioactive waste. **General Goals** 6 – Clean up contamination of sites 7 – Establish a permanent repository for high-level radioactive waste.	1,765*	$ 6,076

* These Federal Employee numbers do not include the combined 2,911 Federal Energy Regulatory Commission and Corporate Management employees (e.g. CFO and General Counsel) that support the above four strategic goals.

— Performance and Accountability Report Card —

Score	Requirement or Initiative	Supporting Indicators
	Government Management Reform Act – Financial Statement Audit	Audit Opinion – Qualified Opinion on the Balance Sheet Disclaimer on remaining statements
	Federal Managers' Financial Integrity Act – Management Controls (Section II) Financial Systems (Section IV)	No material weaknesses (Section II) Financial systems generally conform to (Section IV) requirements
	OMB Circular A-123, Appendix A	Implementation Green Remediation Yellow One material weakness
	Federal Financial Management Improvement Act	Financial Management Evaluation identified a non-compliance
	Federal Information Security Management Act	Annual FISMA Report
	Improper Payments Information Act	<1% Erroneous Payment Rate Not Considered Significant Risk by OMB
	President's Management Agenda Scorecard	Status / Progress
	Human Capital	Green / Green
	Competitive Sourcing	Green / Green
	Financial Performance Improvement	Red / Green
	E-Government	Yellow / Green
	Budget & Performance Integration	Green / Yellow
	Federal Real Property Asset Management	Green / Green
	Performance Results:	
	Defense Strategic Goal	Green
	General Goal 1: Nuclear Weapons Stewardship	Green
	General Goal 2: Nuclear Nonproliferation	Green
	General Goal 3: Naval Reactors	Green
	Energy Strategic Goal	Green
	General Goal 4: Energy Security	Green
	Science Strategic Goal	Green
	General Goal 5: World-Class Scientific Research Capacity	Green
	Environment Strategic Goal	Green
	General Goal 6: Environmental Management	Green
	General Goal 7: Nuclear Waste	Green
	Certificate of Excellence in Accountability Reporting	Awarded for the FY 2004 PAR
	Mercatus Performance Scorecard Ranking	Ranking: FY 2003: 12; FY 2004: 6; FY 2005: 9

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

PERFORMANCE GOALS, OBJECTIVES AND RESULTS

— Program Performance —

The Department continues to work toward the goals established in our September 2003 *Strategic Plan*. The following sections focus on progress made toward the Department's four strategic goals: Defense, Energy, Science and Environment. The Department's progress toward these strategic goals is described within the context of outcome-based general goals and program goals, and key, output-based annual performance targets. Programmatic benefits to the public are discussed, as are external factors that may potentially impact achievement of the Department's goals.

Additional detailed performance progress is provided in the Performance Results section and provides the year-end assessment of each annual performance target for FY 2006, performance information for the past three fiscal years (FY 2003-2005), and progress on performance targets that were not previously met.

Performance Management Framework

The Performance Management Framework illustrates the hierarchical relationship of performance elements within the Department. During performance planning, high-level goals direct the scope of the supportive performance elements; consequently, progress against these goals is indicated by actual performance at the lower levels. Each of these performance elements are described below.

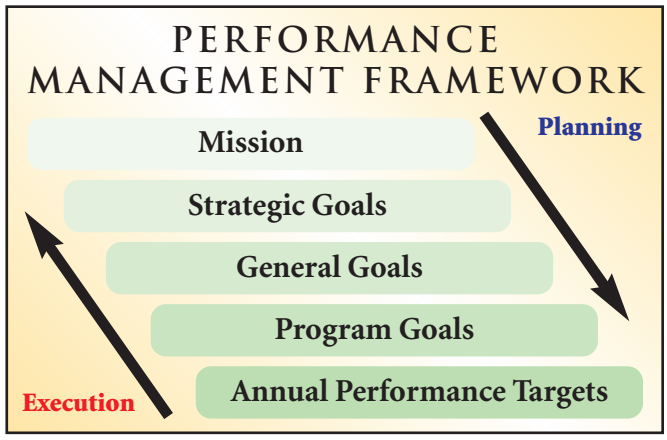
Mission – The Department of Energy's mission is to advance the national economic and energy security of the United States; to promote scientific and technological innovation in support of that mission; and to ensure the environmental cleanup of the national nuclear weapons complex.

Strategic Goals – The Department has four strategic goals that support the achievement of this mission. A strategic goal is a statement of aim or purpose that may not be directly measurable. Strategic goals are used by the Department to guide the creation of general goals and program goals, which are focused on producing outcomes that support the Department's mission.

General Goals – The Department has seven long-term general goals that support the four strategic goals. A general goal defines more specifically what the Department plans to achieve in carrying out its mission over a period of time. General goals are expressed as outcomes, which allow for an assessment of progress toward the goal.

Program Goals – Outcome-based program goals bridge the gap between long-term general goals and annual performance targets. In FY 2006, the Department tracked 53 program goals, spread across Departmental administrations and offices. Because they are focused on the core missions of the administrations and offices to which they are assigned, program goals are critical mid-term indicators of Departmental performance.

Annual Performance Targets – In an effort to reduce the number of performance measures to the critical few, the Department monitored 204 annual performance targets in FY 2006 in contrast with 248 in FY 2005. These targets establish a measurable performance baseline against which actual achievement may be assessed. Annual performance targets may be either outcomes or outputs.



Performance Scorecard

Each of the following Strategic Goal sections include a Performance Scorecard. This depiction reveals both cost (program costs and budgetary expenditures) and performance information in a consolidated presentation.

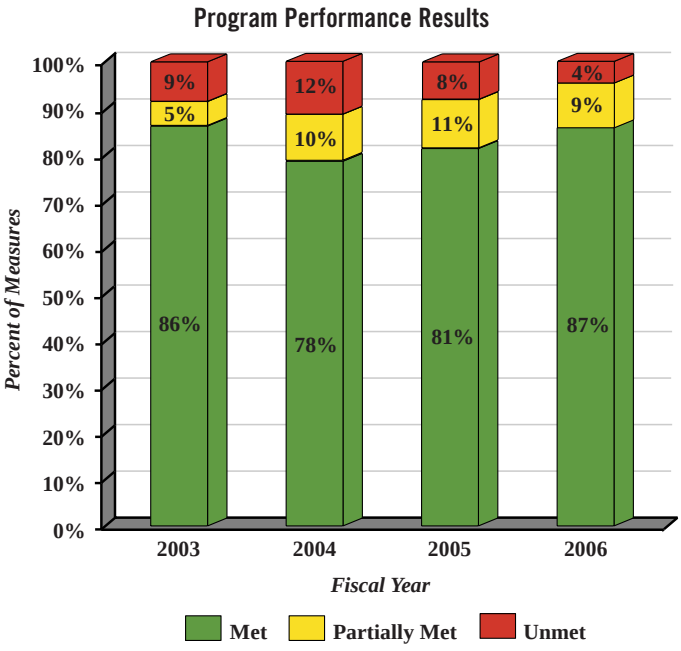
Program costs are defined as full period costs computed using the accrual basis of accounting that recognizes expenses when incurred regardless of when the related budgetary expenditures are made. Budgetary expenditures represent the goods and services received during the current year for which the Department has paid or will be required to pay in the future. It is important to note that the budgetary expenditures will not equal program costs in any particular year because there are significant timing differences between accrued cost and recognition of budgetary expenditures. For example, an asset with a useful life of ten years, purchased in the current year, would have its full cost recognized as a budgetary expenditure, while its full cost for accounting purposes would be spread over its ten-year useful life. Conversely, an unfunded liability recorded in the current year would be recognized as a program cost in the current year, yet would not be recognized as a budgetary expenditure until funding is made available to liquidate the liability.

Performance information is presented for program goals associated to the strategic goal. Actual performance against annual performance targets is recorded on a quarterly basis in *Joule*, the Department's performance measurement tracking system. These results indicate progress toward the associated program goals, and ultimately its general and strategic goals. Performance goals and targets are color rated as Green, Yellow or Red. The definitions used for color rating annual targets and program goals are as follows:

Organizational Goals	Program Goals and Annual Targets	
≥ 90% Met	100% Met	
≥ 80% Met; < 90% Met	≥ 80% Met; < 100% Met	
< 80% Met; or Undetermined	< 80% Met; or Undetermined	

Program goals and annual targets are assessed differently from organizational goals to provide managers a reasoned approach to performance assessment. Because organizational goal assessments are based on a roll-up of annual targets, it is important to put the impact of unmet targets in the proper perspective at the program goal level.

The Department adjusts its management strategies each year, as necessary, based on actual performance, current resources, and the national energy and economic outlooks. This ensures that the Department is continuously fulfilling its mission.



Performance Validation and Verification

Validation and verification of the Department's performance is accomplished by certifications, periodic reviews and audits. The Department's end-of-year reporting process includes certifications by heads of program elements that the reported results are accurate. The results are internally reviewed by the Department for quality and completeness, while key internal controls related to performance reporting are considered by the Department's independent auditors. Source data substantiating performance target results is maintained by the program offices, the National Laboratories, and the Department's contractor work force. Due to the size and diversity of the Department's portfolio, validation and verification is also supported by the following activities.

Budget Preparation Analysis: Validating and verifying program contributions to the Department's strategic and general goals are a routine part of reviewing and analyzing the annual performance budget submission. Performance targets submitted at each phase of budget development are also reviewed to ensure that they contribute effectively to the achievement of the program and Departmental goals.

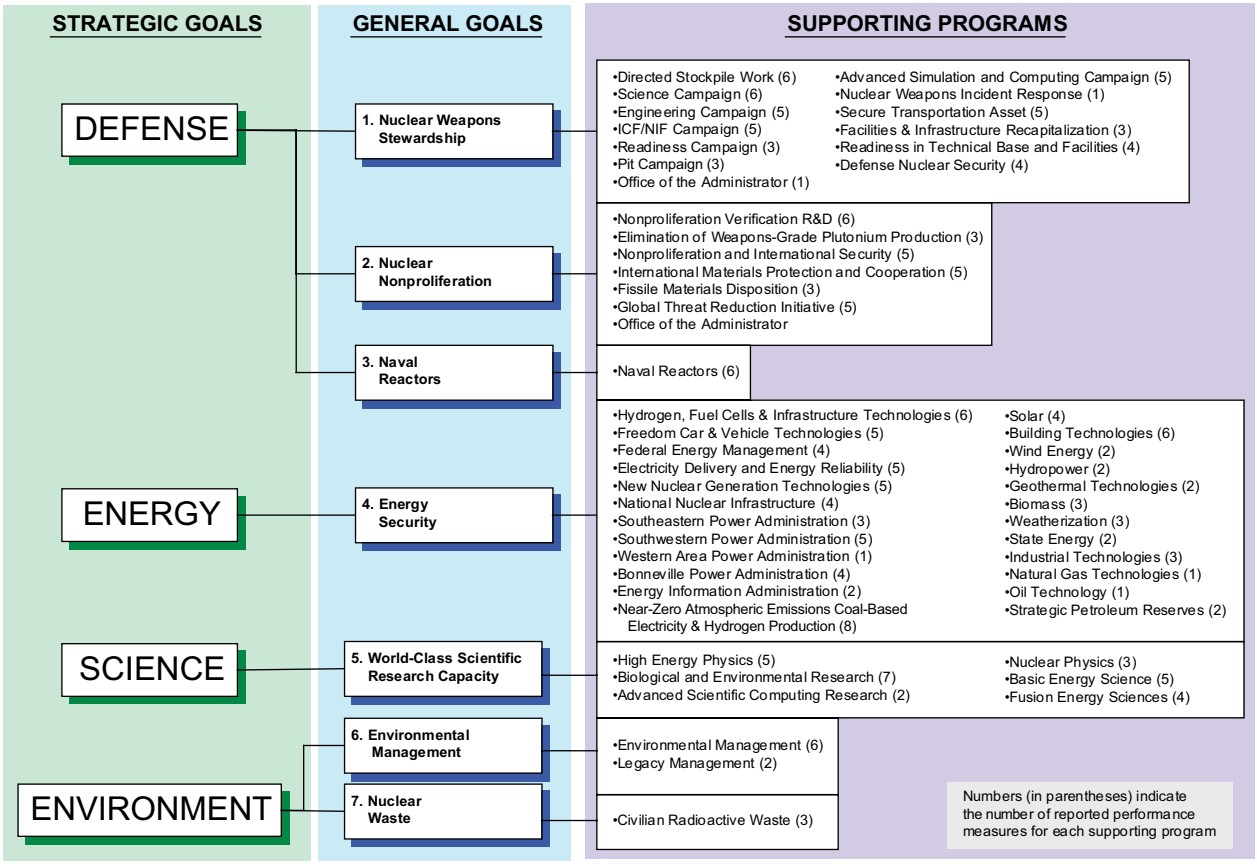
Internal Controls: Training and other forward-looking actions have helped the Department maintain a strong commitment to internal controls that serve to enhance validation and verification of program performance. For example, the Department provides quarterly training that addresses areas such as internal controls over performance measurement, the relevance and meaningfulness of performance targets, and the auditability and accuracy of reported performance results.

Automated Systems: Tracking and evaluating program performance is accomplished by an automated system known as *Joule*. The system allows for remote data entry of quarterly performance results by Departmental administrations and offices, as well as remote monitoring and oversight by Headquarters. Joule provides the end-of-year performance information that is included in the PAR.

External Independent Analysis: Program assessment is also conducted by OMB through use of its Program Assessment Rating Tool (PART). PART results reveal that a majority of the Department's assessed programs periodically initiate independent evaluations to gauge program effectiveness and to support program improvements. Departmental programs and activities are also reviewed and audited on an on-going basis by the Department's Office of Inspector General (http://www.ig.doe.gov/reports.htm) and the Government Accountability Office (http://www.gao.gov/index.html).

Management Reviews: Evaluating the effectiveness of established internal controls is a requirement of the *FMFIA Act of 1992*. Accordingly, the Department performs annual evaluations of its internal controls to provide reasonable assurance that they are working effectively; that program and administrative functions (including the accuracy and reliability of the reporting of performance results) are performed in an economical and efficient manner consistent with applicable laws; and that the potential for waste, fraud, abuse or mismanagement of assets is minimized.

— DOE Strategic and General Goals and Supporting Programs —



Program Assessment Rating Tool (PART)

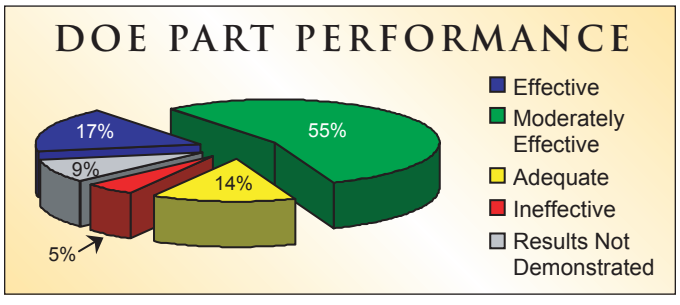
PART was developed by Office of Management and Budget (OMB) in 2002 as a key component for implementing the President's Management Agenda (PMA), particularly the Budget and Performance Integration initiative. PART grew out of the Administration's desire to assess and improve program performance so that the Federal Government can achieve better results. It provides Federal agencies with a disciplined tool for assessing program planning, management, and performance against quantitative, outcome-oriented goals. It is a tool to inform funding and management decisions aimed at making the program more effective. As an instrument for periodically evaluating the efficiency and effectiveness of Federal programs, PART enables managers to identify and rectify existing and potential problems associated with program performance.

The Department has completed official assessments for 94 percent of its available programs through 2006, putting it well-ahead of OMB's implementation schedule for the Federal Government. Of these, 72 percent are rated as "Moderately Effective" or "Effective." More information on PART scores and OMB's findings are available at http://www.whitehouse.gov/omb/expectmore/index.html.

PART provides a pathway for the Department and OMB to agree upon meaningful long-term and annual targets for each program. As programs are newly assessed and reassessed, program goals and annual performance targets will be consistent with long-term goals and annual goals tracked within PART.

Ultimately, the PART is designed to be an iterative process, capable of tracking the evolution of program performance over time through periodic reassessments. Key to this process are the recommendations that OMB develops during the assessment process to foster program improvement. Actions taken toward implementing PART recommendations are tracked by Offices and reported to OMB semi-annually. To see the Department's assessment of PART recommendations developed as part of the FY 2006 PART cycle (conducted during calendar year 2004) please refer to the previously identified website.

The on-going implementation and review of PART recommendations, coupled with the utilization of performance information derived from assessments and periodic reassessments, signify the PART as an integral process for planning and budget decision-making, as opposed to a set of one-time program evaluations. The Department will continue to make good use of this tool to inform funding and management decisions that will ensure mission success.



DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

— Defense —

— Meeting National Security Challenges —

To protect our national security by applying advanced science and nuclear technology to the Nation's defense.

One of the primary responsibilities of the Department is to enhance national security through the application of nuclear technology. To accomplish this goal the Department oversees:

- Maintenance and certification of the U.S. nuclear weapons stockpile;
- Development of responsive infrastructure that can adapt quickly to stockpile changes while still drawing down the stockpile of weapons excess to defense needs;
- Security of the nuclear complex, strengthening of international nuclear nonproliferation controls;
- Reduction in global danger from weapons of mass destruction; and
- Provision to the U.S. Navy of safe and effective nuclear propulsion systems.

The National Nuclear Security Administration (NNSA) is responsible for these activities critical to our national security.

General Goal 1: Nuclear Weapons Stewardship

Ensure that our nuclear weapons continue to serve their essential deterrence role by maintaining and enhancing the safety, security, and reliability of the U.S. nuclear weapons stockpile.

One of the most important responsibilities of the Secretary of Energy, in cooperation with the Secretary of Defense, is certifying to the President that the Nation's nuclear weapons stockpile is safe, secure and reliable. To do so, NNSA:

- Maintains a nuclear weapons stockpile surveillance and engineering capability;
- Refurbishes and extends the lives of selected nuclear systems; and
- Maintains a science and technology base, including the ability to restore the manufacturing infrastructure for the production of replacement weapons, should the need arise.

These capabilities ensure the vitality of our nuclear weapons without the need for underground nuclear testing.

— DEFENSE PERFORMANCE SCORECARD — ($ in millions)

General Goals and Scores	Program Costs FY 2006	Program Costs FY 2005	Programs and Scores		FY 2006 Budgetary Expenditures Incurred *	Performance of Annual Targets: Met (100%)	Not Met (≥ 80% but < 100%)	Not Met (< 80%)	Undetermined
1. Nuclear Weapons Stewardship	$6,841	$6,779	Directed Stockpile Work	Y	$1,497	2	3	1	0
			Science Campaign	G	$274	6	0	0	0
			Engineering Campaign	G	$280	5	0	0	0
			Inertial Confinement Fusion Ignition and High Yield (ICF) Campaign	Y	$632	4	1	0	0
			Advanced Simulation and Computing (ASC) Campaign	Y	$652	4	1	0	0
			Pit Manufacturing and Certification Campaign	Y	$285	2	1	0	0
			Readiness Campaign	G	$230	3	0	0	0
			Readiness in Technical Base and Facilities (RTBF)	G	$1,977	4	0	0	0
			Secure Transportation Asset (STA)	Y	$225	2	3	0	0
			Nuclear Weapons Incident Response (NWIR)	Y	$155	0	1	0	0
			Facilities & Infrastructure Recapitaliztion Program (FIRP)	G	$290	3	0	0	0
			Defense Nuclear Security	Y	$813	2	1	1	0
			Office of the Administrator **	G	$393	1	0	0	0
2. Nuclear Nonproliferation	$1,210	$1,191	Nonproliferation and Verification R&D	G	$309	6	0	0	0
			Elimination of Weapons-Grade Plutonium Production (EWGPP)	Y	$127	2	1	0	0
			Nonproliferation and International Security (N&IS)	G	$184	5	0	0	0
			International Nuclear Materials Protection and Cooperation	Y	$364	3	2	0	0
			Fissile Materials Disposition	G	$420	3	0	0	0
			Global Threat Reduction Initiative (GTRI)	Y	$0	3	2	0	0
			Office of the Administrator **	G	–	–	–	–	–
3. Naval Reactors	$782	$810	Naval Reactors	G	$986	6	0	0	0
Total Cost	$8,833	$8,780			$10,093	66	16	2	0

* Includes capital expenditures but excludes such items as depreciation, changes in unfunded liability estimates and certain other non-fund costs, and allocations of Departmental administration activities.
** Program goal and associated annual targets are shared by General Goal 1 and 2.

— How We Serve the Public

Each year NNSA certifies the readiness of 100 percent of the strategically deployed nuclear weapons, an activity necessitated when the United States stopped development and production of new nuclear warheads following the end of the Cold War and established a moratorium on nuclear testing. To this end, the Department adopted a science-based Stockpile Stewardship Program (SSP) that emphasizes development and application of greatly improved technical capabilities to assess the safety, security and reliability of existing nuclear warheads without the use of nuclear testing.

In FY 2006, NNSA announced the details of the Nuclear Weapons Complex 2030, a comprehensive plan to enhance our capability to respond to changing national and global security challenges. For the Nuclear Weapons Complex 2030, NNSA plans to employ a smaller, safer and more secure nuclear weapons stockpile that has assured reliability over the long term, and is backed by the industrial and design capabilities needed to respond to changing technical, geopolitical or military needs. This plan will facilitate the President's vision for the smallest stockpile consistent with our national security needs.

Nuclear Weapons Complex 2030

During FY 2006, NNSA started a number of major activities for the Nuclear Weapons Complex 2030. NNSA engaged two teams from the nuclear weapons labs—one from Los Alamos and another from Lawrence Livermore, both supported by Sandia National Laboratories—in a Reliable Replacement Warhead (RRW) design. If RRW is technically feasible, NNSA will seek authorization to proceed to engineering development and production. Also in support of the Nuclear Weapons Complex 2030, NNSA accelerated warhead dismantlements to enhance readiness of the remaining stockpile, assure other nations we are not building up our stockpile, and reduce the security risks associated with safeguarding retired weapons. NNSA established an office within Defense Programs both to drive change and lead nuclear weapons complex transformation. NNSA began managing risk more effectively in research and development (R&D) and production activities by employing cost-benefit analysis and risk-informed decisions. NNSA started distributed production centers of excellence at the current production complex to include transition of all R&D and production involving quantities of plutonium (except sub-critical experiments at the Nevada Test Site) to a single site—a consolidated plutonium center—in the early 2020s.

Reliable Replacement Warhead

The concept for RRW is in contrast with the Cold War design constraints that maximized yield to weight ratios. RRW will facilitate design replacement components that are easier to manufacture; are safer and more secure; are less environmentally dangerous, and contain fewer reactive and unstable materials; and increased design margins thus ensuring long-term confidence in reliability and a correspondingly reduced chance for conducting a nuclear test for stockpile confidence. RRW will provide leverage for a more efficient and responsive infrastructure and opportunities for a smaller stockpile. During the next decade or more needed to complete the transition to an RRW, legacy warheads must be supported through ongoing life extension programs.

Responsive Infrastructure

The envisioned 2030 infrastructure to support the stockpile will have the following characteristics:

- Strengthened, but consolidated R&D infrastructure;
- Modernized production complex with a consolidated plutonium center and increased production throughput;
- Consolidated nuclear materials at fewer sites and fewer locations within sites; and
- Streamlined business practices, including a more effective approach to managing risks.

NNSA undertook several steps in FY 2006 to start the transformations required for the Responsive Infrastructure. Major scientific and experimental facilities, such as the National Ignition Facility (NIF) and the Dual-Axis Radiographic Hydrotest (DARHT) facility are being converted into national, shared user facilities managed to benefit the entire complex and to eliminate redundant capabilities and programs reflected in today's complex. The NIF is designed to create and measure extreme temperature and pressure conditions of a simulated nuclear explosion. DARHT is designed to provide x-ray images of weapons implosion processes, supporting weapons certification and assessment.

Inside Out: The interior of the National Ignition Facility target chamber at the Lawrence Livermore National Laboratory.

— *Performance Against Key Targets*

NNSA ensures that the nuclear warheads and bombs in the U.S. nuclear stockpile are safe, secure, and reliable by:

- Developing solutions to extend weapon life and correcting potential technical issues;
- Conducting scheduled warhead/bomb maintenance;
- Dismantling warheads/bombs retired from the stockpile;
- Conducting evaluations to certify warhead/bomb reliability and to detect/predict potential weapon fixes, mainly from aging;
- Producing and refurbishing warheads/bombs to install the life extension solutions and other fixes; and
- Researching advanced concepts to serve their essential deterrence role by maintaining and enhancing the safety, security, and reliability of the U.S. nuclear weapons stockpile.

During FY 2006, NNSA:

- Assured that 100 percent of the nuclear warhead stockpile is safe, secure, reliable and available. This activity, conducted jointly with the Department of Defense (DoD), is critically important to U.S. national security in the absence of underground nuclear weapon testing, which has been banned since 1992.
- Completed 34 and 37 percent of the life extension programs for the B61-7/11 for F15 and F16 fighter jets and W76-1 for the Trident submarine, respectively. Extending the life of existing weapons has been a cost effective way to provide nuclear security.
- Completed 70 percent of the DARHT facility to provide data required to certify the safety and reliability of the U.S. nuclear weapons stockpile.
- Completed 88 percent of the construction of the 192-laser beam NIF, as targeted. The NIF also provides data required to certify the safety and reliability of the U.S. nuclear weapons stockpile.
- Achieved a maximum individual computing production platform of 94 trillion floating point operations per second. This capability, part of the Advanced Simulation and Computing Campaign, will ultimately help conduct nuclear stockpile certification for all weapons systems by using highly complex, three dimensional simulations.
- Completed 97 percent of the Tritium Extraction Facility within the cost estimate, as targeted. This facility is designed to extract and refresh tritium in a nuclear weapon.
- Eliminated $118 million of deferred maintenance within the nuclear weapons complex as part of the Facilities and Infrastructure Recapitalization Program, exceeding the annual target. To date, approximately 30 percent of the $1.2 billion deferred maintenance baseline (FY 2003) has been addressed.
- Provided additional personnel, training and equipment for responding to and mitigating nuclear and radiological incidents worldwide. The program overcame personnel and equipment shortages to deliver an 82 percent Emergency Operations Readiness Index in FY 2006.
- Completed 93 secure convoys of special nuclear material to meet DOE, DoD, and other customer requirements, using advanced equipment and highly trained personnel. In response to the deferral of DOE's Environmental Management work until FY 2007, NNSA coordinated with other customers to increase shipments in order to avoid future backlogs.

— *External Factors*

The following external factors could affect the Department's ability to achieve this goal:

Technology: Technological development is inherently unpredictable. The discovery of an insurmountable scientific or engineering obstacle in the science-based stockpile stewardship program could force the resumption of underground nuclear testing.

Nuclear Threats: Changes in the nuclear threats posed to the United States could require changes to our nuclear weapons stewardship programs.

General Goal 2: Nuclear Nonproliferation

Provide technical leadership to limit or prevent the spread of materials, technology, and expertise relating to weapons of mass destruction; advance the technologies to detect the proliferation of weapons of mass destruction worldwide; and eliminate or secure inventories of surplus materials and infrastructure usable for nuclear weapons.

To implement its mission, NNSA:

- Secures nuclear materials, nuclear weapons and radiological materials at potentially vulnerable sites in Russia and elsewhere;
- Reduces quantities of nuclear and radiological materials;
- Bolsters border security overseas;
- Strengthens international nonproliferation and export control regimes;
- Downsizes the nuclear weapons infrastructure of the former Soviet Union (FSU);
- Mitigates risks at nuclear facilities worldwide; and
- Conducts cutting-edge nonproliferation and national security R&D.

— How We Serve the Public

NNSA reduces the threat posed by the proliferation of fissile material by helping to secure domestic and foreign stockpiles of weapons-grade material. In addition, NNSA oversees the dismantlement, destruction, and ultimate disposition of weapons including the down-blending of highly-enriched uranium (HEU) or the burning of plutonium as mixed oxide (MOX) fuel in nuclear plants. NNSA further reduces risk through controlling exports of nuclear-related technologies, monitoring borders for the movement of fissile materials, and ensuring the employment of foreign nuclear-related scientists and engineers in other more productive pursuits. A number of FY 2006 activities directly serve the public.

- In support of the Global Nuclear Energy Partnership (GNEP), launched in February 2006, NNSA will coordinate with DOE's Office of Nuclear Energy on integrating safeguards and security protocols into the development of advanced fuel cycle technologies. NNSA will support the maturation of incentives that contribute to GNEP, including fuel cycle services, international cooperation on safeguards, security and peaceful nuclear uses, and improved international nonproliferation controls.
- Also during FY 2006, site preparation began on the MOX Fuel Fabrication Facility at the Savannah River Site. The MOX facility will convert surplus weapon-grade plutonium to MOX fuel used for reactors, thus eliminating its availability for nuclear weapons and reducing the threat of terrorists or rogue nations obtaining nuclear weapon materials.
- Other nonproliferation activities include NNSA's successful "Megaports" initiative which installs sophisticated radiation detection equipment at many of the world's international ports. This initiative, in conjunction with the Second Line of Defense program, provides detection systems at vulnerable seaports, airports and other land border crossings worldwide in order to minimize the risk of nuclear proliferation and terrorism through detection and deterrence of illicit trafficking in plutonium, HEU and other radioactive materials at international borders. NNSA has made steady progress on the Megaports Initiative since the program's beginning in FY 2003. As of 2006, the Megaports initiative is currently operational in six countries: Greece, the Bahamas, Sri Lanka, the Netherlands, Singapore and Spain. NNSA is at various stages of implementing the program in the following countries: Belgium, China, Dominican Republic, Dubai, Egypt, Honduras, Israel, Jamaica, Oman, the Philippines, Taiwan and Thailand.

Uranium: Highly Enriched Uranium (HEU) is down-blended with other forms of uranium to produce Low Enriched Uranium (LEU), suitable for commercial, civilian purposes.

— Performance Against Key Targets

The Department draws from its world-class scientific and technical expertise, and leverages existing nonproliferation programs to identify and prioritize vulnerable materials, remove or secure such materials, convert research and test reactors, and take any other steps necessary to meet changing threats. Much of NNSA's nonproliferation work is conducted abroad. Uncertainties in these foreign environments impact the completion of NNSA's annual goals, most notably the construction of fossil fuel plants to eliminate weapons grade plutonium production in Russia and the FSU, and completion of Second Line of Defense sites in Russia and other regions of concern.

During FY 2006, NNSA:

- Completed 50 percent of the refurbishment of a fossil fuel plant in Seversk, Russia. When complete, this plant – along with the construction of another plan in Zheleznogorsk, Russia – will provide an alternative fossil fuel power source required for shutdown of three nuclear reactors, which currently produce up to 1.2 metric tons of weapons-grade plutonium annually.
- Progressed on the facility and equipment design, construction, and cold start-up activities for the U.S. MOX facility. As planned, 17 percent of the work associated with this facility was completed by the end of FY 2006. MOX facilities support nuclear nonproliferation by reducing the supply of fissile material.
- Installed a cumulative 104 Second Line of Defense sites including 6 Megaport sites, as targeted. NNSA provides assistance to foreign governments to identify and intercept illegal shipments of weapons materials by working in Russia and other regions of concern.
- Completed 24 percent of the facility design, construction and cold start-up activities for the Plutonium Disassembly and Conversion Facility.

This facility will provide the United States with the capability to disassemble surplus nuclear weapons pits and convert the resulting plutonium metal to plutonium oxide, reducing the supply of fissile material.

- Employed over 7,000 displaced Russian and FSU experts in FY 2006 through grants or private-sector jobs, as planned. Employing skilled nuclear-trained professionals in endeavors such as medical technology helps prevent the spread of sensitive knowledge to rogue states.

— External Factors

The following external factors could affect our ability to achieve this goal:

Close Cooperation with Russia: Cooperation between the United States and Russia has made it possible to make great strides in securing and eliminating inventories of surplus materials. A close relationship is necessary for progress to continue.

International Atomic Energy Agency: This agency is essential to the success of our efforts to control nuclear proliferation. It is uncertain whether the agency will receive the necessary funding and show the necessary leadership to member countries. Close monitoring of this situation will continue.

Technology: Technological development is uncertain and unpredictable. Our efforts to develop nuclear weapons/material detection technology may be more or less successful than predicted, which would have a corresponding positive or negative impact on our efforts.

General Goal 3: Naval Reactors

Provide the Navy with safe, militarily effective nuclear propulsion plants and ensure their continued safe and reliable operation.

Naval nuclear propulsion plants currently power about 40 percent of the Navy's principal combatants. The NNSA will continue to provide the Navy and DoD with reliable and militarily effective nuclear power through the Naval Reactors program. New technologies, methods, and materials to support reactor plant design for future generations of submarines, aircraft carriers, and other combat ships are also developed under this program.

USS Ronald Reagan: The nuclear-powered aircraft carrier, USS RONALD REAGAN (Carrier Vessel Nuclear (CVN) 76), being welcomed for the first time in her new homeport, San Diego, California.

— How We Serve the Public

NNSA's Naval Reactors program serves the public by providing the Navy with safe, militarily effective nuclear propulsion plants and ensuring their continued safe and reliable operation. This program, which supports the nuclear powered submarines and carriers around the world, remains a vital part of the national security mission and the Global War on Terrorism.

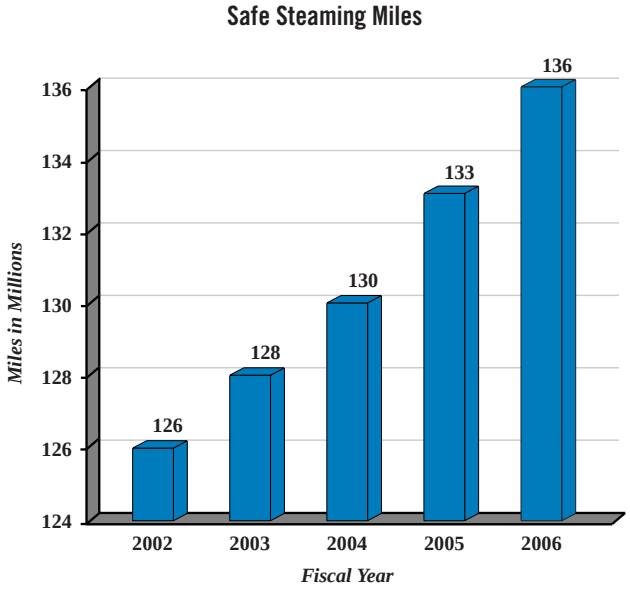
— Performance Against Key Targets

During FY 2006, the NNSA:

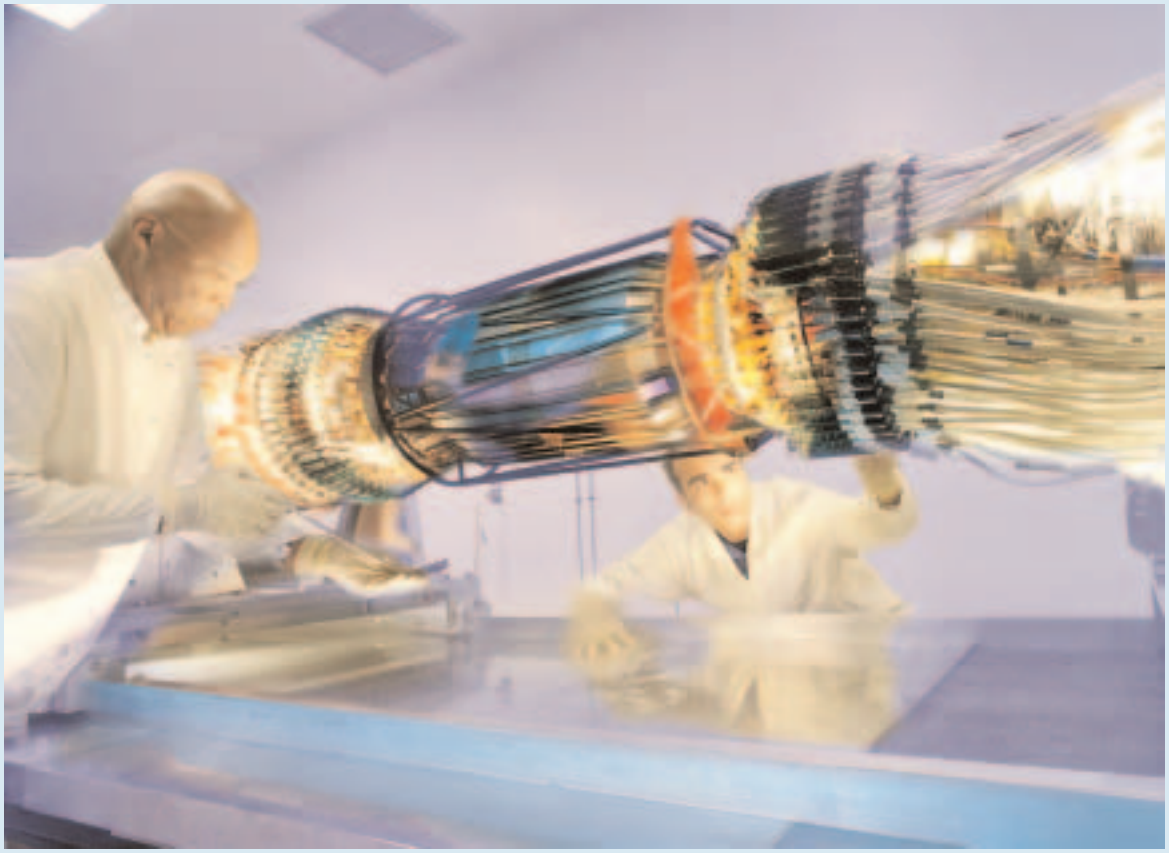
- Achieved 2.3 million miles of safe steaming in nuclear-powered ships and the design of new reactors. Since its inception, the Naval Reactors program has achieved 135.7 million miles of safe nuclear propulsion, as shown in the chart below.
- Completed 75 percent of the next generation aircraft carrier reactor design (referred to as the CVN 21). The CVN 21 nuclear propulsion plant will have increased core energy, nearly three times the electrical plant generating capacity, and will require half of the Reactor Department sailors, compared to today's aircraft carriers.

— External Factors

Currently, no external factors appear to impact the ability to achieve this General Goal. However, given the unique nature of the Naval Reactor's responsibilities, commitments to both DOE and the U.S. Navy must be considered at all times. Therefore, any external factor seriously affecting either organization's policies may have an impact on the Program's ability to achieve this goal.



Cumulative Safe Steaming Miles (in millions) for Nuclear Powered Ships



— Energy —

— Investing in America's Energy Future —

To protect our national and economic security by promoting a diverse supply and delivery of reliable, affordable, and environmentally sound energy.

The demand for energy in the U.S. is rising much faster than the projected increase in domestic energy production. The shortfall between domestic energy demand and domestic supply is projected to increase nearly 50 percent by 2020. That projected shortfall can be made up in only three ways – import more energy, improve energy conservation and efficiency, and/or increase domestic supply.

The Administration considered these options in its development of the National Energy Policy (NEP). It concluded that increased dependence on oil imports from volatile regions of the world would jeopardize our national and economic security. As imports rise, so does our vulnerability to shortages and disruptions. For that reason, the Administration resolved to take steps to improve energy conservation and efficiency, increase domestic energy production, and increase the reliability and security of imports in order to avoid increased dependence on imports from volatile regions of the world.

The President signed the *Energy Policy Act* (EPACT) into law in August 2005. This law is the first comprehensive energy plan in more than a decade. It encourages energy efficiency and conservation, promotes alternative and renewable energy sources, reduces our dependence on foreign sources of energy, increases domestic production, modernizes the electricity grid and encourages the expansion of nuclear energy.

Science and technology are the Department's principal tools for achieving the goals of the NEP and the EPACT of 2005. The Department invests in high-risk, high-value energy R&D that the private sector alone would not or could not develop in a market-driven economy.

— Energy Performance Scorecard — ($ in millions)

General Goal and Score	Program Costs FY 2006	Program Costs FY 2005	Programs and Scores		FY 2006 Budgetary Expenditures Incurred *	Performance of Annual Targets: Met (100%)	Not Met (≥ 80% but < 100%)	Not Met (< 80%)	Undetermined
4. Energy Security	$6,832	$6,617	Hydrogen, Fuel Cells and Infrastructure Technologies Program	G	$104	6	0	0	0
			Freedom Car & Vehicle Technologies	Y	$175	4	0	1	0
			Solar	G	$309	4	0	0	0
			Building Technologies	G	$75	6	0	0	0
			Wind Energy	Y	$41	1	1	0	0
			Hydropower	G	$2	2	0	0	0
			Geothermal Technologies Program	G	$32	2	0	0	0
			Biomass	G	$110	3	0	0	0
			Weatherization Program	Y	$248	2	1	0	0
			State Energy Program	G	$113	2	0	0	0
			Federal Energy Management Program	G	$6	4	0	0	0
			Industrial Technologies Program	G	$80	3	0	0	0
			Near-Zero Atmospheric Emissions Coal-Based Electricity & Hydrogen Production	G	$413	8	0	0	0
			Natural Gas Technologies	G	$53	1	0	0	0
			Oil Technology	G	$60	1	0	0	0
			Strategic Petroleum Reserve (SPR)	G	$313	2	0	0	0
			New Nuclear Generation Technologies	G	$243	5	0	0	0
			National Nuclear Infrastructure	G	$214	4	0	0	0
			Electricity Delivery and Energy Reliability	G	$180	5	0	0	0
			Southeastern Power Administration	Y	$47	1	0	2	0
			Southwestern Power Administration	Y	$86	4	1	0	0
			Western Area Power Administration	G	$659	1	0	0	0
			Bonneville Power Administration	G	$4,779	4	0	0	0
			Energy Information Administration	G	$91	2	0	0	0
Total Cost	$6,832	$6,617			$8,433	77	3	3	0

* Includes capital expenditures but excludes such items as depreciation, changes in unfunded liability estimates and certain other non-fund costs, and allocations of Departmental administration activities.

Fill Up: President George W. Bush at a Washington D.C. Shell Station, the first integrated gasoline/hydrogen station in North America. The Department's Hydrogen "Learning Demonstration," brings together automobile makers and energy companies to test fuel cell vehicles and hydrogen fueling systems in real-world conditions.

General Goal 4: Energy Security

Improve energy security by developing technologies that foster a diverse supply of reliable, affordable, and environmentally sound energy by providing for reliable delivery of energy, guarding against energy emergencies, exploring advanced technologies that make a fundamental improvement in our mix of energy options, and improving energy efficiency.

The programs supporting this General Goal follow through on the President's promise for a strong, secure economy, and more energy-independent future. Investments are being made that will benefit the Nation today and in the future, including expanding energy supplies, assessing and addressing energy infrastructure vulnerabilities, and developing energy assurance activities consistent with the NEP and EPACT.

The Department's technologies draw on all of the Nation's available resources: renewable energy sources (including hydropower, wind, solar, bioenergy and geothermal), nuclear energy, oil, natural gas, coal, and reductions in demand through conservation and energy efficiency technologies and processes. The Administration believes it is not the role of the Federal Government to choose the energy sources for the country. Instead, its role is to help the private sector develop technologies capable of providing a diverse supply of energy, and to allow the market to decide how much of each energy source is actually used. Diversity of energy sources can help provide stability and guard against price spikes, helping to ensure the Nation's energy security.

— Energy Efficiency and Renewable Energy

The Department's Office of Energy Efficiency and Renewable Energy's (EERE) mission is to strengthen America's energy security, environmental quality, and economic vitality through public-private partnerships with the private sector, state and local governments, DOE national laboratories and universities. These partnerships seek to promote energy efficiency and productivity, bring clean, reliable and affordable energy technologies to the marketplace, and make a difference in the everyday lives of Americans by enhancing their energy choices and quality of life.

— How We Serve the Public

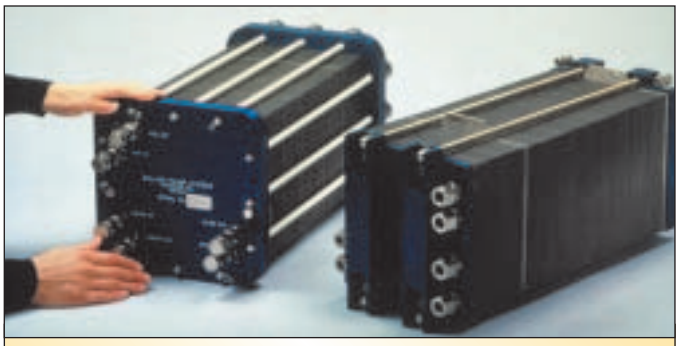
Renewable energy technologies hold tremendous promise in moving the Nation toward sustained, low emission electricity, hydrogen supply and affordable biofuels. Government-sponsored R&D efforts over recent decades have been very successful in helping to lower costs and improve the reliability of renewable energy technologies, and more can be achieved with robust research and development in the future. The Department's programs address both the supply and demand sides of the energy security equation in three general areas:

- Replacement of Conventional Fuels – The Vehicle Technology and Hydrogen programs work together through the FreedomCAR Partnership and Hydrogen Fuel Initiative to develop technologies that have the potential to significantly reduce or virtually eliminate the use of petroleum for transportation. During FY 2006, DOE supported the installation of four hydrogen refueling test stations: in Jamestown, Florida; and in Oakland, San Francisco and Sacramento, California. These learning demonstration projects will help identify major technical and economic hurdles in electrolyzer technology and distributed hydrogen production that must be overcome to make these technologies a reality.
- Clean, Affordable & Renewable Energy Sources – The Solar Energy Technology R&D program works to provide clean, reliable, affordable solar electricity for the Nation through its research programs in photovoltaic energy systems, concentrating solar power systems and solar hot water systems. Photovoltaic (PV) technology, for example, makes use of the abundant energy from the sun to convert sunlight directly into electricity for residential and commercial buildings, including power for lights and air conditioning. The Department has continued to demonstrate greater increases in conversion efficiency, and is working to drive down production costs for PV modules.
- Energy Efficiency and Conservation – The Weatherization and Intergovernmental Program is the central program for deployment of energy-efficient and renewable energy technologies. The Program funds energy projects, provides technical assistance, delivers weatherization assistance to low-income families in the United States, and participates in energy and economic development programs overseas. In recent years, the Weatherization Assistance Program has improved the energy efficiency of about 100,000 low-income homes each year; DOE disburses funds to states, Indian tribes, and the District of Columbia on a formula basis and these entities award funding to local agencies.

— Performance Against Key Targets

During FY 2006, the Department:

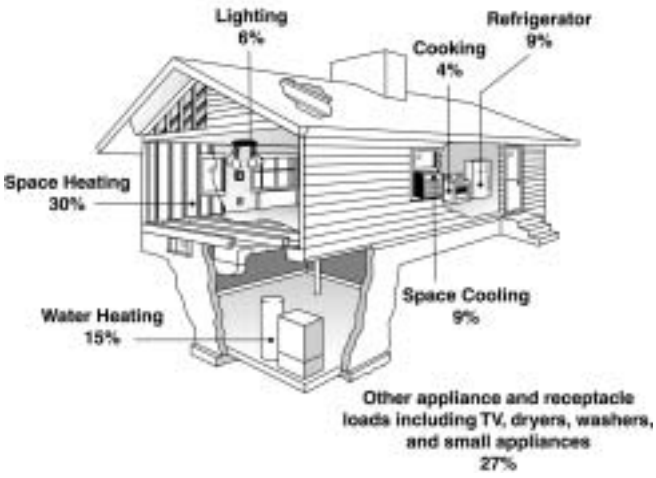
- Achieved a modeled technology cost of $110 per kilowatt (kW) for a hydrogen-fueled, 80 kilowatt fuel cell power system, meeting the annual target. The Hydrogen, Fuel Cells and Infrastructure Technologies program is conducting R&D to develop hydrogen production, storage, delivery and fuel cell technologies to the point where they are cost and performance competitive and are used by the Nation's transportation, stationary and portable power industries.



Fuel Cell: A fuel cell uses the chemical energy of hydrogen to produce electricity and water, cleanly and efficiently.

- Reduced to $750 the cost of a high power, light vehicle lithium ion battery, meeting the annual target. The Vehicle Technologies program goal is to develop technologies that enable cars and trucks to become highly efficient through improved hybrid power technologies, cleaner domestic fuels, and lightweight materials, and to be cost and performance competitive. Manufacturers and consumers could use these technologies to help the Nation reduce both energy use and greenhouse gas emissions, thus improving energy security by reducing dependence on oil.
- Verified, through laboratory testing, the conversion efficiencies of commercial production of 14 percent efficient crystalline silicon modules and 11.7 percent efficient thin film modules, meeting the annual target. Improving conversion efficiencies, which represents the percentage of light energy from the sun that is actually converted into electricity, is one way to improve the performance of solar energy systems. The Solar program goal is to reduce development, production and installation costs to competitive levels. This could accelerate large-scale usage across the Nation and contribute to a clean, reliable and flexible U.S. energy supply.
- Completed R&D activities that resulted in meeting or exceeding the following annual targets: a 4.2 cents/kilowatt hour (kWh) cost of energy for large land-based low wind speed technology systems, 9.3 cents/kWh for large offshore wind systems, and 11-16 cents/kWh for large offshore wind systems (under 100 kW), all based on a fixed technology baseline (which differs from current market conditions). The technology acceptance activities led to partial completion of its goal to help facilitate installations of wind energy in 16 states. The Wind Energy Technologies program leads the Nation's R&D efforts to improve wind energy technologies that enhance domestic economic benefits from wind power development.

Energy Use in a Low-Income Household



Since 1999: DOE has been encouraging the network of weatherization providers to adopt the whole-house approach whereby they attack residential energy efficiency as a system rather than as a collection of unrelated pieces of equipment.

- Weatherized over 97,300 homes with DOE funds, and weatherized an additional 100,000 homes using leveraged (combination of DOE, other Federal, state and local) funds, meeting the annual target. Established performance criteria and quality standards and a procedure under which a manufacturer can request that an item be treated as a renewable energy system eligible for the Weatherization Assistance Program, meeting an EPACT of 2005 milestone.
- Continued its commitment to the appliance and equipment standards program by aggressively addressing the backlog of rulemakings. The Department published the standards required for support of the EPACT, regarding energy conservation standards for electric distribution transformers, commercial unitary air conditioners and heat pumps, to include residential furnaces and boilers.

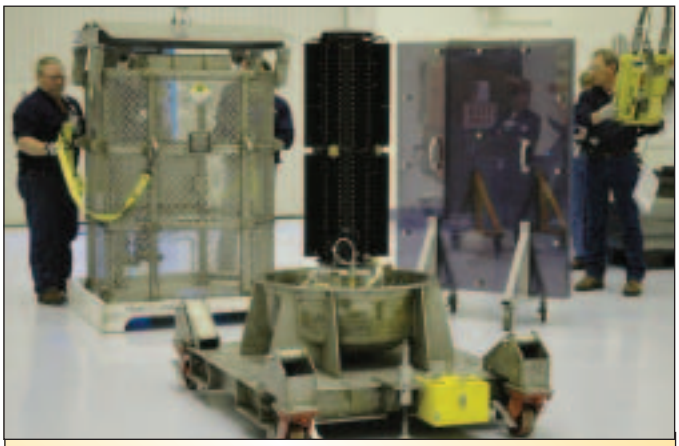
— Nuclear Energy

The Department's Office of Nuclear Energy (NE) leads the development of new nuclear energy generation technologies and initiatives to meet energy and climate goals and advanced nuclear reactor and fuel cycle technologies that maximize energy from nuclear fuel, while maintaining and enhancing the national nuclear infrastructure.

— *How We Serve the Public*

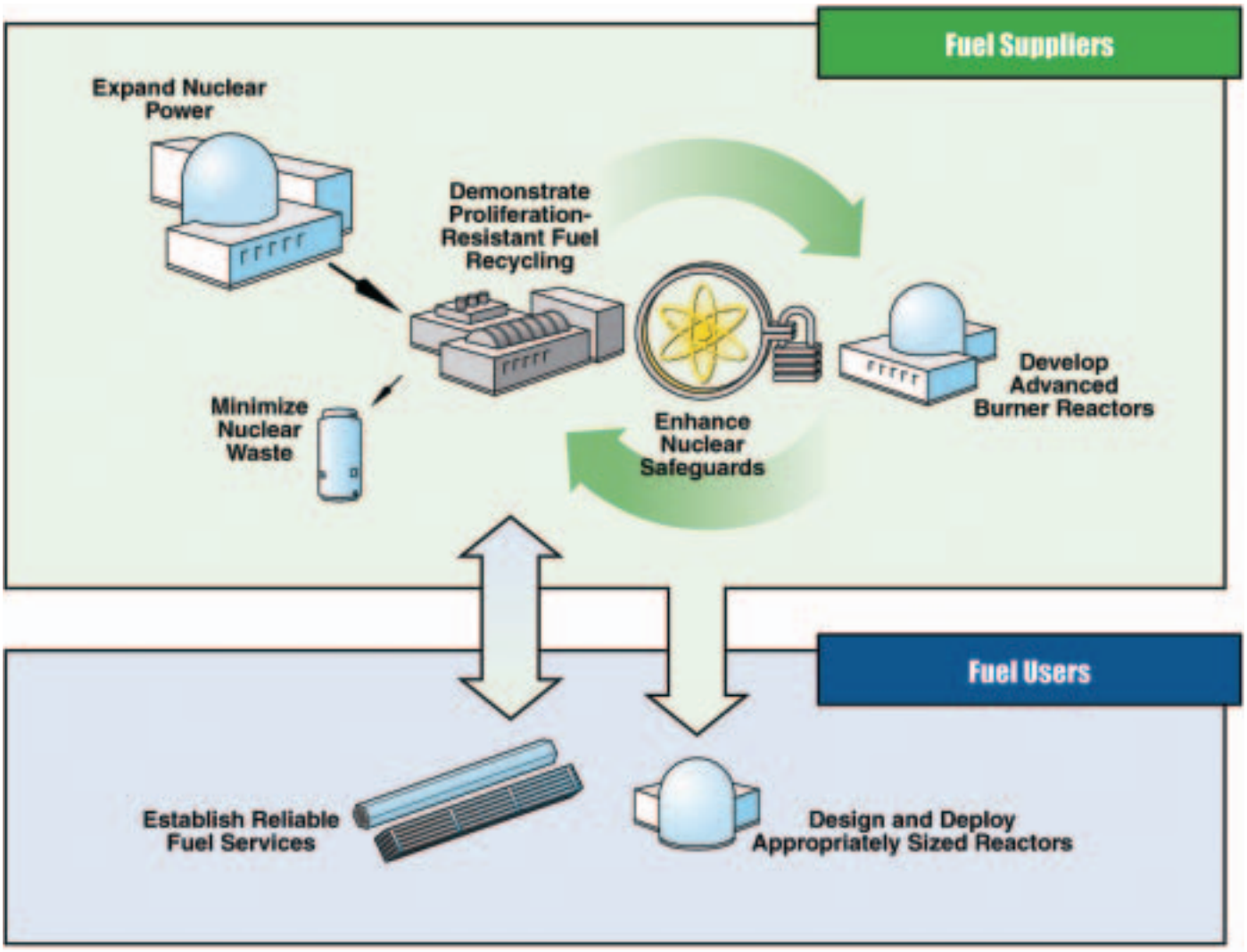
The Department focuses on both the present and future nuclear energy needs of the country through two general activities: (1) development of new nuclear technologies and (2) operation and maintenance of the Department's nuclear infrastructure.

Nuclear Power: The Department is working with industry and the Nuclear Regulatory Commission to lower the risks associated with the deployment of new nuclear power plants in the United States.



Going to Pluto: NE supplied the Radioisotope Thermoelectric Generator (RTG) for the New Horizons Spacecraft, which will be the first spacecraft to visit Pluto and its moon Charon.

- Planned benefits from DOE's R&D activities include the promotion of nuclear power generation in the United States, advances in waste treatment processes that yield reductions in the volume and long-term toxicity of high level waste from spent nuclear fuel, and provision of technologies to recover the energy content in spent nuclear fuel while enhancing proliferation resistance.
- As part of President Bush's Advanced Energy Initiative, Secretary of Energy Bodman launched the Global Nuclear Energy Partnership (GNEP) in February 2006. The goal of GNEP is to enable expansion of nuclear energy worldwide, in an economical and carbon-free manner, by demonstrating and deploying new advanced technologies using a nuclear fuel cycle that enhances proliferation resistance. Coordinated by NE, GNEP includes the participation of several DOE organizations, including the NNSA and the Office of Civilian Radioactive Waste Management.



Global Nuclear Energy Partnership (GNEP): GNEP focuses on expanding nuclear power and establishing partnerships between fuel suppliers and fuel users.

- Additional work includes maintenance and operation of the Department's nuclear infrastructure required to support facilities dedicated to advanced nuclear energy research; to meet demand for isotopes used in medicine, scientific research and homeland security; and to provide radioisotope power systems for space exploration and national security.

— *Performance Against Key Targets*

During FY 2006, the Department:

- Focused on R&D activities associated with materials and fuels testing necessary for determining the design of the next generation nuclear power plant. This work moves the program closer to meeting the requirements of the EPACT of 2005.
- Focused on R&D activities associated with thermo-chemical processes designed to demonstrate the viability of using heat and/or electricity from a Generation IV nuclear energy systems with the goal of producing hydrogen at a price that is cost competitive with other alternative fuels. Successful achievement of FY 2006 milestones directly contribute to the goals of the Department's Hydrogen Posture Plan.
- Focused on R&D activities associated with advanced separations and fuels testing and initiating pre-conceptual design work on an advanced fuel cycle facility. Successful achievement of the target increases our understanding of the nuclear fuel cycle. These activities directly contribute to the GNEP.
- Focused on activities associated with achieving Nuclear Regulatory Commission certification of two advanced nuclear reactor designs and continued work with industry on combined construction and operating licenses for new nuclear power plants. Achievement of the annual target moves the program closer toward enabling an industry decision to deploy new nuclear power plants by 2010.

- Maintained operability of key Departmental nuclear facilities to enable accomplishment of NE and other Departmental program milestones. Successful achievement of the annual target represents an assurance that the Department's unique nuclear infrastructure is available to support national priorities.

— Fossil Energy

The Department's fossil energy's activities are designed to ensure that the economic benefits from moderately priced fossil fuels are compatible with the public's expectation for exceptional environmental quality and reduced energy security risks.

— *How We Serve the Public*

Fossil fuels are an important part of the U.S. and global energy mix. The Nation relies on fossil fuels for about 85 percent of the energy it consumes and forecasts indicate that this percentage will experience little change through 2030. The current U.S fossil research portfolio is structured to address this forecast, providing a fully integrated program with mid- and long-term market entry offerings. The principal goal is the demonstration of a near-zero atmospheric emissions, coal-based electricity generation plant that has the ability to co-produce low-cost hydrogen. The mid-term manifestation of that goal is expected to be the FutureGen project, a $1 billion venture with industry and international partners that will combine electricity and hydrogen production. This project will use a combination of efficiency improvements and carbon capture and storage to eliminate virtually all emissions of air pollutants, including sulfur dioxide, nitrogen oxides, mercury and carbon dioxide. This prototype power plant will prove the most advanced technologies, such as hydrogen fuel cells.

Fossil energy also advances a technology research and development program to resolve the environmental supply and reliability constraints of producing oil and natural gas resources. The Department also maintains the Strategic Petroleum Reserve, which guards against the adverse economic impact of a major petroleum supply interruption to the United States, helping to ensure the Nation's energy security.

Fuel Cells: General Electric (GE) prototype for radial stacked planar solid oxide fuel cells.

— *Performance Against Key Targets*

During FY 2006, the Department:

- Conducted initial pilot scale slipstream field testing of technology capable of 90 percent mercury removal. The maximum removal rate of 96 percent was achieved during a month long test using lignite and bituminous and subituminous also achieved greater than 90 percent removal in initial test. Field testing is a critical step toward developing high performance mercury removal technology that help enable coal fired power plants to economically reduce emissions.
- Initiated construction and testing of advanced gas separation technologies. In FY 2006, the Gasification Technologies program moved gas separation, including ceramic membrane, hydrogen separation, carbon dioxide hydrate formation and ceramic membrane air separation, closer to commercialization, which will eventual lead to capital cost reductions of $60-$80 per kW from the baseline of $1,200/kW for Integrated Gasification Combined Cycle systems and efficiency improvements of greater than one efficiency point.
- Performed pilot-scale testing and laboratory testing of different carbon dioxide capture technologies. This testing will lead to significant improvement in cost and performance, and initiate field sequestration activities within the regional partnerships leading to future sequestration tests.
- Improved cell performance and reliability through reduction of area specific resistance and interconnect reliability improvement to aid the Solid State Energy Conversion Alliance Industry Teams in achieving technical requirements and cost goals.
- Developed industry standards for the design and operation of a commercial-scale advanced hydrogen separation system and completed screening tests of a pre-engineering scale prototype unit to validate design parameters.

— Electricity Delivery and Energy Reliability

The Department leads national efforts to modernize the electric grid, enhance security and reliability of the energy infrastructure, and facilitate recovery from disruptions to the energy supply through its Office of Electricity Delivery and Energy Reliability. The Department performs critical functions, by working with industry, state and local governments, national laboratories and other entities to: (1) develop advanced technologies to improve the reliability of energy delivery (2) guard against energy emergencies and (3) improve energy reliability and efficiency.

— *How We Serve the Public*

The Department's electricity delivery and energy reliability activities benefit the public in several areas. In the field of R&D, work is

HTDS: High Temperature Desulfurization System installed at the Eastman Chemical Company.

conducted with national labs, private industry, and university and research institutions to develop technologies that will facilitate the modernization of the Nation's electricity delivery system. The Department also analyzes the condition and operation of the energy infrastructure to identify critical transmission bottlenecks, chokepoints, market failures and other issues that are barriers to modernizing and upgrading the national electric grid. Finally, the Department responds to energy emergencies, helps protect against terrorist attacks on the energy infrastructure and assists all levels of government and the private sector recover from energy supply disruptions. In 2005/2006 the Department responded to meet the following public needs:

- Responding to Hurricanes Katrina and Rita: The Department staff accelerated vital infrastructure repairs, facilitated restoration of essential services, enabled resumption of port operations, and coordinated fuel delivery and ensured fuel distribution. While the Department's recovery role was widely applauded, several steps to improve upon response capabilities for FY 2006 and future years have been implemented.
- Securing the Electric Grid: The Department focuses on developing advanced technologies to secure vulnerable cyber assets in the energy sector. Power system reliability depends on extensive use of Supervisory Control and Data Acquisition (SCADA) networks and distributed control systems. Control systems are used throughout the U.S. energy sector to monitor and manage electricity flows in transmission and distribution lines, and oil and gas flows in pipelines. SCADA networks combine computers, applications and sensors that perform the key functions that keep the power flowing for the essential appliances we rely on for refrigeration, lighting, heating, cooling and communication. While all energy sectors have stepped up protective measures, perhaps no area is more vulnerable to malicious cyber and physical attack than these interconnected systems. To develop better control system technology for the future, the Department partnered with industry to create a Roadmap to Secure Control Systems in the Energy Sector in January 2006. The roadmap identified critical challenges and priorities with input from leading industry experts. This document lays out a groundbreaking strategy and vision to develop control systems that can survive an intentional cyber attack without loss of critical functions.

Research and development efforts in the area of control systems security have resulted in:

- Development of cyber assessments and recommendations for reducing vulnerabilities of three SCADA/Energy Management Systems systems manufactured by major oil and gas sector producers;
- Partnerships with energy sector end-users to test and assess control systems cyber vulnerability using a Discovery Tool developed by the U.S. Department of Homeland Security; and
- Training for over 300 end-users on how cyber attacks are generated and how attacks can be diminished.

— *Performance Against Key Targets*

During FY 2006, the Department:

- Worked jointly with major electric utility companies in Albany and Long Island, New York and Columbus, Ohio to pilot a new high-temperature superconductive power line on the electric grid, in an effort to modernize electricity transmission and distribution in highly congested areas with high-energy demands. After more than 1,240 hours of testing the new lines, the results showed a 50 percent reduction in loss of service lines which result in the ability to generate more reliable and efficient electric current to support more customers.
- Worked to prevent another blackout, similar to that in August 2003 which affected over 50 million customers. The Department and its partners are implementing the Eastern Interconnection Phasor Project. This project consists of developing and deploying a robust, widely-available, real-time monitoring and visualization system in the eastern portion of the North American power grid. This next generation system features Global Positioning System technology, secure data communications, custom visualization, and advanced controls. The data from the "phasor" measurement instruments are being fed into data archiving and analysis locations to make the project's information readily available to the utilities. The visualization and control systems will allow operators to detect disturbances and take action before problems cascade into widespread outages. During FY 2006, DOE spearheaded efforts that led to the installation and operation of 30 additional measurement units and two additional archiving and analysis locations for a cumulative total of 80 measuring units and eight archiving and analysis locations.

Integrated Energy System: An Integrated Energy system installed at the Fort Bragg 82nd Airborne Central Heating Plant.

- Collaborated with the California Energy Commission and New York State Energy Research and Development Authority, to commission three pioneering energy storage projects. These projects will allow for the storage of electrical energy that will be available when needed. This will reduce transmission system congestion, help manage high energy demands, and make renewable electricity sources readily available and reliable.
- Developed a Combined Heat and Power system that operates at 70 plus percent efficiency rate that has benefited the Dell's Children Hospital energy operating needs. The Dell's Children Hospital has benefited from lessons learned at Fort Bragg U.S. military base and other Combined Heat and Power system users. The new system provides the Dell's Children Hospital with 100 percent of their energy requirements to operate the hospital's power supply and cleaner, more reliable power that has a power backup to the electric grid. During a natural or man-made disaster the new system will keep the hospital operational and available to serve the public.

Combined Heat and Power: The new system provides the Dell's Children Hospital 100 percent of the thermal requirements to operate the hospital's power supply; and cleaner, more reliable power that has a power backup to the electric grid.

— Power Marketing Administrations

The *Reclamation Project Act of 1939*, the *Flood Control Act of 1944*, and other Acts direct the Department's Southeastern, Southwestern and Western Area Power Administrations to market and deliver the power produced at Federal dams to not-for-profit utilities at the lowest possible rates to consumers, consistent with sound business practices. The self-financed Bonneville Power Administration, operating under the *Bonneville Project of 1937*, the *Transmission System Act of 1974*, the *Northwest Power Act of 1980* and other statutes, markets and delivers Federal and non-Federal power to meet its statutory and contractual obligations to its customers, including providing the net firm power requirements of its requesting customer utilities.

Bonneville Power Administration: Headquartered in Oregon, Bonneville is self-financed and markets wholesale electricity and transmission in Washington, Oregon, Idaho, and Western Montana, providing about half the electricity used in the Northwest and operating over three-fourths of the region's high-voltage transmission lines. For more information go to www.bpa.gov/corporate.

Southeastern Power Administration: Headquartered in Georgia, Southeastern markets electricity generated at reservoirs operated by the U.S. Army Corps of Engineers. The marketing area includes southern Illinois, Kentucky, Virginia, North Carolina, South Carolina, Georgia, Alabama, Mississippi, Tennessee and the panhandle of Florida. For more information go to www.sepa.doe.gov.

Southwestern Power Administration: Headquartered in Oklahoma, Southwestern markets the hydroelectric power produced at 24 U.S. Army Corps of Engineers multi-purpose dams to customers in Arkansas, Kansas, Louisiana, Missouri, Oklahoma and Texas. For more information go to www.swpa.gov.

Western Area Power Administration: Headquartered in Colorado, Western markets and delivers hydroelectric power and related services from 56 hydropower plants operated by the Bureau of Reclamation, U.S. Army Corps of Engineers, and the International Boundary and Water Commission, (over a 1.3 million square mile marketing area) to public power customers, including municipal and cooperative utilities and Native American tribes, in Arizona, California, Colorado, Iowa, Kansas, Minnesota, Montana, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Texas, Utah and Wyoming. For more information go to www.wapa.gov.

— *How We Serve the Public*

The Power Marketing Administrations (PMA) market and deliver reliable, cost-based Federal hydroelectric power and related services to customers over much of the southeastern, central, and western United States. Transmission systems owned by the PMAs are part of the Nation's interconnected generation and transmission system and make a significant contribution to the country's past and future energy supply. While they assure that customers receive the benefits of Federal power, the PMAs also collect sufficient revenue to repay,

Dispatcher: This power system dispatcher monitors Supervisory Control and Data Acquisition system data to ensure enough generation is flowing to meet consumers' instantaneous demand for electricity. In control rooms operated by DOE's four Power Marketing Administrations, dispatchers work around the clock to deliver 117.2 billion kilowatt hours of electricity to consumers across 3/4 of the continental United States.

within timeframes established by law and regulations, the American taxpayers' investment in such power generation and transmission systems. Each PMA implements individual power marketing programs based on regional hydropower sources and other factors inherent to their specific region of the country. By marketing and delivering Federal hydropower, the PMAs foster a diverse supply of reliable, affordable, and environmentally-sound energy while increasing the Nation's mix of energy options.

— *Performance Against Key Targets*

During FY 2006, the Power Marketing Administrations:

- Achieved each of their targets for system reliability, respectively, in accordance with key Control Performance Standards developed by the North American Electric Reliability Council (NERC). In addition to meeting their goal, the Power Marketing Administrations continue to exceed the electrical utility industry average. By reaching this goal, the Power Marketing Administrations are able to deliver affordable and reliable power across the United States.
- Completed repayment of the Federal power investment to the U.S. Treasury meeting their obligation to the U.S. Treasury and the public taxpayer.
- Due to the southeast area of the United states experiencing one of the worst drought periods in the past 100 years, the Southeastern Power Administration (SEPA) was only able to repay $21 million (52 percent) of the planned $40.7 million. For FY 2006, SEPA set a target of paying $40.7 million annually under average water conditions to meet required payments as they come due and assure that all aged investments will be replaced on a timely basis now and in the future. Cyclical drought conditions resulted in below average power generation and a subsequent decrease in repayment. Greater than average rainfall over the previous two fiscal years enabled SEPA's repayment to be significantly greater than planned. The cyclical nature of rainfall should be considered when evaluating off-year results that are less than expected.
- The severe drought in the southwest prevented the Southwestern Power Administration (SWPA) in providing $462 million in economic benefits to the region from the sale of hydroelectric power (under average water conditions). Southwestern has achieved 69.7 percent, or $322 million, of the $462 million annual goal. SWPA continues to

Iceman: This line worker chips ice off an insulator string on a 500-kilovolt (kV) transmission line in frigid conditions to ensure the line stays in service delivering bulk electricity to 1,500 wholesale power customers across the high-voltage transmission lines operated by DOE's four Power Marketing Administrations.

Breakerbox: Electricians wire circuit breaker controls. Circuit breakers are used to control the flow of electricity at 552 substations on the high-voltage power grids operated by DOE's four power marketing administrations.

Connecting: A lineman connects conductor wire to an insulator string on the first phase of a new section of high-voltage transmission line. DOE's four power marketing administrations own and operate almost 34,000 miles of transmission lines stretching across 3/4 of the continental United States.

experience severe drought conditions that hamper its ability to generate sufficient energy to fulfill its contractual obligations and provide expected economic benefits. In order to accomplish this goal, the system will have to generate approximately 720 gigawatt (GWh), or about 73 percent of average for the first quarter of FY 2007.

— Energy Information Administration

The Department's Energy Information Administration (EIA) provides information on energy resources, reserves, production, demand, related financial information and prices. EIA conducts survey and data collection operations, produces energy analyses and forecasts, and publishes data and analysis reports. EIA's customer base includes the Administration, Congress, Federal and State policymakers and agencies, the private sector, and International agencies.

— *How We Serve the Public*

EIA's contributions are critical for promoting sound energy decision-making and efficient energy market operations, as well as fostering general public understanding. These contributions subsequently facilitate the supply and delivery of reliable, affordable and environmentally sound energy, both now and in the future. There has been an increasing reliance on EIA's data and analyses by the Administration, the Congress, industry, and the public to understand and respond to current and emerging changes in various energy sectors. These changes result from actions such as energy industry restructurings, demographic changes, new fuel standards, and legislative initiatives. For example, in the wake of high oil and natural gas prices, exacerbated by Hurricanes Katrina and Rita, during FY 2006, EIA testified 15 times before Congressional Committees, and has conducted more than 30 briefings for members of Congress and/or their staffs. In addition, EIA has responded to dozens of short-turnaround requests from the White House, other Federal departments, and Congressional staff for energy data and analysis. EIA's information is frequently referenced by news organizations both large and small, and the EIA website averaged over 1.5 million user sessions per month in FY 2006.

— *Performance Against Key Targets*

During FY 2006, the Department's EIA:

• Achieved a "satisfied" or "very satisfied" rating from 93 percent of customers surveyed about the quality of EIA information, exceeding the annual customer satisfaction target of 90 percent. EIA maintains this effectiveness through regular monitoring of customer satisfaction, something it has been doing for the past ten years.

— Science —

— Advancing Scientific Understanding —

To protect our national and economic security by providing world-class scientific research capacity and advancing scientific knowledge.

> ***"To keep America competitive, one commitment is necessary above all: We must continue to lead the world in human talent and creativity. Our greatest advantage in the world has always been our educated, hardworking, ambitious people—and we are going to keep that edge. Tonight I announce an American Competitiveness Initiative, to encourage innovation throughout our economy, and to give our nation's children a firm grounding in math and science.***
>
> ***First, I propose to double the Federal commitment to the most critical basic research programs in the physical sciences over the next 10 years. This funding will support the work of America's most creative minds as they explore promising areas such as nanotechnology, supercomputing and alternative energy sources."***
>
> ***– President George W. Bush, State of the Union Message, January 31, 2006***

At the heart of the American Competitiveness Initiative (ACI) is the idea that our Nations' prosperity is based on innovation and risk taking. The United States has enjoyed unprecedented success because of our ability to innovate and create market opportunities where none existed before. The Nation's ability to innovate is based on the willingness of its people to invest in world-class basic research and development facilities as well as build a system of education that ensures access and opportunity. However, both our system of education and research facilities are not short-term investment opportunities, rather, by nature, they represent the long-term risk that a great nation takes to ensure that people and technologies are in place to solve tomorrow's challenges.

The ACI identifies three key Federal entities; the Department of Energy's Office of Science (SC), the National Science Foundation and the Department of Commerce's National Institute for Standards and Technology that support basic research programs in the physical sciences and engineering. There are six major research goals identified in the American Competitiveness Initiative related to the Department:

- World-class capability and capacity in nanofabrication and nanomanufacturing that will help transform current laboratory science into a broad range of new industrial applications for virtually every sector of commerce;
- Chemical, biological, optical and electronic materials breakthroughs critical to cutting edge research in nanotechnology, biotechnology, alternative energy and the hydrogen economy through essential infrastructure;
- World-leading high-end computing capability (at the petascale) and capacity, coupled with advanced networking, to enable scientific advancement through modeling and simulation at unprecedented scale and complexity across a broad range of scientific disciplines and important to areas such as intelligent manufacturing, accurate weather and climate prediction;
- Overcoming technological barriers to revolutionizing fields of secure communications, as well as quantum mechanics simulations used in physics, chemistry, biology and materials science;
- Overcoming technological barriers to efficient and economic use of hydrogen, nuclear and solar energy through new basic research approaches in materials science; and
- Improving capacity, maintenance and operations of DOE labs.

— SCIENCE PERFORMANCE SCORECARD — ($ in millions)

General Goal and Score	Program Costs FY 2006	Program Costs FY 2005	Programs and Scores		FY 2006 Budgetary Expenditures Incurred *	Performance of Annual Targets: Met (100%)	Not Met (≥ 80% but < 100%)	Not Met (< 80%)	Undetermined
5. World-Class Scientific Research Capacity	$3,720	$3,565	High Energy Physics	Y	$814	4	0	1	0
			Nuclear Physics	G	$399	3	0	0	0
			Biological and Environmental Research	G	$804	7	0	0	0
			Basic Energy Sciences	G	$1,468	5	0	0	0
			Advanced Scientific Computing Research	G	$377	2	0	0	0
			Fusion Energy Sciences	G	$312	4	0	0	0
Total Cost	$3,720	$3,565			$4,174	25	0	1	0

* Includes capital expenditures but excludes such items as depreciation, changes in unfunded liability estimates and certain other non-fund costs, and allocations of Departmental administration activities.

General Goal 5: World-Class Scientific Research Capacity

Provide world-class scientific research capacity needed to ensure the success of Department missions in national and energy security; to advance the frontiers of knowledge in physical sciences and areas of biological, medical, environmental and computational sciences; or to provide world-class research facilities for the Nation's science enterprise.

The Department manages and provides the principal Federal funding for the Nation's research programs in high-energy physics, nuclear physics, fusion energy sciences, basic energy sciences, biological and environmental sciences, and computational science. It manages 10 world-class laboratories as part of the overall Department's laboratory portfolio. In FY 2006, these laboratories were used by more than 19,000 researchers from universities, other government agencies, private industry and the international science community. Through these investments, the Department is building the human and technological foundations necessary to retain the Nation's lead in world-class research and development.

— Advanced Scientific Computing Research

— *How We Serve the Public*

> ***"Advanced computing is a critical element of President Bush's American Competitiveness Initiative and these projects represent an important path to scientific discovery...We anticipate that they will develop and improve software for simulating scientific problems and help reduce the time-to-market for new technologies."***
>
> ***– Dr. Raymond Orbach, DOE Under Secretary for Science***
>
> DOE Announces $60 Million in Projects to Accelerate Scientific Discovery through Advanced Computing — www.doe.gov/news/4135.htm — September 7th, 2006

Computational science is increasingly important to almost every scientific discipline that keeps America competitive. The Department's Advanced Scientific Computing Research (ASCR) program is expanding our world-class scientific research capability through advances in mathematics, high performance computing and advanced networks, and through the development and use of computers capable of many trillions of operations per second. Computer-based simulation allows us to understand and predict the behavior of complex systems that are beyond the reach of our most powerful experimental probes or our most sophisticated theories. For example, computer modeling and simulation enables us to understand how the chemical elements were created within the interior of stars and how protein machines work inside living cells that is critical to harnessing microbes for energy or waste cleanup needs. ASCR supports scientific computing research activities occur at more than 70 academic institutions and 15 DOE laboratories. In addition, more than 2,400 university scientists, government agencies and U.S. companies use ASCR-funded high-performance computers each year.

— *Performance Against Key Targets*

Scientific Discovery through Advanced Computing (SciDAC) Support

During FY 2006, the Department:

- Exceeded its goal of improving by 50 percent its average annual percentage increase in the computational effectiveness (either simulating the same problem in less time or simulating a larger problem in the same time) of a subset of application codes within the Scientific Discovery through Advanced Computing (SciDAC) effort by achieving an increase of 135 percent. The SciDAC program is a collection of partnerships between the ASCR program and the other Department programs aimed at strengthening the role of high-performance computing in furthering science and advancing the Department's missions. The SciDAC program has contributed to a number of areas including: climate modeling and prediction, plasma physics, particle physics, accelerator design, astrophysics, chemically reacting flows and computational nanoscience.

Supercomputer Autograph: President George W. Bush signing the Cray X1 supercomputer installed in the Computational Sciences Building at Oak Ridge National Laboratory

— Biological and Environmental Research

— *How We Serve the Public*

The Department's Biological and Environmental Research (BER) program supports basic research that impacts our health, environment and energy future and is a key element of the ACI. Biotechnology solutions to our Nation's energy and environmental challenges are only possible by understanding complex biological systems and developing computational models that predict their behavior. The BER program is developing the understanding needed to advance biotechnology-based strategies for bio-fuel production, focusing on the President's Advanced Energy Initiative (AEI) related goals in biohydrogen and bioethanol development. Additionally, BER is advancing our ability to predict long range and regional climates for effective future planning of our energy, agriculture, land and water needs.

— *Performance Against Key Targets*

DNA Sequencing

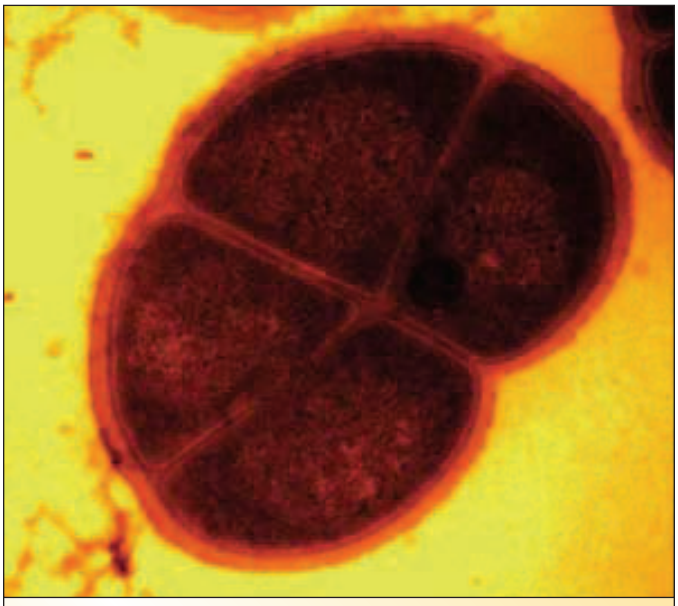
During FY 2006, the Department:

- Increased the rate of DNA sequencing beyond its FY 2006 target of 30 billion base pairs by sequencing more than 32.7 billion base pairs. To unlock the code of an organism's genetics, the BER program is working to sequence the related genome. Thanks to investments in technological improvements, the rate at which the BER program can extract this sequence has been steadily increasing. The Department is working toward developing microbes that might generate hydrogen, sequester carbon dioxide and breakdown chemical or radioactive waste.

Climate Change

During FY 2006, the Department:

- Met its goal of producing a new continuous time series of retrieved cloud properties at each Atmospheric Radiation Measurement site and evaluating the extent of agreement between climate model simulations of water vapor concentration and cloud properties and measurements of these quantities on time scales of one to four days. The Department's climate change research is focused on developing accurate advanced climate models that can predict climate changes decades to centuries in the future. These models require that we explore the role of the oceans, atmosphere, sea ice and land masses on climate; as well as the role of clouds in controlling solar and terrestrial radiation. It also studies the impacts of increasing carbon dioxide in the atmosphere on the Earth's climate and ecosystems to develop possible mitigation strategies from human sources, including energy use. BER's research enables policymakers to develop science-based energy policy for the U.S.



Imagine something that loves to eat nuclear waste:
Nuclear waste is a gourmet meal for one type of bacteria, Deinococcus radiodurans. In the 1950's, scientists discovered this bacterium in a can of spoiled ground beef that had been "sterilized" with radiation. Further study showed that the remarkable DNA repair processes of D. radiodurans permit the microbe to survive amazingly large amounts of radiation, amounts that would kill most organisms, including humans. In 1999, researchers completed the DNA sequencing for this bacterium, and now scientists are exploring genetic manipulation that would expand D. radiodurans' extraordinary capabilities for removing toxic wastes from contaminated sites.

Biomedical Engineering

During FY 2006, the Department:

- Met its goal of completing the design of a 256 microelectrode array retinal prosthesis, and constructing and testing individual components for electronic integrity and biocompatibility in vitro and in animal test systems. BER researchers are developing medical diagnostic and therapeutic technologies to treat and diagnose disease, conduct non-invasive medical imaging and advance biomedical engineering.

— Basic Energy Sciences

— *How We Serve the Public*

Basic research supported by the Department's Basic Energy Sciences (BES) program touches virtually every aspect of the Department's mission that will lead to transformational energy technologies for our Nation. BES research in materials sciences and engineering is leading to the development of materials that improve the efficiency, economy, environmental acceptability and safety of energy generation, conversion, transmission and use. The BES program supports materials research critical to hydrogen fuel, biofuels and numerous other major industrial applications. Basic chemical research is leading to the development of advances such as efficient combustion systems with reduced emissions of pollutants; new solar photo-conversion processes; improved catalysts for the production of fuels and chemicals; and better separations and analytical methods for applications in energy processes, environmental remediation and waste management. Research in the molecular and biochemical nature of photosynthesis is aiding the development of solar photo energy conversion and biomass conversion.

— *Performance Against Key Targets*

World Class Scientific Facilities

During FY 2006, the Department:

- Met its goal of operating its BES scientific user facilities in excess of 90 percent of the scheduled available operating hours. BES provides the Nation's researchers with world-class research facilities, including reactor- and accelerator-based neutron sources, light sources soon to include the X-ray free electron laser, nanoscale science research centers, and electron beam micro-characterization centers. These facilities provide the world's best capabilities for imaging and characterizing materials of all kinds from metals, alloys and ceramics to fragile biological samples.

The Advanced Photon Source (APS) at the Argonne National Laboratory is a national synchrotron-radiation light source research facility. Utilizing high-brilliance x-ray beams from the APS, scientist carry out world-class basic and applied research in the fields of materials science; biological science; physics; chemistry; environmental, geophysical, and planetary science; and innovative x-ray instrumentation. The knowledge gained from this research is impacting the evolution of combustion engines and microcircuits, aiding in the development of new pharmaceuticals, and pioneering nanotechnologies whose scale is measured in billionths of a meter.

Understanding materials and biology at the molecular and atomic level is essential for developing the materials, devices and medical treatments and drugs of the future. For example, researchers at the Advanced Photon Source (APS) have determined the structure of a key protein believed to play a role in a deadly infection that afflicts the lungs of patients with cystic fibrosis.

The Spallation Neutron Source was completed this year and is the world's most powerful neutron scattering facility for studying the structure and dynamics of materials using neutrons. This user facility enables researchers from the United States and abroad to study the science of materials that forms the basis for new technologies in telecommunications, manufacturing, transportation, information technology, biotechnology and health.

Nanoscale Research

During FY 2006, the Department:

- In FY 2006, the Department met its goals of demonstrating an X-ray pulse of less than 100 femtoseconds in duration and containing more than 100 million photons per pulse demonstrating the first measurement of spatial resolutions for imaging in the hard and soft x-ray regions, and spatial information limit for an electron microscope (nanometers). For FY 2006, the spatial resolution targets were 100, 18 and 0.08 nanometers, respectively.

Because the sciences—and especially their applications—are interconnected, research in physical science and engineering provides tools and technologies for all other fields. Ultimately, of course, everything is made of atoms and their sub-components. As such, basic techniques for the imaging, manipulation and simulation of matter at the atomic scale are of value for applications in all fields.

– American Competitiveness Initiative, February 2006

Just as the resolution of a computer screen determines the clarity of very small images, the resolution of scientific equipment determines the clarity with which scientists can "see" very small objects such as viruses or even atoms. In addition to seeing at the nanoscale, it is important to understand how molecular processes unfold over time. Similar to a camera's shutter speed controlling the sharpness of the photograph of a fast moving object, temporal resolution determines how well scientists can "see" fast events, such as chemical reactions and the folding of proteins, which happen in femtoseconds (1/1,000,000,000,000,000 of a second). The current challenge is to create instruments that can simultaneously measure the very small and the very fast. With these tools, we will better understand how the nanoscale composition of materials determine their physical properties, how protein structures reshape themselves, how chemical reactions take place, and the nature of the chemical bond. The ability to see small objects and observe rapid processes are crucial to building world-class nanoscale fabrication and manufacturing capabilities described in the ACI.

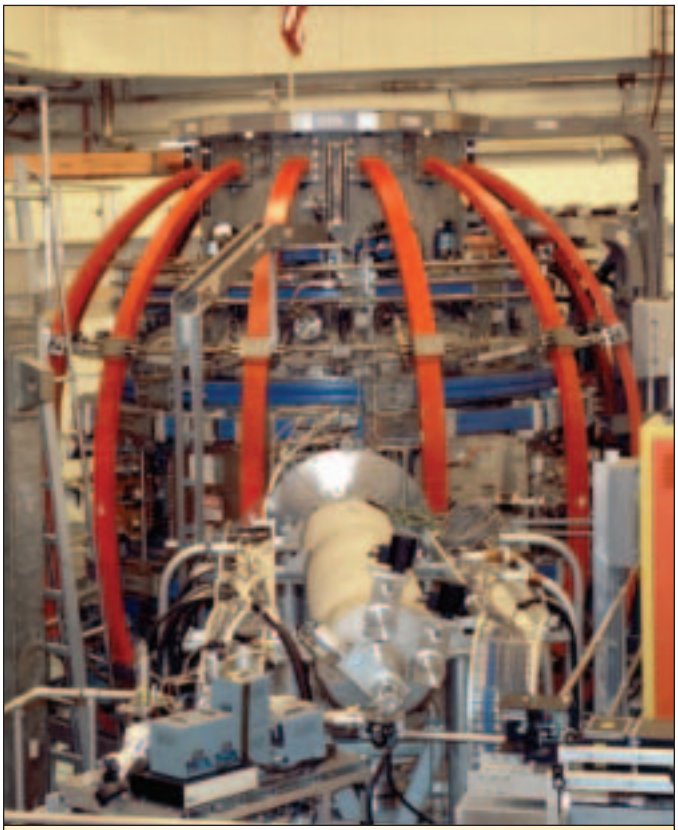
— Fusion Energy Sciences

— *How We Serve the Public*

The Department's Fusion Energy Sciences (FES) program advances the theoretical and experimental understanding of plasma and fusion science, including a close collaboration with international partners in identifying and exploring plasma and fusion physics issues through specialized facilities. In our sun, the gravitational forces at its center compress hydrogen into a very dense super-heated plasma sufficient to cause the hydrogen nuclei to fuse into helium nuclei. The advantage of using fusion energy here on Earth is that a small amount of hydrogen converted to helium would release a large amount of energy. When perfected, fusion will provide a virtually never-ending, safe and environmentally friendly energy source available to the whole world. The challenge is to understand and recreate this hot dense plasma here on Earth. FES leads the U.S. participation in the joint international research and development fusion project, known as ITER (in Latin, iter means "the way"). This international collaboration will provide an unparalleled scientific research opportunity with a goal of demonstrating the scientific and technical feasibility of fusion power.

In FY 2005 and early FY 2006, international negotiations on ITER resulted in the host site selection of Cadarache, France and India joining ITER as a full non-host party. In May 2006, the seven ITER parties initialed the ITER Agreement in Brussels, to signify that the text was final. The signing of the Agreement will confirm the multilateral commitment for ITER and provide the legal framework for the construction, operation, deactivation and decommissioning phases.

> ***"Initialing this agreement brings us one step closer to a viable source of fusion power, with the potential to free the quickly growing global economy and population from the looming constraints of conventional energy supplies and their associated environmental effects...It is for reasons of international peace, prosperity, and environmental security that President Bush led the United States to participate in the ITER project. This is the first stand alone, truly international, large-scale scientific research effort in the history of the world. It is quite striking that the seven parties to the agreement represent more than half of the world's population."***
>
> ***– Dr. Raymond Orbach, Under Secretary of Science, May 24, 2006***



National Spherical Torus Experiment (NSTX) is an innovative magnetic fusion device that was constructed at the Princeton Plasma Physics Laboratory in collaboration with the Oak Ridge National Laboratory, Columbia University and the University of Washington.

— *Performance Against Key Targets*

U.S. Experimental Facilities Supporting ITER

During FY 2006, the Department:

- Supported the ITER effort and fusion research by meeting its goal of an average operation time of greater than 90 percent of the major national fusion facilities (the DIII-D tokamak, the Alcator C-Mod, and the National Spherical Torus Experiment (NSTX)) as a percentage of the total planned operation time. The U.S. Burning Plasma Organization, established in May 2006, coordinates burning plasma research in the U.S. and made major progress by developing its structure, membership and working on specific tasks for U.S. support for ITER physics and technology.

— High Energy Physics

— *How We Serve the Public*

The Department's High Energy Physics (HEP) program provides over 90 percent of the Federal support for the Nation's high energy physics research. This research advances our understanding of how the universe works at its most basic level, from the elementary constituents of matter to the recently discovered but still mysterious dark energy and dark matter that dominates our universe.

> ***"High energy physics labors at what is arguably the deepest frontier of science, and this fact is significant to its long term appeal to great nations."***
>
> ***– John Marburger***
>
> John Marburger, Director, Office of Science and Technology Policy Executive Office of the President, Washington, D.C. March 3, 2006

The Department's HEP program represents our Nation's continued search for new knowledge about the origins of our universe. While it is uncertain whether the knowledge gained from this research will develop into a new product or energy source, the technology that has so far been developed to support the demands of high energy and nuclear physics research has become indispensable to other fields of science and has found wide applications in both industry and medicine. One-third of all accelerators today are used in medical applications including cancer therapy, imaging, and the production of short-lived isotopes. The other nearly two-thirds are used for industrial applications ranging from micro-machining to food sterilization and for national security applications, which include x-ray inspection of cargo containers and nuclear stockpile stewardship.

— *Performance Against Key Targets*

World Class Scientific Facilities

The Department's HEP researchers are world leaders in the construction and development of advanced particle accelerators and detector technologies. The HEP program provides these research facilities to

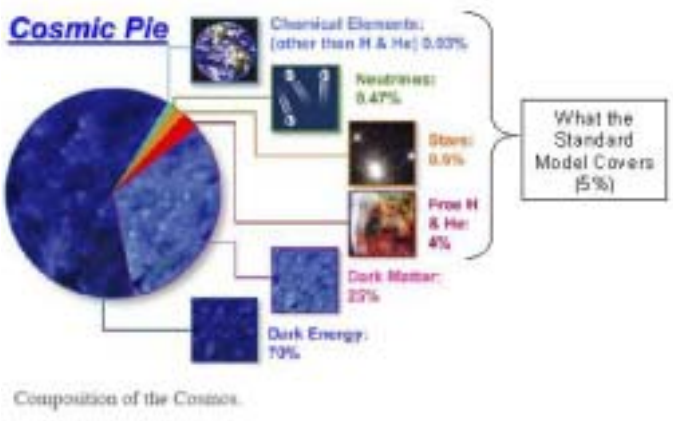
research teams from around the world, not only in high energy physics, but increasingly in other fields, including particle astrophysics and cosmology.

During FY 2006, the Department's:

- Scientific user facilities, Fermilab, Tevatron and the Stanford Linear Accelerator Center (SLAC) B-factory, achieved an average operation time of 78 percent of the total scheduled annual operating time, which was below the goal of 80 percent. This was caused by extended downtime at the Tevatron. The HEP program was still able to support approximately 3,200 researchers in FY 2006 and the Tevatron is now fully operational.

The Standard Model and the Higgs Boson

The Standard Model of particle physics is currently the most widely accepted theory for matter and the forces that act on them. This theory, which has existed for about 30 years, is the foundation from which physicists work to advance our understanding of the universe, but it is incomplete since it only addresses approximately 5 percent of the known universe. A new theoretical vision is required that embraces the Standard Model while resolving the mystery of newly discovered dark energy and dark matter. Experiments conducted at our particle accelerators seek evidence of "unification," the melding of today's diverse family of particles and interactions into a much simpler picture at high particle energies, similar to those that prevailed in the beginning of the universe.



Composition of the Cosmos

During FY 2006, the Department:

- Facilitated Higgs Boson research by meeting its goal of delivering, within 20 percent of the baseline estimate, a total integrated amount of data (in inverse picobarns) to the CDF and D-Zero detectors at the Tevatron. Because the detector's probability of capturing collision event data is extremely low per collision, researchers require large amounts of data from a large number of collisions. Researchers hope this collision data will provide the evidence for the existence of the Higgs Boson, a theoretical particle that gives matter its mass characteristic.

Matter-Antimatter Asymmetry Research Results

Today's universe consists mostly of matter with very little antimatter, known as matter-antimatter asymmetry. However, the current Standard model predicts a universe balanced between with equal amounts of matter and antimatter. HEP researchers strive to understand how this inequality occurred and to understand why matter and antimatter did not completely annihilate each other in the early universe. Matter-antimatter asymmetry research is conducted primarily at the B-factory at the SLAC in California. This facility provides precision measurements of how matter and antimatter behave differently in the decays of short-lived exotic particles known as B-mesons, considered by physicists to be vital to solving this mystery.

During FY 2006, the Department:

- Met its goal of delivering, within 20 percent of baseline estimate, a total integrated amount of data (in inverse femtobarns) delivered to the BABAR detector at the SLAC B-factory. The FY 2006 baseline was 100 inverse femtobarns, so within 20 percent of baseline is 80 inverse femtobarns.

— Nuclear Physics

— *How We Serve the Public*

The Department's Nuclear Physics (NP) program is the major sponsor of fundamental nuclear physics research in the Nation, providing about 90 percent of Federal support. NP builds and operates leading scientific facilities and state-of-the-art instrumentation to study the evolution and structure of nuclear matter, from the smallest building blocks, quarks and gluons, to the natural elements. Key areas of research aim to expand our understanding of how the quarks and gluons interact to form protons and neutrons, and of the properties and behavior of the nucleus under extreme conditions of temperature and pressure. Results and insight from these studies are relevant to understanding the earliest moments of the universe, how the chemical elements were created, and how the properties of one of Nature's basic constituents, the neutrino, influences astrophysics phenomena such as supernovae.

Today's revolutionary technologies and many of our most popular consumer products have roots deep in basic and applied research. Long before there were computers and the Internet, scientists were unlocking the secrets of lasers, semiconductors, and magnetic materials upon which today's applications were built. This enterprise was fueled in large part by Federal investment in basic research that was necessary but not necessarily profitable for the private sector to undertake over the long term.

– American Competitiveness Initiative, February 2006

— *Performance Against Key Targets*

World Class Scientific Facilities

The majority of NP's research is conducted at our national user facilities, such as the Argonne Tandem Linac Accelerator System (ATLAS) at Argonne National Laboratory, the Holifield Radioactive Ion Beam Facilities (HRIBF) at Oak Ridge National Laboratory, the Continuous Electron Beam Accelerator Facility (CEBAF) at Thomas Jefferson National Accelerator Facility and the Relativistic Heavy Ion Collider (RHIC) at Brookhaven National Laboratory.

During FY 2006, the Department:

- Met its goal of achieving at least 80 percent average operation time of the scientific user facilities as a percentage of the total scheduled annual operating time.

Quantum Chromodynamics

The CEBAF is the world's most powerful electron "microscope" for studying the nucleus and advancing our knowledge of the internal structure of protons and neutrons. Protons and neutrons are made up of even smaller particles called quarks and gluons. Researchers are studying a unique property of the quarks and gluons called "confinement." Confinement means that we can never observe an isolated quark or gluon, they are only observed bound to other quarks and gluons. By providing precision experimental information concerning the quarks and gluons, the approximately 1,200 experimental researchers that use CEBAF, together with researchers in nuclear theory, seek to describe nuclear matter in terms of the fundamental theory of strong interaction, known as quantum chromodynamics. In nuclear physics, the average number of events recorded by detectors is a good indicator of progress. The events that researchers are really interested in are rare, so the more events they record the more likely they will record what they are interested in studying.

During FY 2006, the Department:

- Met its goal of recording at least 80 percent of the weighted average number of billions of events recorded by experiments in Hall A, Hall B, and Hall C at the CEBAF. The FY 2006 Baseline weighted average is 3.62 (1.45, 7.70, 1.70); so at least 80% of the weighted average is 2.89 (1.16, 6.16, 1.36).

The Power of the Stars

The low energy ion beams generated by ATLAS allows NP scientists to study the stability and structure of atomic nuclei and explore the origin of the chemical elements and their role in shaping the reactions that occur in the cosmos. HRIBF produces beams of radioactive nuclei with a wide range of easily variable energies and intensities believed sufficient for scientists to make the first direct measurements of the nuclear reactions which power supernovae, X-ray bursts and other stellar explosions.

During FY 2006, the Department:

- Met its goal of recording at least 80 percent of the weighted average number of billions of events recorded at the ATLAS and HRIBF facilities, respectively. The FY 2006 Baseline weighted average is 9.5 (17.5, 1.4); so at least 80 percent of the weighted average is 7.5 (14, 1.1).

— *External Factors*

Currently, no external factors appear to impact the ability to achieve this General Goal. However, the prospect of insufficient scientific and technical talent, now and in the foreseeable future, is a Departmental concern for maintaining a world-class scientific capacity.


DOE
DOE

— Environment —

— Eliminating the Environmental Legacy —

To protect the environment by providing a responsible resolution to the environmental legacy of the Cold War and by providing for the permanent disposal of the Nation's high-level radioactive waste.

Fifty years of nuclear defense work and energy research resulted in large volumes of solid and liquid radioactive waste along with significant areas of contaminated soil and water.

The mission of the Department's Environmental Management program is to safely clean up the contamination from these operations and dispose of the waste in a manner protective of the environment, the workers and the public. Over the past several years, the program has delivered significant risk reduction and cleanup results while ensuring that the cleanup is safe for workers, protective of the environment and cost effective. These outcomes provide important and valuable benefits for future generations. The Office of Environmental Management (EM) made significant advances in FY 2006 in accelerating its schedule for the packaging of high-risk nuclear materials until ultimate disposition.

Following site closure, the Office of Legacy Management (LM) takes control of the site and has the mission of protecting human health and the environment through effective long-term stewardship of land, structures, facilities and records. LM also oversees the Department's post-closure responsibilities for former contractor employees.

The Office of Civilian Radioactive Waste Management (RW) is responsible for constructing a geological repository at Yucca Mountain, Nevada, to manage and dispose of high-level radioactive waste and spent nuclear fuel in a manner that protects health, safety and the environment; enhances national and energy security; and merits public confidence. Disposition of these materials in a geologic repository is necessary to ensure the United States maintains an energy portfolio and remains competitive in the global economy, as well as to support cleanup of our defense sites, and to advance our international nonproliferation goals. RW made significant progress in FY 2006 toward developing a license application for a geological repository at Yucca Mountain, Nevada, by applying the necessary resources to enhance and improve the underlying scientific and engineering bases for proceeding with the development of the Yucca Mountain site.

General Goal 6: Environmental Management

Accelerate cleanup of nuclear weapons manufacturing and testing sites, completing cleanup of 108 contaminated sites by 2025.

For all its missions, safety is the Department's number one priority, including Environmental Management. EM continues to maintain and demand the highest safety performance in all aspects of its work. The Department's cleanup program is focused on risk reduction, that is also cost effective, and working collaboratively with regulators and stakeholders in developing site closure strategies.

While EM focuses on achieving site closure, LM focuses on post-closure activities – long-term surveillance and maintenance, site records, pension plans and post-retirement benefits. This separation of mission objectives ensures that both offices are fully committed to their respective objectives, thus heightening the Department's visibility and accountability to the affected communities.

— *How We Serve The Public*

The Department is facing the environmental legacy of more than 50 years of nuclear weapons production and nuclear power research and development. This mission requires the stabilization and disposition of large volumes of contaminated material and high-level radioactive waste. Once completed, environmental risks will be effectively eliminated. This program is the largest cleanup effort in the world - encompassing over two million acres at 114 sites. As of September 2006, the Department has completed cleanup and is monitoring 89 formerly contaminated geographical sites.

— *Performance Against Key Targets*

The Department set interim targets of cleaning up 89 and 100 geographic sites by the end of FY 2006 and FY 2012, respectively. To ensure the success of these future targets, EM maintains a set of corporate

— ENVIRONMENT PERFORMANCE SCORECARD — ($ in millions)

General Goal and Scores	Program Costs FY 2006	Program Costs FY 2005	Programs and Scores		FY 2006 Budgetary Expenditures Incurred *	Performance of Annual Targets: Met (100%)	Not Met (≥ 80% but < 100%)	Not Met (< 80%)	Undetermined
6. Environmental Management	$5,601	$6,719	Environmental Management	Y	$8,173	5	0	1	0
			Legacy Management	G	$69	2	0	0	0
7. Nuclear Waste	$475	$521	Nuclear Waste Disposal	G	$568	2	0	1	0
Total Cost	$6,076	$7,240			$8,810	9	0	2	0

* Includes capital expenditures but excludes such items as depreciation, changes in unfunded liability estimates and certain other non-fund costs, and allocations of Departmental administration activities.

Radioactive Facility Demolition: The demolition of the decontaminated 334A Waste Acid Storage Building at the Hanford Reservation at Richland, Washington.

performance measures that enables the program to track the accomplishment of risk reducing actions at each of its sites. These corporate performance measures are quantitative and provide a comprehensive programmatic perspective to completing the EM mission. The performance measures, each of which has an established annual target, are tracked in the context of the total measure (life-cycle) necessary to complete cleanup at each site. The key performance measures below portray the broad scope of challenges the EM program faces in completing its cleanup mission.

During FY 2006, the Department:

- Packaged for disposition a cumulative total of 6,479 enriched uranium containers. This is an increase of 938 containers over the cumulative total of 5,541 enriched uranium containers packaged in FY 2005 and exceeds the cumulative target of 5,877 for FY 2006 by 602 containers. The accelerated schedules at the Savannah River Site for disposition of enriched uranium were maintained throughout the year and resulted in this FY 2006 target being exceeded. This FY 2006 accomplishment will result in the Department succeeding in its environmental cleanup mission.

- Packaged for disposition a cumulative total of 2,489 containers of high level waste exceeding the cumulative FY 2006 target of 2,477 by 12. This is an increase of 252 containers over the planned cumulative total of 2,227 containers of high-level waste packaged for disposition in FY 2005. This accomplishment will enable the Department to remain on schedule for this environmental cleanup in future years.

- Completed the remediation work at a cumulative total of 365 nuclear and radioactive facilities, exceeding its FY 2006 cumulative target. This is an estimated increase of 66 facilities over the planned cumulative total of 299 nuclear and radioactive facility completions in FY 2005. Many sites, including facilities in Rocky Flats, are physically completed and awaiting final regulatory approval. When the regulators

Chart 1 – TRU Waste Disposed at WIPP

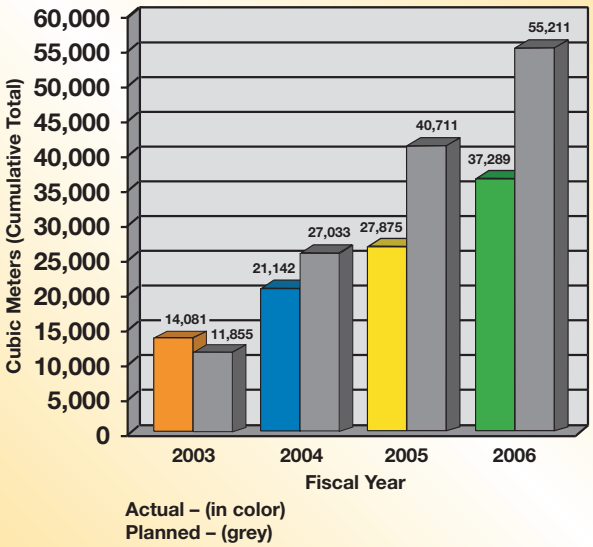


Chart 2 - Enriched Uranium Packaged for Disposition

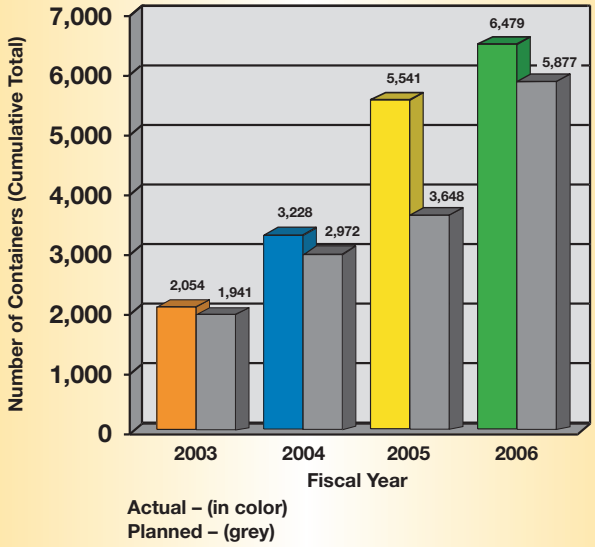
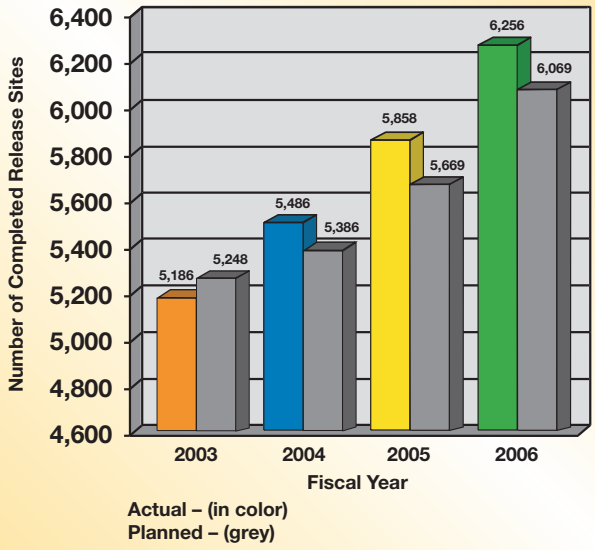


Chart 3 - Completed Release Sites



approve the facility completion reports, the Department will be able to count these facilities toward its target. Achieving this annual performance target will enable the Department to maintain its accelerated cleanup schedule.

- The Department failed to meet its target of disposal of transuranic (TRU) waste at the Waste Isolation Pilot Plant (WIPP) a cumulative total of 55,211 cubic meters of TRU waste. This was an estimated increase of 14,500 cubic meters over the planned cumulative total of 40,711 cubic meters of TRU waste to be disposed at WIPP in FY 2005. This shortfall was caused by delays throughout the complex including Idaho, Los Alamos National Laboratory (LANL), and the Savannah River Site that began in FY 2004. As Chart 1 indicates, EM was behind its life-cycle schedule for disposing of a cumulative total of 40,711 cubic meters of TRU waste at the end of FY 2005 and behind its schedule for disposing of 27,033 cubic meters of waste in FY 2004. While the Department has not met its target for FY 2006, the program is still on-track to meet its life-cycle target for the EM cleanup mission. EM has taken action to revise and improve procedures and implement corrective actions at Idaho. The Advanced Mixed Waste Treatment Facility at Idaho processes waste at or near its design capacity. Idaho has also met its goal of 6,000 cubic meters TRU waste disposed at WIPP in FY 2005, required by the 1995 Settlement Agreement. The Department is also evaluating its schedule for shipments and will establish realistic targets for FY 2007.

LM supports the General Goal by ensuring that the Department's long-term agreements and legal commitments to environmental stewardship and to former contractor employees are satisfied. By managing the long-term surveillance and maintenance at closed sites where remediation has been essentially completed EM is allowed to concentrate its efforts on continuing to accelerate cleanup and site closure. This results in reduced risks to human health and the environment as well as reduced landlord costs.

During FY 2006, the Department:

- Exceeded its goal of conducting surveillance and maintenance activities at 69 sites to ensure the effectiveness of cleanup remedies in accordance with legal agreements, or identifying sites subject to additional remedial action in order to ensure effectiveness, by completing surveillance and maintenance activities at 70 sites (including Pinellas and Maxey Flats). Exceeding this measure ensures continued effectiveness of cleanup remedies, and thereby protection of human health and the environment.

- Exceeded its goal of reducing the ratio of program direction expenditures to the total expenditures (excluding Congressionally Directed Activities) by one percent from the FY 2005 baseline by reducing the ratio by four percent. Program direction expenditures in FY 2006 were $12.9 million which is less than the one percent target expenditure of $15.3 million. Accomplishment of this measure ensures lower administrative costs for the program activities. This will result in a reduced ratio of program direction expenditures which lessens administrative cost per program dollar.

— *External Factors*

The following external factors could affect our ability to achieve this goal:

- Regulatory Requirements: The Department's approach to cleanup is influenced by various regulatory requirements, including compliance with environmental laws and regulations, agreements with state and Federal regulators, and judicial decisions. Further, existing laws and regulations are often subject to change and agreements with States require renegotiation and judicial decisions can alter long-term plans.

- Technology: The development and deployment of innovative technologies could help reduce risk, lower cost, and accelerate the pace of cleanup. However, suitable cleanup technologies may not currently exist for all cleanup conditions.

- Uncertain Work Scope: Uncertainties are inherent in the environmental cleanup program due to the complexity and nature of the work. For example, there are uncertainties at some of the sites regarding the types of contaminants, the extent of the contamination concentration levels and end states for cleanup. As cleanup progresses, new discoveries of additional or more complex contamination is not uncommon. Also, the end state for cleanup at certain sites has not been fully determined.

- Commercially Available Options for Waste Disposal: Accelerated risk reduction and site closure is always dependent upon the continued availability of commercial mixed low-level waste and low-level waste disposal facilities.

General Goal 7: Nuclear Waste

License and construct a permanent repository for nuclear waste at Yucca Mountain and begin acceptance of waste.

The disposal of spent nuclear fuel from the Nation's commercial and defense nuclear reactors, and the disposal of high-level radioactive waste from environmental cleanup from the Cold War era, are the Federal Government's responsibilities as directed by the *Nuclear Waste Policy Act of 1982*, as amended. In July 2002, after more than two decades of scientific study, the *Yucca Mountain Development Act* was passed by a joint Congressional Resolution and signed by President Bush, designating Yucca Mountain as the site of the Nation's first geologic repository for high-level radioactive waste and spent nuclear fuel. With that designation, the RW program transitioned from scientific site characterization to license application preparation for a submittal to the Nuclear Regulatory Commission (NRC) now scheduled for June 2008.

— How We Serve the Public

The construction and operation of new commercial nuclear power plants allows the United States to maintain a diverse energy portfolio and improves our energy security by successfully opening and operating a repository at Yucca Mountain for the disposal of commercial spent nuclear fuel.

— Performance Against Key Targets

During FY 2006, the Department:

- Revised the project conceptual design report to adopt a primarily canister-based approach for handling commercial spent nuclear fuel to enable more efficient repository surface facility construction and simplify repository operations.
- Received Energy Systems Acquisition Advisory Board approval of a revised critical decision-1 to proceed with the canister-based approach and prepare for critical-decision-2.
- Issued a revised Program schedule to submit a license application to the NRC by June 30, 2008, and begin initial operations by 2017.
- Designated Sandia National Laboratory as the lead laboratory to coordinate and organize all scientific work on the Yucca Mountain Project. Sandia will develop the total system performance assessment in order to strengthen and enhance long-term performance assessment by reducing model uncertainties and conservatisms. The laboratory will also review the existing infiltration model and prepare a new model to be used as part of the technical basis for the license application.
- Initiated operational planning activities in coordination with responsible Federal agencies while leveraging existing DOE expertise in materials shipment to identify the long-lead logistical planning, rolling stock and hardware acquisition strategies, and ancillary communication, traffic management and proactive technologies to enable the efficient, safe, and secure transport of radioactive materials by 2017.
- Improved and upgraded facilities to enhance worker safety and health.

— External Factors

The opening date of the Yucca Mountain repository will also depend on resolution of a number of external factors, including:

- Regulatory Requirements: The *Nuclear Policy Act*, as amended, requires that a repository at Yucca Mountain, Nevada, must be licensed by the NRC, which will base its review of the Department's license application submittal against its licensing requirements, including radiation protection standards issued by the Environmental Protection Agency (EPA). The EPA regulations have not yet been finalized. As a license applicant, the Department must also have its Licensing Support Network certification accepted by the NRC six monthly prior to the license application submittal.
- Litigation: Any actions by the Department or other agencies that advance either the repository or transportation, e.g., environmental impact statements are likely to be challenged in the courts.
- Legislation: Proposed legislation has been introduced that contains a number of provisions to facilitate the licensing, construction and operation of a repository at Yucca Mountain. These provisions will permit the Department to accelerate fulfillment of its responsibilities, without diminishing the protection currently afforded workers, members of the public and the environment.

CORPORATE MANAGEMENT

— President's Management Agenda —

The President, in his 2001 President's Management Agenda (PMA), challenged the Federal Government to become more efficient, effective, results-oriented and accountable. Over the past five years, the PMA has become the primary framework by which the Department has implemented changes to support the President's management goals. The PMA reflects the President's on-going commitment to achieve immediate and measurable results that matter to the American people.

"What matters most is performance and results. In the long term, there are few items more urgent than ensuring that the Federal Government is well-run and results-oriented."

- President George W. Bush

Each agency is held accountable for its performance in carrying out the PMA through quarterly scorecards issued by OMB. Agencies are scored green, yellow or red on their status in achieving overall goals or long-term criteria, as well as their progress in implementing improvement plans.

The Department is scored against six PMA initiatives: five government-wide areas and one agency-specific area. Each year, the Department and OMB consider progress made over the previous year and create a plan for the upcoming year's PMA-related activities. The plan is used by the Department to guide further management reforms and by OMB as the baseline for assessing the Department's quarterly performance. Further information on OMB's management of the PMA may be found at http://www.results.gov.

FY 2006 saw many significant accomplishments in each of the six PMA areas and the following summarizes key achievements.

Strategic Management of Human Capital – The Department continues to make significant progress in its management of human capital.

Initiative	As of September 30, 2006 Status	Progress
Human Capital	Green	Green
Competitive Sourcing	Green	Green
Financial Performance	Red	Green
E-Government	Yellow	Green
Budget & Performance Integration	Green	Yellow
Federal Real Property Asset Management	Green	Green

Green: Implementation is proceeding according to plan.
Yellow: Some slippage or other issue(s) requiring adjustment.
Red: Initiative in serious jeopardy absent significant management intervention.

Specifically, the Department reduced the under-representation of minorities in its workforce, compared to the 2001 baseline, especially in the area of Hispanic employment. Additionally, DOE continues to take steps to address skills gaps in critical mission occupations. In addition, the Department has developed a revised Human Capital Management Strategic Plan.

Competitive Sourcing – The Department has studied 1,228 Federal and over 1,022 contractor positions since FY 2002 as part of eight competitive sourcing studies. As a result of the competitions completed to date, DOE expects to save taxpayers over $538 million.

Improved Financial Performance – The Department implemented an aggressive plan to mitigate and remediate the financial management challenges that were identified since receiving a disclaimer of opinion on its FY 2005 financial statements. On the heels of converting to a new Standard General Ledger compliant financial accounting system during FY 2005, the remediation effort has already resulted in significant improvements in the underlying business practices used complex-wide. In January 2006, a new cost accrual methodology was put into place which automatically accrues cost on the thousands of outstanding obligations each month. Project management at the Department was enhanced through certification of some Earned Value Management Systems, as part of the Department's ongoing certification program, and techniques that objectively track physical accomplishment of work and provide early warning of performance problems, increasing the likelihood that projects will stay within planned cost and schedule. Real property management was improved

by establishing a departmental framework of internal controls, including a standard validation process and formal classes to teach the process. The Department continues its aggressive effort to build and improve its integrated business management system, I-MANAGE, and the associated I-MANAGE Data Warehouse. Together, these systems enhance decision-making with increased availability and reliability of financial and other business data, and by providing these just-in-time data at the desktops of managers. Future modules of the I-MANAGE suite under development include a budget formulation system and a standard procurement capability.

Expanded Electronic Government – The Department has made considerable progress in achieving PMA objectives for Expanded Electronic Government in FY 2006. Key accomplishments include a renewed emphasis and focus on cyber security as demonstrated by completion of a Cyber Security Revitalization Plan in March 2006, and the subsequent issuance of over twelve new cyber security guidance documents; enhanced and better integrated information technology (IT) management processes to ensure that IT fully aligns with and supports Departmental missions; and the establishment and use of the DOE Enterprise Architecture as a strategic driver for future IT management.

Budget and Performance Integration – The Department continues to improve and expand the integration between budget and performance information. This past year, senior leadership formulated a new Departmentwide Strategic Plan that will be the foundation of future budgets and the lens through which the performance of the Department is evaluated. The Department worked with OMB to assess all major programs over the last five years. Implementation of improvement plans resulting from PART assessments is ongoing, and full reassessment will be conducted periodically as warranted. Finally, the Department issued its first ever agency-wide multi-year budget plans to Congress in March 2006, which serve as the five-year planning window that bridges the high-level goals of the Strategic Plan and the key funding objectives of the annual budget request to Congress.

Federal Real Property Asset Management (Agency-Specific) – Last year, the Department issued its Asset Management Plan providing the guidelines and principles for managing the real property portfolio. This year, the Department prepared an implementation document outlining specific activities meant to meet the goals of the plan. The Department continued to improve its Facility Information Management System and satisfied the Federal Real Property Council's goal of 100 percent reporting of all data elements. Further, to enhance the integrity and reliability of the Department's real property data, a statistical validation program was established to monitor data accuracy and correct deficiencies.

"Working together, we will achieve our goal of steadily improving every Department of Energy program and continue to transform the Department into an organization that makes good on its promises and delivers results for the Nation."

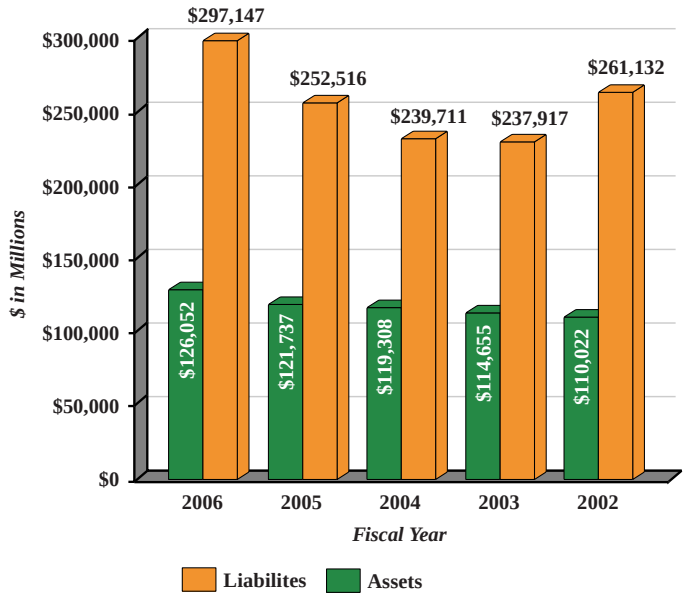
– Energy Secretary Samuel W. Bodman

— Analysis of Financial Statements —

The Department's financial statements are included in the Financial Results section of this report. Preparing these statements is part of the Department's goal to improve financial management and provide accurate and reliable information that is useful for assessing performance and allocating resources. The Department's management is responsible for the integrity and objectivity of the financial information presented in these financial statements.

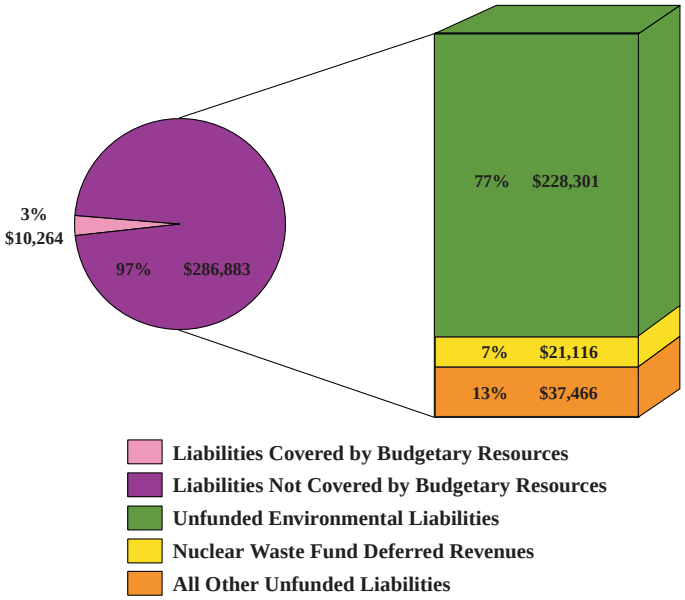
The financial statements have been prepared to report the financial position and results of operations of the entity, pursuant to the requirements of 31 U.S.C. 3515(b). The statements have been prepared from the Department's books and records in accordance with generally accepted accounting principles (GAAP) prescribed by the Federal Accounting Standards Advisory Board and the formats prescribed by the OMB. The financial statements are prepared in addition to the financial reports used to monitor and control budgetary resources which are prepared from the same books and records. The statements should be read with the realization that they are for a component of the U.S. Government, a sovereign entity.

Total Assets and Total Liabilities



Balance Sheet. The Department has significant unfunded liabilities that will require future appropriations to fund. The most significant of these represent ongoing efforts to cleanup environmental contamination resulting from past operations of the nuclear weapons complex. The FY 2006 environmental liability estimate totaled $230 billion and represents one of the most technically challenging and complex cleanup efforts in the world. Estimating this liability requires making assumptions about future activities and is inherently uncertain. The future course of the Department's environmental management program will depend on a number of fundamental technical and policy choices, many of which have not been made. The cost and environmental implications of alternative choices can be profound.

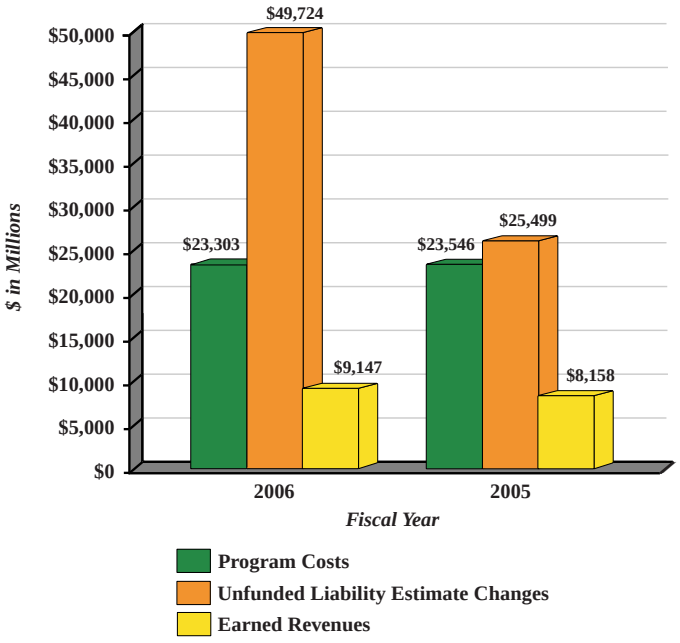
FY 2006 Liabilities ($ in Millions)



Changes to the environmental baseline estimates during FY 2006 and FY 2005 (unaudited) resulted from inflation adjustments to reflect constant dollars for the current year; improved and updated estimates for the same scope of work; revisions in acquisition strategies, technical approach or scope; regulatory changes; cleanup activities performed; additional scope and transfers out of the environmental baseline estimates; and additions for facilities transferred from the active and surplus category.

Net Cost of Operations. The major elements of net cost include program costs, unfunded liability estimate changes and earned revenues. Unfunded liability estimate changes result from inflation adjustments;

Major Elements of Net Cost



improved and updated estimates; revisions in acquisition strategies, technical approach, or scope; and regulatory changes. The Department's overall net costs are dramatically impacted by these changes in environmental and other unfunded liability estimates. Since these estimates primarily relate to the cost of multiple years operations, they are not included as current year program costs, but rather reported as "Costs Not Assigned" on the Consolidated Statements of Net Cost. Program costs also exclude current-year outlays for environmental cleanup work as those costs were accrued in prior years.

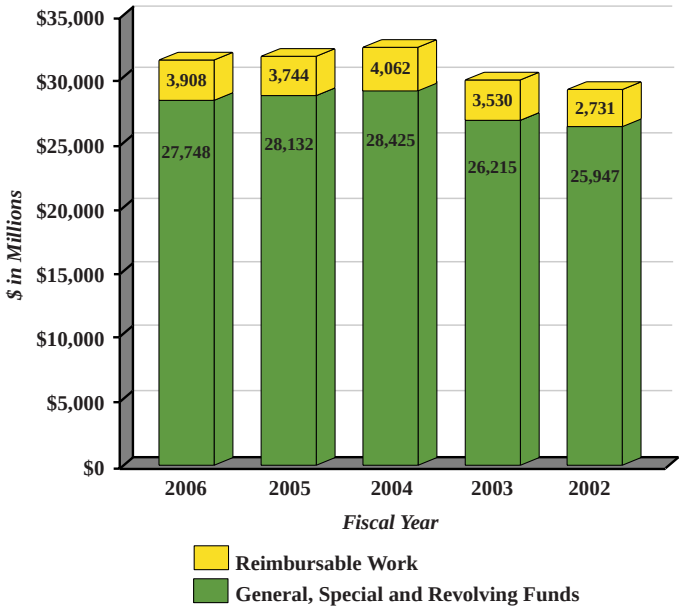
Budgetary Resources. The Combined Statements of Budgetary Resources provide information on the budgetary resources that were made available to the Department for the year and the status of those resources at the end of the fiscal year. The Department receives most of its funding from general government funds administered by the Department of the Treasury and appropriated for Energy's use by Congress. Since budgetary accounting rules and financial accounting rules may recognize certain transactions at different points in time, Appropriations Used on the Consolidated Statements of Changes in Net Position will not match costs for that period. The primary difference results from recognition of costs related to changes in unfunded liability estimates. The Consolidated Statements of Financing reconcile the accrual-based and budgetary-based information.

Pension/Postretirement Benefits Liabilities Trend Analysis. A 50 basis point increase from its historical low in the discount rate used to estimate contractor employee pension plan obligations was the primary reason for an improvement in the funded status from an under funding of more than $5.7 billion last year to an under funding of almost $4.5 billion in FY 2006 for these plans. The discount rate increase improved the funding by $2.5 billion, but was offset partially by the cost of additional benefits accruing and other losses during the year. A return to the pre-2002 levels of discount rates could significantly reduce or eliminate the unfunded pension obligation.

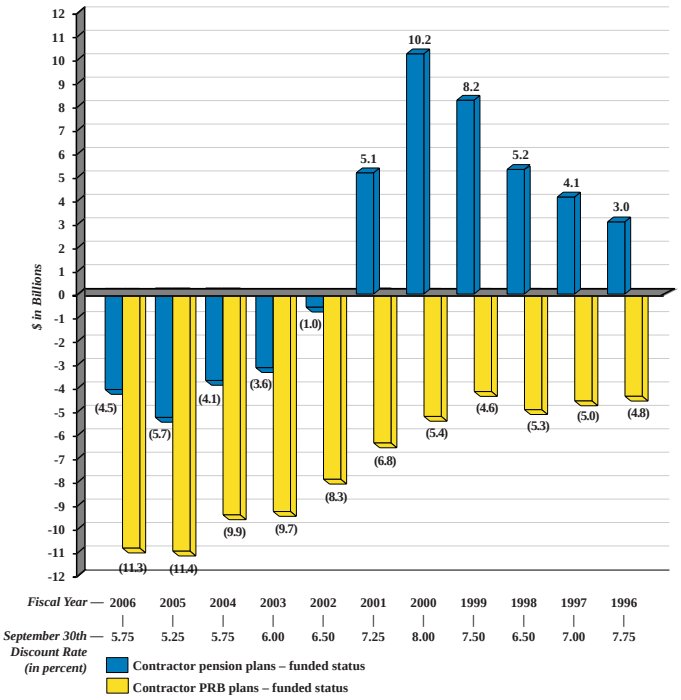
A similar change in the discount rate used to estimate the obligations of contractor postretirement benefits other than pensions (PRB) improved the funded status by $1.0 billion, but was nearly offset by the cost of additional benefits accruing, higher than expected increases in the cost of medical care and other losses during the year. Assets are not generally set aside to fund PRB plans as they are for pension plans, so PRB plans are not expected to ever become fully funded.

Changes in the estimated plan benefit obligations are generally amortized over an extended time period, and therefore do not result in an immediate change in unfunded liabilities recorded by the Department. However, the size and direction of changes in the funded status have significant implications for future funding and budgeting needs. The table below shows the funded status for contractor employee pension, PRB plans and the year-end discount rate from FY 1996 to FY 2006.

Obligations Incurred



Pension/Postretirement Benefits Liabilities Trend Analysis



Management Assurances

Federal Managers' Financial Integrity Act

The *Federal Managers' Financial Integrity Act* (FMFIA) of 1982 requires that agencies establish internal control and financial systems to provide reasonable assurance that the integrity of Federal programs and operations is protected. Furthermore, it requires that the head of the agency provide an annual assurance statement on whether the agency has met this requirement and whether any material weaknesses exist.

In response to the FMFIA, the Department developed an internal control program which holds managers accountable for the performance, productivity, operations and integrity of their programs through the use of management controls. Annually, senior managers at the Department are responsible for evaluating the adequacy of the internal controls surrounding their activities and determining whether they conform to the principles and standards established by the OMB and the GAO. The results of these evaluations and other senior management information are used to determine whether there are any internal control problems to be reported as material weaknesses. The Departmental Internal Control and Audit Review Council, the organization responsible for oversight of the Management Control Program, makes the final assessment and decision for the Department.

Appendix A of OMB Circular A-123

New internal control requirements for publically traded companies contained in the *Sarbanes-Oxley Act* of 2002 paved the way for the Federal Government to also strengthen its internal control requirements. The issuance of Appendix A of OMB Circular A-123 provides new specific requirements to agencies for conducting management's assessment of internal control over financial reporting. The Department has adopted, with the approval of OMB, a three-year, phased approach for implementing the new requirements in Appendix A of OMB Circular A-123. For FY 2006, the scope for Federal sites was limited to the high-risk activities that are most critical to supporting our financial statement audit goals. For contractor sites, the scope included all high-risk activities. All activities, including medium and low-risk, are expected to be completed by the end of FY 2008. Material weaknesses identified as of June 30, 2006:

- Controls over entries to record reductions to environmental liabilities and Construction Work in Progress related to legacy waste expenditures were not working effectively. Controls failed to prevent or detect, in a timely manner, material differences between reductions to legacy waste facilities and environmental liabilities for current year legacy waste capital expenditures.
- Controls over reconciliation and confirmation of interoffice accounts receivable and accounts payable were not working effectively. Standard Accounting and Reporting System (STARS) reports necessary to facilitate interoffice reconciliations were not available in time for field offices to confirm interoffice receivables and payables prior to the preparation of the Department's third quarter financial statements.
- Controls to ensure integrated contractors properly recorded current year changes to pension and PRB unfunded liabilities were insufficient to identify the use of the incorrect Standard General Ledger accounts and program values. STARS edits and/or Headquarters reconciliation procedures failed to identify entries made by integrated contractors that did not comply with the Department's guidance for unfunded pension and PRB liabilities.

Although the material weaknesses described above were identified as of June 30, 2006, appropriate corrective actions have been taken. Therefore, these issues are not considered material for the year-end financial statements presented in this report.

The following material weakness was identified subsequent to June 30, 2006:

- Controls over the recording of obligations and the timely deobligations of funds in excess of those needed to cover undelivered orders need to be improved. These controls include performing periodic reviews of undelivered orders to ensure they are valid and supported by source documents.

The Department has initiated corrective actions to remediate this material weakness. Specifically, supplemental year-end closing statement (FMS 2108) review guidance was issued to all field offices to perform a year-end analysis of balances of undelivered orders and accounts payable in excess of $100,000 that have had no activity for the past twelve months and to deobligate funds where warranted. This effort will mitigate the risk of any material misstatements of undelivered orders at year-end until a more comprehensive review of these balances can be performed in FY 2007.

Federal Financial Management Improvement Act

The *Federal Financial Management Improvement Act* (FFMIA) of 1996 was designed to improve Federal financial management and reporting by requiring that financial management systems comply substantially with three requirements: (1) Federal financial management system requirements; (2) applicable Federal accounting standards; and (3) the United States Government Standard General Ledger at the transaction level. Furthermore, the Act requires independent auditors to report on agency compliance with the three stated requirements as part of financial statement audit reports.

The Department has evaluated its financial management systems and has determined that they substantially comply with Federal financial management systems requirements and the U.S. Government Standard General Ledger at the transaction level. However, the Department did not substantially comply with the applicable Federal accounting standards

component of FFMIA due to the material weakness related to undelivered orders, reported in the Independent Auditors' Report. Actions to address the Department's A-123 material weakness (noted earlier) related to undelivered orders will also address this non-compliance.

Management Assurances

The Department's management is responsible for establishing and maintaining an effective system of internal controls to meet the objectives of the *Federal Managers' Financial Integrity Act*. To support management's responsibilities, the Department is required to perform an evaluation of management and financial system internal controls as required by Sections II and IV, respectively, of OMB Circular A-123, *Management's Responsibility for Internal Control*, and internal controls over financial reporting as required by Appendix A of the Circular. The following assurances are made based on the results of these evaluations, which are reflected in reports and representations completed by senior accountable managers within the Department.

The Department has completed its evaluation of management and financial system internal controls. Based on that evaluation, the Department can provide reasonable assurance that management internal controls over effectiveness and efficiency of operations and compliance with applicable laws and regulations as of September 30, 2006, was operating effectively with no material weaknesses found in the design or operation of the internal controls. Evaluation results also indicated that the Department's financial systems generally conform to governmental financial system requirements. However, the Department does not substantially comply with the Federal accounting standards component of the *Federal Financial Management Improvement Act*.

In addition, the Department has completed its FY 2006 limited scope evaluation of internal control over financial reporting, which includes safeguarding of assets and compliance with applicable laws and regulations, as required by Appendix A of OMB Circular A-123 and Departmental requirements. The evaluation included an assessment of both entity and process controls, as required. Based on the results of the evaluation, the Department is providing reasonable assurance that, except for the material weaknesses noted earlier in this section, internal controls over financial reporting, as of June 30, 2006, were working effectively. However, the Department cannot provide assurance on the overall financial reporting control system (qualified or unqualified) until we have completed our OMB approved three-year baseline evaluation in FY 2008.

Samuel W. Bodman
November 15, 2006

Federal Information Security Management Act

The *Federal Information Security Management Act* (FISMA) of 2002 provides a comprehensive framework for establishing and ensuring the effectiveness of security controls for information and information systems that support Federal assets and operations. In accordance with FISMA, the Chief Information Officer (CIO) is responsible for developing, maintaining, ensuring compliance with and reporting annually on the agency's progress in implementing the agency's information security program.

The Department is committed to improving the protection of its information and information systems through a strong cyber security management program. During FY 2006, the Department's senior management created the Cyber Security Executive Steering Committee. The committee is chaired by the CIO and includes the Department's three Under Secretaries; the Chief Health, Safety and Security Officer; the Administrator of the EIA; and a senior representative of the Power Marketing Administrations as active members. The Secretary and the Deputy Secretary are personally involved in cyber security management and have guided the development of a Cyber Security Revitalization Plan to focus higher level attention to the management of cyber security across the DOE complex.

The Cyber Security Revitalization Plan, developed by the Executive Steering Committee and approved by the Deputy Secretary, establishes a governance framework for cyber security management in the Department through a partnership between the Office of the CIO, the Under Secretaries and other senior management to provide mission-focused protection of all DOE information and information systems. The Steering Committee has also established a Cyber Security Working Group, which participates actively in the development of cyber security guidance and in other cyber security activities.

During FY 2006, the Department has made significant improvements to its cyber incident handling capability, including initiating continuing action in real time by a Departmentwide cyber forensics team that addresses the most serious cyber attacks that it faces. Improvements have been made in cyber security incident management coordination with other Federal agencies and cyber incident reporting to the IG and other key Departmental organizations. The Department has also engaged in a continuing cyber security awareness campaign involving DOE senior management and the entire complex, especially with regard to actions our employees and contractors can take to improve our cyber security posture. The Department has taken steps to improve its secure configuration management and to improve its Departmentwide automated asset management/inventory management processes. Use of continuous vulnerability scanning has been expanded to include the entire Department.

Although improvements remain to be carried out in the protection of the Department's information and information systems, no significant deficiencies were identified under FISMA during FY 2006. The Department will continue to execute these improvements to strengthen its cyber security.

The Department carries out multiple, complex and highly diverse missions. Although the Department is continually striving to improve the efficiency and effectiveness of its programs and operations, there are some specific areas within DOE's operations that merit a higher level of focus and attention. These areas represent the most daunting management challenges and significant issues the Department faces in accomplishing its mission. The *Reports Consolidation Act* of 2000 requires that, annually, the Inspector General (IG) prepare a statement summarizing what he considers to be the most serious management and performance challenges facing the Department to be included in the Performance and Accountability Report (PAR). The IG's statement, included in the Financial Results section of the PAR, identifies these challenges. Similarly, in FY 2003 the Government Accountability Office (GAO) identified six major management challenges and program risks to be addressed by the Department.

The Department, after considering the areas identified by the IG, GAO and all other critical activities within the agency, has identified 10 "Significant Issues" that represent the most important matters facing DOE now and in the coming years. It is the Department's goal that resolution of these Significant Issues will help mitigate the IG and GAO management challenges as well as internally identified issues.

The Department aggressively pursues corrective actions for all challenges, whether identified externally by the IG, GAO or internally. As a result of corrective actions taken on the following two FY 2005 Significant Issues, the Department no longer identifies these areas on the FY 2006 list of Significant Issues. To ensure that appropriate focus and attention remains with these areas, the Department will continue to internally track further enhancements and actions.

Financial Control and Reporting

In FY 2005, the Department reported that operational issues surrounding the overlapping implementations of the financial services "Most Efficient Organization" (MEO) and new accounting and reporting systems created significant challenges in the area of financial control and reporting. The lack of fully documented processes and operational procedures exacerbated reconciliation and data conversion issues, and staffing and skill mix problems negatively impacted MEO start-up operations and the ability to effectively deal with those issues. Since that time, critical policies and procedures have been put in place, key processes have been documented and a resource plan has been initiated to ensure the strategic training and deployment of staff to effectively mitigate the challenges faced in FY 2005.

The progress made in addressing the critical milestones to resolve this issue has minimized the potential impacts of the remaining issues; therefore, financial control and reporting will no longer be reported as a Significant Issue. However, while these issues have been stabilized, the Department recognizes that additional work needs to be done and will continue to internally track all of the previously identified milestones to completion. In addition, material issues related to financial control and reporting are being captured in the OMB Circular A-123 reporting section of this report.

Information Technology Management

Since FY 2000, the Department has reported a significant issue regarding the ability to fully implement Federal information technology requirements of the *Clinger-Cohen Act* of 1996 and OMB Circular A-130. These issues related to the Department's decentralized management approach, need for greater CIO span of control in the budgeting process and lack of an information technology baseline. In FY 2006, the last of the critical milestones required to resolve this issue were completed. In doing so, key strategy objectives were accomplished including centralizing the Department's information technology management approach, expanding control and influence of the CIO in the program budgeting process and establishment of an information technology baseline. These actions have provided managers with sufficient information to make sound information technology investment decisions and have laid the foundation for the CIO to better guide and influence the acquisition of technology resources within the Department.

Based on the progress made in this area, information technology management will no longer be reported as a significant issue; however, the Department recognizes that the ever-changing technology landscape will continue to pose new challenges. Therefore, we will continue to pursue and internally track additional actions and strategies to further enhance our information technology management activities.

FY 2006 Management Challenges and Significant Issues Crosswalk

To highlight how the Department's strategy for mitigating its Significant Issues addresses the IG and GAO challenge areas, the following table provides a crosswalk of the relationship between the three. Please note that the IG and GAO did identify areas that are not currently reported as Significant Issues by the Department. While the ongoing importance of those areas is recognized and they continue to receive appropriate management attention, due to the progress the Department has made in those areas in the past, they are no longer considered to be significant management problems.

IG Challenge Area	GAO Challenge Area	Significant Issue Identified By the Department
Contract Management **(S)**	Resolve problems in contract management that place the agency at high risk for fraud, waste and abuse **(S)**	Oversight of Contractors **(S)**
		Acquisition Process Management **(S)**
Safeguards and Security **(D)**	Address security threats and problems **(D)**	Security **(D)**
Environmental Cleanup **(D)**	Improve management for cleanup of radioactive and hazardous wastes **(D)**	Environmental Cleanup **(D)**
		Nuclear Waste Disposal **(D)**
Stockpile Stewardship **(D)**	Improve management of the Nation's nuclear weapons stockpile **(D)**	Stockpile Stewardship **(D)**
Project Management **(D)**		Project Management **(D)**
Cyber Security **(S)**		Unclassified Cyber Security **(S)**
Energy Supply **(D)**	Enhance leadership in meeting the Nation's energy needs **(D)**	
	Revitalize infrastructure **(S)**	
IG Watch List		
Human Capital Management **(S)**		Human Capital Management **(S)**
Worker and Community Safety **(S)**		Safety & Health **(S)**
Financial Management and Reporting **(S)**		

(D) Mission Direct (S) Mission Support

Oversight of Contractors

Description of Issue

Improvements are needed in the oversight of contractors managing and operating the Department's facilities. Specific oversight problems have been identified at environmental cleanup sites and laboratories conducting national security and scientific activities. Adequate oversight is needed to ensure that contractor operations are effective and efficient.

Actions Taken & Remaining

In FY 2006, the Department's Office of Science (SC) continued implementation of its new restructured organization that places clear line management accountability for the laboratory contracts at the Site Office. This sharpened focus within SC can aid the efficient and effective SC laboratory mission and operational performance. SC also utilized its new contract approach to complete the Thomas Jefferson National Accelerator Facility contract. Over the next 24 months this new approach will be utilized to compete the contracts at the Argonne, Ames, Fermi and Princeton laboratories. In addition, SC has completed its revision of new performance measures and has been conducting both technical and business reviews with each of their laboratory contractors.

Recognizing the need for increased focus on planning and management of contracts and the competitive procurement process, the Department has restructured its Office of Environmental Management (EM) to include a Deputy Assistant Secretary for Acquisition and Project Management. This reorganization will establish more systematic ways to identify lessons learned from past contract awards; emphasize training for its contracting staff; streamline acquisition activities; develop consistent contracting strategies that are expected to lead to shorter procurement lead-times; and institute more timely resolution of contracting issues leading to contract modifications.

Additionally, National Nuclear Security Administration (NNSA) Site Manager reporting has been realigned to the Deputy Administrator for Defense Programs to enhance management accountability and provide consistent programmatic, management and administrative guidance to all areas, including contract administration.

Expected Completion

Correction is expected to extend into the out-years with the completion date to be reassessed in FY 2007.

Acquisition Process Management

Description of Issue

The Department is the largest civilian contracting agency in the Federal Government and spends approximately 90 percent of its annual budget on contracts to operate its scientific laboratories, engineering and production facilities and environmental restoration sites. A June 2006 GAO report cited concerns involving delays in awarding contracts and the need for a systematic method to share lessons learned from contract awards.

Actions Taken & Remaining

To improve the timeliness in awarding contracts, several actions are underway. For example, EM, which has the majority of complex procurement actions, is staffing a new organization to plan and implement its procurements. The Office of Management has developed a monthly report for senior leaders on the status of major procurements. Also, regular meetings between senior program, management and procurement leaders have been implemented to discuss at-risk procurements.

The Department also continuously identifies and shares lessons-learned with DOE staff. Recent ongoing source evaluation board training conducted in the field provided procurement and technical staff with current policy, the latest guidance and lessons-learned from analysis of past DOE competitive procurements.

The Department's Chief Acquisition Officer will lead a review of the process used Departmentwide to award major procurements with the goals of identifying and eliminating unnecessary, inefficient and redundant steps, improving timeliness of contract awards and better sharing of lessons learned. Recommendations for improvement will be identified and included in an action plan with milestones and performance metrics.

Expected Completion

FY 2007

Security

Description of Issue

Unprecedented security challenges have evolved since the events of September 11, 2001. The need for improved homeland defense, highlighted by the threats of terrorism and weapons of mass destruction, created new and complex security issues that must be surmounted to ensure the protection of our critical energy resources and infrastructure. These have made it necessary for the Department to reassess and strengthen its security postures.

Actions Taken & Remaining

In May 2004, the former Secretary of Energy announced a set of sweeping new initiatives to improve security across the Department's nationwide network of laboratories and defense facilities, particularly those housing weapons-grade nuclear material. The Department's continued completion of these initiatives will ensure the Department has a clear strategic security plan outlining the Department's future security course, conducts ongoing threat analyses to establish the framework for continually improving security protective measures and enhances the physical security of our facilities. In FY 2006, a number of actions were taken to improve security across the Department. These actions focused on implementing the necessary improvements to meet the current Design Basis Threat Policy to include revising vulnerability assessments; evaluating, testing and deploying security technologies; and implementing the elite protective force model. Through an integrated approach, the Department is working to coordinate site mission, operations, security technologies and the elite protective force to provide more robust security protection measures at a lower overall cost. The Security Technologies Demonstration at the Idaho National Laboratory included this approach and the results of this successful demonstration are being combined with a review of security protection measures. This approach will be initiated throughout the Department to build an efficient security program that is also flexible to meet both today's threat and tomorrow's challenges.

NNSA continued the implementation of processes, procedures and technologies to fully implement the Enhanced Design Basis Threat. Resource and planning documents were developed for the Diskless Workstation Conversion Secretarial initiative. During FY 2006, NNSA also continued work with various programmatic and administrative elements to meet portions of Homeland Security Presidential Directive-12 access controls requirements. NNSA also continued to address specific security operations and personnel issues identified by the IG and GAO.

Expected Completion

Long-term correction is expected due to the continuing nature of security threats.

Environmental Cleanup

Description of Issue

There are significant long-term compliance and waste management problems at the Department's facilities due to past operations that left risks to the environment. Even though these issues resulted from earlier activities conducted in a different atmosphere and under less stringent standards than today, the Department is committed to maintaining compliance with current environmental laws and agreements.

Actions Taken & Remaining

The Department continues to make progress in cleaning up contaminated sites. In FY 2006, five sites achieved cleanup completion - the Rocky Flats Site in Colorado, Columbus Site in Ohio, Lawrence Livermore National Laboratory – Main Site in California and the Salmon Site and Kansas City Plant in Missouri. In addition, the Fernald Site in Ohio is expected to be completed by the end of the calendar year. The Lawrence Berkeley National Laboratory and the Sandia National Laboratory in California, and the Miamisburg Site in Ohio are also expected to complete cleanup activities in FY 2007. Longer term activities within the EM program include treating radioactive liquid waste into a stable form; safely storing nuclear materials; disposing transuranic and low-level waste; and decontaminating and decommissioning excess facilities and remediating the surrounding environment.

While cleanup progress continues to be made, there have been some setbacks. Several assumptions made as part of the Accelerated Cleanup initiative have not materialized; new work scope from emerging cleanup requirements has now been identified; and execution of some key projects has not been adequate. The Department is currently updating these assumptions to reflect known changes in the regulatory and statutory requirements, incorporate changes based on actual program performance and to incorporate technological and acquisition strategies to meet the Department's long-term environmental commitments. In addition, EM continues to implement robust project management principles including the refinement and validation of resource-loaded project baselines and senior leadership monitoring of cost and schedule performance.

Expected Completion

Correction is expected to extend to the out-years with the completion date to be reassessed in FY 2008.

Nuclear Waste Disposal

Description of Issue

Construction of a repository for the disposal of spent nuclear fuel and high-level radioactive waste, authorized under the *Nuclear Waste Policy Act*, at Yucca Mountain, Nevada, has been delayed because of external factors and program adjustments. Funding shortfalls and the scientific and technical challenges encountered in this first-of-a-kind endeavor to develop a disposal system that must potentially endure a compliance period of a million years have complicated the steady progress necessary to achieve previously published milestones. Finalizing the EPA radiation protection standards and addressing the licensing requirements of the NRC to submit a license application are the key to achieving the new milestones published in July 2006.

Actions Taken & Remaining

The introduction of the *Nuclear Fuel Management and Disposal Act*, in April 2006, seeks to provide stability, clarity and predictability to the Yucca Mountain Project. The proposed legislation addresses many of the uncertainties that are currently beyond the control of the Department and have the potential to significantly delay the opening date for the repository. The most important factor is the enactment of a provision that will facilitate Congressional funding needed to implement the Project.

The Program adopted a primarily canister-based approach for handling commercial spent nuclear fuel. The revised approach enabled deployment of necessary surface and sub-surface facilities in a manner that could accommodate future funding and income streams and enhances repository operations and performance.

In January 2006, the Department designated Sandia National Laboratories the lead laboratory to coordinate and organize all scientific work on the Project. Sandia National Laboratories will also review the existing infiltration model and prepare a new model to be used as part of the technical basis for the license application.

The Program is implementing management controls in accordance with DOE O 413.3, *Program and Project Management for the Acquisition of Capital Assets*, and performance metrics required under the Department's performance and accountability report system and OMB reporting requirements to ensure it achieves its revised milestones. Additionally, the Program is proceeding to certify its earned value management system, which will be in place prior to critical decision-2, Approve Performance Baseline.

Expected Completion

Submittal of a license application to the NRC by June 30, 2008; construction authorization from the NRC by 2011; and receipt of a license amendment from the NRC to receive and possess nuclear material by 2017.

Stockpile Stewardship

Description of Issue

Stewardship of the Nation's nuclear weapons stockpile is one of the most complex, scientifically technical programs undertaken and the Department needs to ensure that all aspects of this mission-critical responsibility are fulfilled. Based on stockpile stewardship activities, the Secretary, jointly with the Secretary of Defense, annually certifies to the President that the nuclear weapons stockpile is safe and reliable and that underground nuclear testing does not need to resume. Success is dependent upon unprecedented scientific tools to better understand the changes that occur as nuclear weapons age, enhance the surveillance capabilities for determining weapon reliability and extend weapon lives. The Department must ensure that problems in these areas are aggressively addressed.

Actions Taken & Remaining

Processes have been put in place to eliminate a backlog of surveillance tests and resolve deficiencies in the investigations conducted when weapons problems are identified. Plans and financial controls over weapons refurbishment have been strengthened. Self-assessments of project management processes of the Enhanced Surveillance Campaign have been completed and all sites have developed an Enhanced Surveillance Campaign Project Management Improvement Plan. During FY 2005, the Enhanced Surveillance Campaign Risk Management Plan was issued. The Life Extension Programs and sub-elements are now subject to the NNSA's Planning, Programming, Budgeting and Evaluation processes and the Department's project management processes. Resource loaded plans that contain cost, scope and milestones were implemented for the Enhanced Test Readiness Program during FY 2005.

In FY 2006, NNSA announced the details of the Nuclear Weapons Complex 2030, a comprehensive plan to enhance the Department's capability to respond to national and global security challenges while facilitating the President's vision of a smaller stockpile consistent with our national security needs. To guide and oversee Complex 2030, NNSA established the Office of Transformation under its Deputy Administrator for Defense Programs. Other major activities initiated to implement Complex 2030 include a Reliable Replacement Warhead, the acceleration of warhead dismantlement to enhance test readiness and the move toward consolidating special nuclear material to fewer sites.

Expected Completion

Long-term correction is expected.

Project Management

Description of Issue

The Department needs to improve the discipline and structure for approving and controlling program and baseline changes to projects as well as the Departmentwide approach for certifying Federal Project Directors at predetermined skill levels to ensure competent management oversight of resources. In addition, it was determined that the Department needs stronger policies and controls to ensure that ongoing projects are re-evaluated frequently in light of changing missions.

Actions Taken & Remaining

EM has applied project management principles to all cleanup projects having a total estimated cost greater than $20 million and is continuing its review of resource-loaded cost and schedule baselines for 88 projects. The baselines describe in detail the activities, schedule and resources required to complete the EM cleanup mission at each site or to construct a major facility at a site. Of the 88 projects, 67 are considered active. External independent reviews have been completed for 47 of the 67 active projects. The remaining 20 projects will have reviews scheduled and conducted as expeditiously as possible.

SC has an established independent, peer evaluation process for assessing the performance of its projects. This process has been recognized by Office of Science and Technology Policy as a best practice among Federal agencies. Typically, SC's independent project reviews are conducted semiannually for ongoing, major construction projects and fabrication of large-scale experimental equipment to assess the projects' technical progress, cost and schedule performance, and management practices. Additionally, projects are reviewed prior to approvals of critical decisions, such as: establishing technical, cost and schedule baselines; requesting construction funds as part of the Department's budget process; and requesting authorization to start operations. This process promotes comprehensive, regular communication of project status to SC management and timely mitigation of project issues. The effectiveness of the process is demonstrated by the successful completion of SC projects and the history of project performance reported in the Department's Project Assessment and Reporting System.

During FY 2006, NNSA continued their efforts in strengthening and expanding project management capabilities through the certification process of its construction Project Managers.

Expected Completion

FY 2007

Unclassified Cyber Security

Description of Issue

In July 2005, the Deputy Secretary established a Cyber Security Improvement Initiative. The goal of the initiative was to identify improvements that could be made in management, operational and technical cyber security controls within the Department. The first phase of the initiative resulted in the identification of a number of improvements that could be made to cyber security across the agency. The second phase involved conducting Site Assistance Visits (SAVs) to evaluate implementation of cyber security policies and standards, and test the effectiveness of security controls. SAVs have been conducted at several sites, with planned expansion to other DOE operations.

Actions Taken & Remaining

The Cyber Security Project Team (CSPT), under the direction of the Office of Health, Safety and Security (HSS), and including representatives from the CIO, NNSA and Office of Energy, Science and Environment (ESE), was charged with reviewing systemic problems in the area of cyber security and developing an initial plan of action to improve cyber security across the DOE complex. Following the release of the *DOE Cyber Security Project Team Summary Report and Plan of Action* in November 2005, and management initiatives taken by the incoming CIO, the Secretary and Deputy Secretary of Energy, the Department embarked on an intensive effort to aggressively address systemic weaknesses in the implementation of cyber security. As part of this effort, the CIO coordinated with the Department's Senior Management to develop a plan to revitalize cyber security across the agency. This plan was formally approved by the Deputy Secretary on March 6, 2006. The plan incorporates the recommendations outlined in the CSPT report, establishes a new governance structure that emphasizes implementation and accountability at the Under Secretary level and contains tactical and strategic elements for mitigating systemic weaknesses identified by internal and external oversight organizations.

NNSA initiated a reprogramming of FY 2006 funds to address some of the more immediate cyber security issues. Implementation plans for NNSA's enhanced cyber security directives have been developed by NNSA field organizations and are being put into place.

Expected Completion

Long-term corrective action is expected due to the evolving nature of security threats.

Human Capital Management

Description of Issue

Since 1995, the Department has experienced a 27 percent reduction in the workforce. As of the beginning of FY 2005, up to 53 percent of the Department's workforce is eligible for retirement within the next five years. The decline in staffing has left the Department with a significant challenge: reinvesting in its human capital to ensure that the right skills, necessary to successfully meet its missions, are available.

Actions Taken & Remaining

A Departmental framework for addressing this issue was put in place with the implementation of a comprehensive human capital management strategy. The Department has continued its focus on this issue as evidenced by the revision of DOE's Human Capital Management Strategic Plan.

During FY 2006, efforts continued to re-shape the Department's workforce through increased emphasis on performance and accountability. The Department completed total reorganizations in the offices of SC and EM, while the NNSA completed the implementation of all its reengineering plans. NNSA also developed and used Managed Staffing Plans in assigning staffing targets and in identifying critical hiring needs, skills mix imbalances and buyout eligible occupations. EM implemented its comprehensive Capital Management Plan to address issues of performance excellence and leadership continuity. As part of the Department's efforts under Proud-to-Be III, we developed and implemented a Departmentwide Human Capital Management Assessment Program.

The Department will continue to strategically manage its Federal workforce through the use of voluntary separation incentive payments and voluntary early retirement authority, identify skill mix and skill gap issues and work on closing skill gaps. In addition, the Department will continue to conduct strategic human capital analyses and realign Department organizations complex-wide to ensure a workforce that is fully capable of meeting its responsibilities.

Expected Completion

FY 2007

Safety & Health

Description of Issue

Ensuring the Safety and Health of the public and the Department's workers is one of the top priorities in accomplishing our challenging scientific and national security missions. Due to the inherently critical nature of these issues, there is the need for continuous vigilance and improvement. Currently, the Department continues to address emerging safety issues identified within the past year.

Actions Taken & Remaining

Significant actions have been taken to mitigate Safety and Health concerns. SC continued efforts to identify benchmarks for safety performance and establish a best-in-class performance measure based on performance by the top ten percent of similar research and development industries. These goals are institutionalized and are being incorporated into the lab appraisal plans. SC's plan is to have all labs performing in the top ten percent of research and development (R&D) industries by the end of FY 2007.

The Office of Nuclear Energy (NE) completed planned reviews of Advanced Test Reactor (ATR) safety bases documentation in FY 2006 and will continue these reviews as part of the ATR Documented Safety Analysis reconstitution project. Additionally, NE will complete its implementation of DOE Order 226.1, *Oversight Policy Implementation*. This effort will incorporate an Oversight Proficiency Assurance Program to assure the proper competencies for safety oversight and delegation of safety authorities; and an Oversight Standard Operating Procedure that will require a fully integrated, risk-based oversight schedule starting in FY 2007.

In FY 2006, the Office of Independent Oversight, within HSS, continued its mission to evaluate the effectiveness and institutional safety and health processes and the implementation of the core functions of Integrated Safety Management.

In addition to the basic statistical methodology to monitor safety performance, EM adopted a project based approach in FY 2006. By using the EM Earned Value Management System (EVMS), EM is now able to contrast and compare project performance with contractors' safety performance. The EVMS model to normalization clearly aligns EM's commitment to manage safety through project performance and offers the ability to normalize safety performance data by site, prime contractor and corporate contractor.

For FY 2006, the NNSA's Environmental Safety & Health (ES&H) Advisor and the Chief of Defense Nuclear Security continued their respective efforts with the weapons complex in addressing Defense Nuclear Facilities Safety Board and other Department of Defense safety concerns. The Deputy Administrator for Defense Programs assumed reporting authority for NNSA's site managers in order to strengthen and provide consistent guidance in safety and other management areas.

Expected Completion

Long-term correction expected with completion to be reassessed in FY 2007.

— Improper Payments Information Act —

The *Improper Payments Information Act* (IPIA) of 2002, Public Law (P.L.) No. 107-300, requires agencies to annually review their programs and activities to identify those susceptible to significant improper payments. In addition, the *Defense Authorization Act* (P.L. No. 107-107) established the requirement for government agencies to carry out cost effective programs for identifying and recovering overpayments made to contractors, also known as "Recovery Auditing." The OMB has established specific reporting requirements for agencies with programs that possess a significant risk of erroneous payments and for reporting on the results of recovery auditing activities.

While the Department does not have any programs that meet the OMB criteria for significant risk, improper payments are monitored on a quarterly basis to ensure our error rates remain at minimal levels. For determining payments subject to the IPIA, the Department includes all payments, whether from contracts or grants. The Departmental erroneous payment rate has remained below one percent since the inception of our tracking program in FY 2002. To support continued success, the Department has committed to pursue reduction of improper payments at any one of the Department's payment sites that exceed a target rate of 1/10 of 1 percent for any quarter. Currently, the majority of all sites are below the target and the sites above target have identified corrective actions.

The Department has established a policy for implementing recovery auditing requirements. This policy prescribes requirements for identifying overpayments to contractors and establishes reporting standards to track the status of recoveries. Analysis of payment activities confirmed a low percentage of overpayments and a high recovery rate. The Department will continue to focus on both the identification and recovery of improper payments to maintain our record of low payment errors and ensure effective stewardship of public funds. Detailed information on IPIA reporting required by OMB is available in the Other Accompanying Information section.

Improper Payments ($ in millions)

	FY 2003		FY 2004		FY 2005		FY 2006	
	Dollars and/or Rate		Dollars and/or Rate		Dollars and/or Rate		Dollars and/or Rate	
Total Payments	$22,695		$23,639		$24,115		$23,652	
Total Improper Payments	$13.7	0.06%	$20.3	0.09%	$14.5	0.06%	$19.0	0.08%

Note: Beginning in FY 2004, Federal payroll payments were excluded due to the outsourcing of the Department's Federal payroll function.

FY 2005 Overpayments to Contractors ($ in millions)

	Dollars
Total Overpayments	$ 11.900
Total Recovered	$ 10.300
Total Pending Recovery	$ 1.530
Total Unrecoverable	$ .073

Note: Overpayment information required for prior year only.

PERFORMANCE RESULTS

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

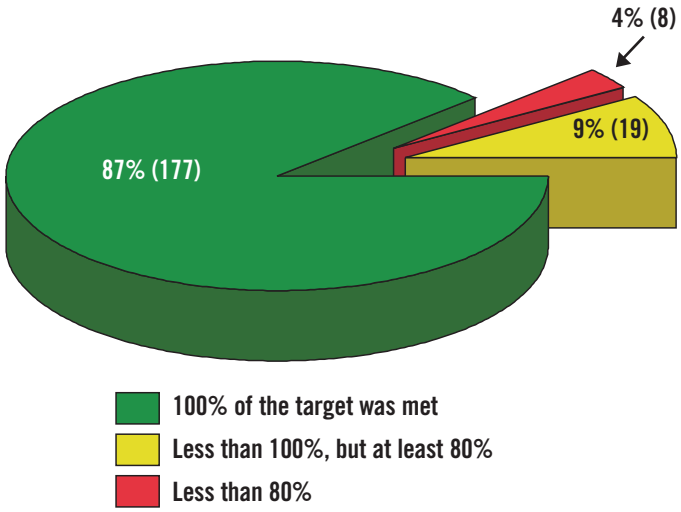
PERFORMANCE INTRODUCTION

The Performance Results section provides detailed information and an assessment of our progress for the Department's 54 program goals and 204 associated annual targets. Understanding the annual progress made toward outcome-oriented, multi-year program goals is a key indicator of whether the Department is, in turn, making progress toward its four strategic and seven general goals.

The following section is organized into seven sub-sections, each corresponding to one of the Department's seven general goals. Summary level information is provided at the start of each sub-section, and includes a tally of annual target performance, as well as current and prior year cost information. Detailed discussions of the program goals and associated annual targets that contribute to the general goal are presented with the following performance information:

- Descriptions and assessments of FY 2006 program goals and annual targets;
- Commentary for each program goal and annual target that explains the relevance of the performance results;
- Plans of action for resolving unmet annual targets;
- Supporting documentation that validates the performance results; and
- FY 2003 - FY 2005 performance results for program goals and annual targets (*where applicable).

The Department's FY 2006 annual target performance is depicted in the following chart, using the color coded-scheme described in the Program Performance section of the Management's Discussion and Analysis.



* Related prior year target performance data represents a summary of performance against similar/related target(s) from each year. As specific targets may vary annually, performance should not be interpreted as a trend of the current year target.

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

General Goal 1: Nuclear Weapons Stewardship	FY 2006 Annual Performance Targets			
Ensure that our nuclear weapons continue to serve their essential deterrence role by maintaining and enhancing safety, security, and reliability of the U.S. nuclear weapons stockpile.	G-Green	Y-Yellow	R-Red	U-Undetermined
	38	11	2	0
	Program Costs ($ in Millions): $ 6,841			

FY06	FY05	FY04	FY03	**Program Goal: Directed Stockpile Work** Ensure that the nuclear warheads and bombs in the United States nuclear weapons stockpile are safe, secure, and reliable.
Y	Y	Y	Y	

Results: In FY 2006, the Department continued to ensure the overall readiness of the nuclear weapons stockpile by completing the Annual Stockpile Certification and Surety Assessment Activities, completing most of the scheduled Stockpile Maintenance and Stockpile Evaluation activities while submitting for review design data packages for the Reliable Replacement Warhead (RRW) 18-month feasibility study. In addition, the timely completion in FY 2006 of the first production unit of an alteration to the B61-7 bomb demonstrated NNSA's Life Extension Program (LEP) refurbishment capabilities.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	G	**Assure 100 percent of warheads in the stockpile are safe, secure, reliable, and available to the President for deployment. (NA GG 1.27.01)**

Results: NNSA and Defense Threat Reduction Agency successfully reconciled the nuclear weapons stockpile content and disposition plans were provided for each weapon in non-operational or non-accepted status. This is significant because it ensures the overall availability of the nuclear weapons stockpile for national security use.

Supporting Documentation: Milestone Reporting Tool (MRT) reports; End-of-Year Reconciliation Report (Feb. 2006); Weapon Reliability Report (May 2006); Quarterly Inventory Report (July 2006).

FY06	FY05	FY04	FY03	
Y	R	Y	NA	**Complete 95 percent of items supporting Enduring Stockpile Maintenance (complete 100 percent of prior-year non-completed items). (NA GG 1.27.03)**

Results: Completed 84 percent of the items that support the Enduring Stockpile Maintenance (63 percent of the current year and 100 percent of the prior year). The major limiting factor to completing all of the current year work was a lack of safety authorization basis for four weapon systems and resources were used for other related deliverables. This maintenance is important because it ensures active nuclear weapons are fully operational, if needed by the President.

Supporting Documentation: MRT reports; quarterly Surveillance Policy and Integrated Requirements Council meetings; periodic site reviews; weapon-specific surveillance reviews; Production and Planning Directive; and surveillance cycle reports.

Action Plan: A Pantex Throughput Improvement Plan has been developed to help guide corrective actions; authorization bases for the B61 bomb and W87 warhead are completed and operations are authorized for FY 2007. The B83 bomb authorization basis is planned for the first quarter of FY 2007 and action is ongoing for the authorization basis for the W88 warhead.

FY06	FY05	FY04	FY03	
G	G	Y	NA	**Complete 34 percent (cumulative) of the Nuclear Weapons Council (NWC)-approved W76-1 Life Extension Program (LEP) activity. (NA GG 1.27.04)**

Results: This achievement is important because extending the life of the W76-1, the weapon system for Navy submarines, is on a highly success-oriented refurbishment schedule to meet DoD requirements and national security needs.

Supporting Documentation: MRT reports; W76-02005 PCD reflects actual first disassembly; and FSED Baseline schedule with completion statuses.

FY06	FY05	FY04	FY03	
Y	G	Y	NA	**Complete 36 percent (cumulative) of the Nuclear Weapons Council (NWC) approved W80-3 Life Extension Program (LEP) activity. (NA GG 1.27.05)**

Results: The W80-3 LEP was cancelled by the NWC on May 10, 2006. At the time of cancellation, the program had completed 33.7 percent (cumulative) of the approved activities. Although the W80-3 LEP is cancelled, two weapon LEPs continue on a success-oriented refurbishment schedule to meet DoD requirements.

Supporting Documentation: MRT reports: PDRAAG Report from DoD/AF/NWCA; successfully conducted flight test on Sep 14, 2005; and NA-10 Phase 6.4 Authorization Letter of April 15, 2005.

Action Plan: The program has stopped LEP activity and is preparing for full shutdown in FY 2007.

FY06	FY05	FY04	FY03	
Y	Y	G	NA	**Complete 40 percent (cumulative) of the Nuclear Weapons Council (NWC) B61-7/11 Life Extension Program (LEP) activity. (NA GG 1.27.06)**

Results: Completed 37 percent (cumulative) of the planned activities. The program fell behind in certification activities even though B61-7 production milestones were met including producing the first production unit. The majority of B61-11 activities continued on schedule, with a first production unit planned for Jan. 2007. This progress is important to the refurbishment schedule to meet DoD requirements and national security needs.

Supporting Documentation: Master Schedule input and MRT reports.

Action Plan: The B61-7 certification activities have been rescheduled for the first quarter of FY 2007, in coordination with the U.S. Air Force.

FY06	FY05	FY04	FY03	
R	G	NA	NA	**Reduce the projected W80 warhead production costs per warhead by 0.5 percent from established validated baseline, as computed and reported annually by the W80 Life Extension Program (LEP) Cost Control Board. (NA GG 1.27.08)**

Results: The W80-3 LEP was cancelled by the Nuclear Weapons Council (NWC) and the W80-3 LEP Cost Control Board has been disbanded. At the time of the cancellation, the program was on track for meeting the target.

Supporting Documentation: W80 LEP Cost Control Board approved baseline.

Action Plan: None for the W80-3 LEP, but a similar cost control efficiency measure is being proposed for the W76-1 LEP since such a measure is beneficial to all weapon programs.

FY06	FY05	FY04	FY03	
G	G	Y	Y	**Program Goal: Science Campaign** **Develop improved capabilities to assess the safety, reliability, and performance of the nuclear package of weapons without further underground testing; enhance readiness to conduct underground nuclear testing as directed by the President; and develop essential scientific capabilities and infrastructure.**

Results: In FY 2006, the Science Campaign made significant progress toward improving our ability to assess the stockpile without underground nuclear testing by advancing the methodology for quantifying the uncertainties for the performance, safety, and reliability of our stockpile, by completing 70 percent of the Dual-Axis Radiographic Hydrotest (DARHT) facility and by completing the Annual Assessment Report on Underground Nuclear Test Readiness. Additionally, the Department maintained its 24-month readiness capability for restarting underground nuclear testing, if directed.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	NA	**Develop 40 percent (cumulative) of the Quantification of Margins and Uncertainties (QMU) methodology to provide quantitative measures of confidence in the performance, safety, and reliability of the U.S. nuclear weapons stockpile. (NA GG 1.28.01)**

Results: When fully developed, this methodology will enable the Department to better quantify the uncertainty associated with the predicted level of performance, safety, and reliability of our nuclear weapons stockpile and will be a critical element for the certification of weapons without underground nuclear testing.

Supporting Documentation: Primary certification milestones completed as reported in individual reports and summarized in the MRT report.

FY06	FY05	FY04	FY03	
G	G	Y	NA	**Complete 60 percent (cumulative) of the Dual-Axis Radiographic Hydrotest (DARHT) facility to provide data required to certify the safety and reliability of the U.S. nuclear weapons stockpile (NA GG 1.28.02)**

Results: Exceeded the target by completing 70 percent of the DARHT facility. This progress is important because the DARHT will enable the continued certification of weapons without underground nuclear testing.

Supporting Documentation: DARHT CD-0 report, monthly project reports, and DOE Project Analysis and Reporting System (PARS).

FY06	FY05	FY04	FY03	
G	G	G	G	**Maintain a 24 month readiness to conduct an underground nuclear test as established by current NNSA policy. (NA GG 1.28.03)**

Results: Maintaining the 24-month readiness means that the United States has a credible capability to test nuclear weapons, if directed by the President.

Supporting Documentation: Milestones reported in the MRT reports to achieve 24-month test readiness as detailed in the Implementation Plan.

FY06	FY05	FY04	FY03	
G	G	R	NA	**Complete 75 percent of the hydrodynamic tests in accordance with the National Hydrodynamics Plan, to support the assessment of nuclear performance. (NA GG 1.28.04)**

Results: These tests provide critical information required for the W88 and W76 Life Extension Program certifications.

Supporting Documentation: Shot reports for the hydrodynamic tests completed and internal program reports.

FY06	FY05	FY04	FY03	
G	G	Y	NA	**Complete 70 percent (cumulative) towards creating and measuring extreme temperature and pressure conditions for the 2013 stockpile stewardship requirement. (NA GG 1.28.05)**

Results: This progress advances the Department's ability to create the specific temperature and pressure conditions required to effectively evaluate the nuclear stockpile in 2013 and beyond.

Supporting Documentation: MRT reports and internal program reports.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Achieve a $380 thousand average annual cost per test of obtaining plutonium experimental data on the Joint Actinide Shock Physics Experimental Research (JASPER) facility to support primary certification models. (NA GG 1.28.06)**

Results: This achievement demonstrates program efficiencies without impacting JASPER testing capabilities.

Supporting Documentation: Memorandum from Lawrence Livermore National Laboratory based on facility records.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Program Goal: Engineering Campaign** **Provide validated engineering sciences and engineering modeling and simulation tools for design, qualification, and certification; improved surety technologies; radiation hardening design and modeling capabilities; microsystems and microtechnologies; component and material lifetime assessments; and predictive aging models and surveillance diagnostics.**

Results: In providing modern tools and capabilities in engineering sciences to support the weapons complex during FY 2006, NNSA completed output analysis for National Missile Defense assets and threats, developed neutron imaging hardware, completed lifetime estimates for predominant pit types, and provided an evaluation for the annual assessment on component and material aging for each weapon system.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	NA	**Complete 65 percent (cumulative) of the Microsystems and Engineering Sciences Applications (MESA) facility project completed (total project cost), while maintaining a Cost Performance Index of 0.9-1.15. (NA GG 1.29.01)**

Results: Exceeded the target by achieving 88 percent (cumulative) completion of the MESA facility project and the Cumulative Cost Performance Index has been maintained within targeted limits. Two of the three main facilities are now occupied and operational. By the end of 2008, MESA will provide the capability to integrate microsystems into weapon components to meet the long term needs of the stockpile and also demonstrate that the MESA project is being completed within DOE construction guidelines and best business practices.

Supporting Documentation: Monthly progress reports and DOE PARS.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Complete 70 percent (cumulative) towards developing all improved surety improvements for the Life Extension Programs (LEPs) having Phase 6.3 beginning in 2010 or later, as documented in the Engineering Campaign Program Plan. (NA GG 1.29.02)**

Results: This progress means that the surety improvement activities are being completed on schedule to support the 2010 Phase 6.3 target date. Achieving Phase 6.3 completion means that the Department will have the potential for enhancing LEP surety.

Supporting Documentation: MRT reports and quarterly Defense Safety Committee presentations and documents.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Complete 32 percent (cumulative) of the delivery of lifetime assessments, predictive aging models, and surveillance diagnostics, as documented in the Engineering Campaign Program Plan. (NA GG 1.29.03)**

Results: This progress means that the Enhanced Surveillance Subprogram is better to able identify early aging concerns that could impact weapon reliability or safety, reduces the uncertainties in the assessment of stockpile health, assists in decisions for weapons refurbishment or replacement, and provides improved diagnostics and models for more predictive surveillance and assessment of the stockpile.

Supporting Documentation: MRT reports and quarterly Enhanced Surveillance program review documents.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Complete 68 percent of the data sets used in developing tools and technologies to validate structural and thermal models and improve the capability for weapon assessment and qualification, in accordance with the Engineering Campaign Program Plan. (NA GG 1.29.04)**

Results: Creating these data sets is a precursor to developing the tools and technologies for validating both the structural and thermal models in the campaign. In the future, these models will be used to assess and qualify the Nation's nuclear stockpile.

Supporting Documentation: MRT reports, annual program review documents, specific deliverables, and various program reports including Sandia Webfile Share #298932.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Complete 27 percent of the development of the technologies and qualification tools needed to meet nuclear survivability requirements for non-nuclear components in the Life Extension Programs (LEPs), in accordance with the Engineering Campaign Program Plan. (NA GG 1.29.05)**

Results: The Nuclear Survivability Subprogram continues to develop, validate, improve, and sustain experimental and theoretical capabilities and develop radiation-hardening technologies to support the certification and effectiveness of the evolving and aging stockpile. A FY 2006 highlight is the return of the Sandia Pulse Power Reactor to in-ground storage. This work is important for meeting nuclear survivability requirements for non-nuclear components in the LEP weapons.

Supporting Documentation: MRT reports, internal program reports, and specific deliverables.

FY06	FY05	FY04	FY03	**Program Goal: Inertial Confinement Fusion Ignition and High Yield (ICF) Campaign** **Develop laboratory capabilities to create and measure extreme conditions of temperature, pressure, and radiation, including thermonuclear burn conditions, approaching those in a nuclear explosion, and conduct weapons-related research in these environments.**
Y	Y	Y	NA	

Results: To avoid underground testing, this program provides laboratory capabilities to create and measure extreme conditions of temperature, pressure, and radiation, approaching those in a nuclear explosion. In FY 2006, the Department maintained its overall schedule for demonstration of thermonuclear ignition by 2010 in spite of mixed performance. While the National Ignition Facility construction schedule was maintained and the availability of ICF test facilities was exceeded, the fusion fuel compression measurement and polar direct drive concept validation milestones were not met and have been rescheduled for FY 2007. Now, robotic transporters are installing optics, diagnostic, and mechanical equipment in modules called line replaceable units (LRUs) for the rest of the beamlines.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	**Complete 73 percent (cumulative) towards demonstrating ignition (simulating fusion conditions in a nuclear explosion) at the National Ignition Facility (NIF) to increase confidence in modeling weapons performance. (NA GG 1.30.01)**
Y	Y	Y	NA	

Results: Completed 71 percent (cumulative) towards demonstrating ignition. Of the nine major FY 2006 milestones that track progress towards ignition, two were not completed - one measures compression of the fusion fuel and the other validates the polar direct drive concept. The two delays are not expected to impact the overall schedule for demonstrating ignition by 2010. Demonstrating ignition will increase the confidence level for the certification of weapons performance, safety, and reliability using component testing and computational predictions without underground nuclear testing.

Supporting Documentation: MRT reports and internal program reports.

Action Plan: Both milestones have been rescheduled for completion by the second quarter of FY 2007 and will be tracked until complete.

FY06	FY05	FY04	FY03	**Complete 87 percent (cumulative) of the construction of the 192-laser beam National Ignition Facility (NIF). (NA GG 1.30.02)**
G	G	G	NA	

Results: Exceeded the cumulative target by attaining 88 percent completion of construction on the NIF. This is an increase of seven percent from the FY 2005 completed cumulative percentage of 81 percent. The overall construction activities include both the NIF Construction Project and the NIF Demonstration Program. The NIF project is on track to provide a laboratory capability by the end of FY 2009 that can create and measure extreme conditions of temperature, pressure, and radiation approaching those in a nuclear explosion.

Supporting Documentation: Monthly progress reports, DOE PARS and earned value records for NIF Project and NDP maintained by the program office.

FY06	FY05	FY04	FY03	
G	Y	R	NA	**Complete 45 percent (cumulative) of the equipment fabrication to support ignition experiments at National Ignition Facility (NIF). (NA GG 1.30.03)**

Results: Meeting this cumulative target represents a 24 percent increase in FY 2006, including the completion of three major FY 2006 milestones. The user optics and cryogenic target systems being fabricated will provide the required diagnostics capability to record critical ignition data. These fabrication activities are on schedule for completion by FY 2010.

Supporting Documentation: MRT reports and internal program reports.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Provide 400 days to conduct stockpile stewardship experiments, totaled for all Inertial Confinement Fusion Ignition and High Yield (ICF) Campaign facilities. (NA GG 1.30.04)**

Results: Exceeded the annual target by achieving 691 total available days for stockpile stewardship experiments at four ICF facilities (OMEGA, Z, Trident, & Nike). The target was increased from 320 days to 400 days in Jan 2006 because of a specific Congressional appropriation. The actual total available, by facility, was: OMEGA: 210; Z: 196; Trident: 151; and Nike: 134. NNSA Science and Engineering Campaigns use the ICF facilities to obtain needed stockpile stewardship data.

Supporting Documentation: MRT reports for Z facility and email records received from managers of Trident, OMEGA, and Nike facilities, based on facility records.

FY06	FY05	FY04	FY03	
G	Y	NA	NA	**Achieve an average of 11 hours per experiment required by the operational crew to prepare the Z-facility for an experiment. (NA GG 1.30.05)**

Results: Exceeded the annual target by achieving an average time of 10.3 hours for the operational crew to prepare the Z facility for an experiment. Reducing the preparation time for Z-facility experiments allows more experiment runs per day, making it possible to acquire additional and/or earlier data at reduced cost.

Supporting Documentation: Site reports based on a spreadsheet maintained by the Z Accelerator Systems Operations manager that lists operational crew hours for each experimental shot.

FY06	FY05	FY04	FY03	
Y	Y	Y	NA	**Program Goal: Advanced Simulation and Computing (ASC) Campaign** **Provide leading edge, high-end simulation capabilities to meet weapon assessment and certification requirements, including weapon codes, weapons science, platforms, and computer facilities.**

Results: In FY 2006, the Department lowered the cost of operating its Stockpile Stewardship Program (SSP) production systems, increased the maximum individual computational speed to 94 trillion floating point operations per second (teraflops) for its individual platform computing (the target was 100 teraflops); and made significant progress toward modernizing its ASC codes. High-end computer simulation capabilities are needed to support the science-based nuclear weapons complex on the road to predictive weapons capability.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	NA	**Completion and peer review of the initial baseline secondary code, a milestone in the Advanced Simulation and Computing Campaign Program Plan, for the development and implementation of improved models and methods into integrated weapon codes and deployment to their users. (NA GG 1.31.01)**

Results: The improvement of these codes and methods are needed to support the advanced approach to stockpile certification. The completion and review of the secondary code enables the Department to integrate the code with other weapon codes, makes this code available to the end users and supports the modern code conversion by the end of FY 2015.

Supporting Documentation: Internal Program Reports.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Analyze 51 percent (cumulative) percentage of the 31 weapon system components, primary/secondary/ engineering system using Advanced Simulation and Computing (ASC) codes, as part of annual assessments and certifications. (NA GG 1.31.02)**

Results: Achieving this cumulative target represents a FY 2006 increase of 13 percent from the FY 2005 cumulative percentage. The adoption of the modern codes for improved assessment and certification of the nuclear stockpile is a critical step in eliminating the need for underground nuclear testing. The progress made in FY 2006 supports the scheduled completion year of FY 2010.

Supporting Documentation: Internal Program Reports.

FY06	FY05	FY04	FY03	
Y	Y	R	NA	**Deliver a 100 trillion floating point operations per second (teraflops) maximum individual platform computing capability. (NA GG 1.31.03)**

Results: Although the annual target was for a single 100 teraflops platform computing capability, a programmatic decision was made to receive two platforms - a 94 teraflops classified platform accompanied by a 6 teraflops unclassified platform. This change met the computing requirements and maintains the expansion of the computing capability required to better support weapons complex users in accordance with the ASC 10-year vision.

Supporting Documentation: Internal Program Reports.

Action Plan: No further actions are needed because the substituted platforms were the result of an implemented programmatic baseline change decision.

FY06	FY05	FY04	FY03	
G	Y	G	NA	**Attain total platform capacity of 160 trillion floating point operations per second (teraflops), taking into consideration procurements and retirements of systems. (NA GG 1.31.04)**

Results: This achievement maintains the expansion of the computing capability required to better support weapons complex users in accordance with the Advanced Simulation and Computing (ASC) 10-year vision of a capacity of 930 teraflops by the end of FY 2016.

Supporting Documentation: MRT reports, internal reports, and Quarterly Performance Report (QPR) Briefs and Program Technical Review Briefs.

FY06	FY05	FY04	FY03	
G	G	Y	NA	**Achieve an average $3.99 million per trillion floating point operations per second (teraflops) for delivering, operating, and managing all Stockpile Stewardship Program (SSP) production systems in a given fiscal year. (NA GG 1.31.05)**

Results: Achieving this target represents a decrease of $1.71 million per teraflop from FY 2005. This improved efficiency means that the Department has increased its SSP computing activity by 30 percent without affecting its operational and maintenance costs.

Supporting Documentation: Program analysis based on availability and cost data.

FY06	FY05	FY04	FY03	
Y	G	Y	NA	**Program Goal: Pit Manufacturing and Certification Campaign Restore the capability and some limited capacity to manufacture pits of all types required for the nuclear weapons stockpile.**

Results: As the trigger of a nuclear weapon, pits, along with their production and certification capabilities, support urgent nuclear weapons refurbishment needs and successful Reliable Replacement Warhead (RRW) development. During FY 2006, the Pit Campaign manufactured seven W88 pits, as required, and completed major milestones to remain on schedule to meet FY 2007 W88 pit certification. Reduced funding and a Continuing Resolution were at the heart of the delay in one area of performance.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Complete 60 percent of the major milestones toward establishing a limited capability of 10 W88 pits/year at Los Alamos National Laboratory (LANL). (NA GG 1.32.01)**

Results: Achieving this target represent an increase of 30 percent from FY 2005 toward establishing a limited capability of 10 W88 pits/year by reprioritizing equipment installations to ensure critical pieces of equipment were installed and remaining equipment on schedule for completion in FY 2007. Installation of the equipment mitigates single point vulnerabilities where equipment malfunctions can impact production schedule. This result is important to restoring a pit manufacturing capability to the nuclear weapons complex

Supporting Documentation: MRT reports, PMCIPP milestone reports, and internal program reports.

FY06	FY05	FY04	FY03	
Y	G	R	NA	**Complete 70 percent of the major milestones, documented in the Pit Manufacturing and Certification Campaign Program Plan, toward W88 Pit Certification. (NA GG 1.32.03)**

Results: The Unicorn Subcritical Experiment (SCE) was completed in FY 2006. However, three Level-2 milestones covering the Armando SCE post-shot report and the completion of small-scale part machining capability were delayed due to diverting resources for the Unicorn SCE effort. This progress is an important step to restoring a certification capability to the nuclear weapons complex by the end of FY 2007.

Supporting Documentation: MRT reports and internal program reports.

Action Plan: The LANL physics design subproject has established a revised physics assessment plan, with an associated set of Level-2 milestones, to compensate for the late delivery in Unicorn and small-scale sample data and to provide a decision point for the use of small-scale plutonium test data, when it will be determined if this data is required for additional confidence in the W88 Major Assembly Release. Due to the outstanding correlation between Unicorn data and predictions, we have increased confidence in the completion of the effort by the end of FY 2007.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Complete 35 percent of the major milestones, documented in the Pit Manufacturing and Certification Campaign Program Plan, toward restoration of manufacturing capability for all pit types in the enduring stockpile. (NA GG 1.32.04)**

Results: This progress represents an increase of 15 percent from FY 2005. As the National Nuclear Security Administration (NNSA) moves to development of the Reliable Replacement Warhead (RRW), this measure will be revised to focus on the RRW. This result is important to restoring a pit manufacturing capability for the long-term while reducing associated cost, time, and hazards.

Supporting Documentation: MRT reports and internal program reports.

FY06	FY05	FY04	FY03	
G	G	Y	NA	**Program Goal: Readiness Campaign** **Develop and deliver design-to-manufacturing capabilities to meet the evolving and urgent needs of the stockpile and support the transformation of the Nuclear Weapons Complex into an agile and more responsive enterprise with shorter cycle times and lower operating costs.**

Results: The Readiness Campaign deployed critical capabilities to support the immediate and urgent nuclear weapons refurbishment needs. During FY 2006, this Campaign delivered 240 Tritium Producing Burnable Absorber Rods to the Watts-Bar Reactor to support a third run of the irradiation cycle while nearly completing the Tritium Extraction Facility.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	Y	NA	**Deploy 15 critical capabilities (cumulative) to support our Directed Stockpile Work (DSW) customer's immediate and urgent nuclear weapon refurbishment needs derived from the Production Readiness Assessment Plan. (NA GG 1.33.01)**

Results: Exceeded the cumulative target by deploying 16 critical capabilities (cumulative). This result is important because these critical capabilities are required for the immediate and urgent nuclear weapon refurbishment needs that are scheduled for completion by FY 2017.

Supporting Documentation: MRT reports.

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Irradiate 240 Tritium-Producing Burnable Absorber Rods (cumulative) in Tennessee Valley Authority reactors to provide the capability of collecting new tritium to replace inventory for the nuclear weapons stockpile. (NA GG 1.33.03)**

Results: The progress made in FY 2006 supports maintaining the required quantities of tritium required for sustaining the readiness of the nuclear weapons stockpile.

Supporting Documentation: Site reporting to subprogram manager and MRT reports.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Complete 96 percent of the Tritium Extraction Facility (TEF) project (total project cost), while maintaining a Cost Performance Index of 0.9 - 1.15. (NA GG 1.33.04)**

Results: Exceeded the cumulative target by completing 97 percent of the TEF project within the acceptable cost performance index range. This result indicates that the project is being managed effectively and efficiently, in terms of both cost and schedule. The TEF is essential for the establishment of an assured, domestic source of tritium to meet the needs of the nuclear weapons stockpile.

Supporting Documentation: Monthly construction project reporting, MRT reports, and DOE PARS.

FY06	FY05	FY04	FY03	
G	G	Y	NA	**Program Goal: Readiness in Technical Base and Facilities (RTBF)** Operate and maintain National Nuclear Security Administration (NNSA) program facilities in a safe, secure, efficient, reliable, and compliant condition, including facility operating costs (e.g., utilities, equipment, facility personnel, training, and salaries); facility and equipment maintenance costs (e.g., staff, tools, and replacement parts); and environmental, safety, and health (ES&H) costs; and plan, prioritize, and construct state-of-the-art facilities, infrastructure, and scientific tools that are not directly attributable to DSW or a campaign, within approved baseline cost and schedule.

Results: Safe operations in mission essential facilities that meet comparable industry standards are needed to support critical nuclear weapons stockpile work. On behalf of nuclear material consolidation activities, RTBF successfully completed the removal of sensitive special nuclear material from Los Alamos National Laboratory Technical Area (TA)-18 in FY 2006, reducing the site's overall security posture and maintained a high level of facility availability and safety. In addition, five facilities/buildings were completed at various sites throughout the complex.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	NA	**Mission-essential facilities are available 90 percent of the scheduled days. (NA GG 1.34.01)**

Results: Exceeded the target by achieving 98.1 percent availability of mission-essential facilities for FY 2006. This achievement indicates that mission essential facilities are being sufficiently maintained to support critical nuclear weapons stockpile work.

Supporting Documentation: Reports-based Spreadsheet - facility availability for RTBF sites and detailed site reports.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Limit the number of Reportable Accidents/200,000 hours of work to five maximum [vs. the Bureau of Labor Statistics (BLS) standard average of 6.4]. (NA GG 1.34.02)**

Results: Exceeded the target by achieving a reportable accident rate of 1.77 per 200,000 hours of work for FY 2006, which is less than one-third the national BLS average of 6.4 per 200,000 hours of work. This result demonstrates that the Department is consistently conducting its critical nuclear weapons stockpile work in a safe manner.

Supporting Documentation: Reports-based Spreadsheet - site safety for RTBF sites and detailed site reports.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Achieve a NNSA complex-wide aggregate Facility Condition Index (FCI) of less than 7.4 percent, as measured by deferred maintenance per replacement plant value, for all mission-essential facilities and infrastructure (the industry standard is below 5 percent). (NA GG 1.34.03)**

Results: Exceeded the annual target by reducing the aggregate Facility Condition Index (FCI) for all mission essential facilities and infrastructure to 6.7 percent. This achievement demonstrates progress towards improving facilities conditions and increasing operational effectiveness and efficiency.

Supporting Documentation: Facilities Information Management System (FIMS).

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Achieve a cumulative 75 percent of baselined construction projects with total estimated cost (TEC) greater than $20M with an actual schedule performance index (SPI) of 0.9-1.15 and a cost performance index (CPI) of 0.9-1.15, as measured against approved baseline definitions. (NA GG 1.34.04)**

Results: Exceeded the annual target. In FY 2006, nine of ten projects (90 percent) maintained SPI and CPI indices within the range of 0.9 to 1.15. This result demonstrates that projects are being effectively and efficiently managed within the RTBF program.

Supporting Documentation: DOE PARS and individual monthly project reports.

FY06	FY05	FY04	FY03	
Y	Y	Y	NA	**Program Goal: Secure Transportation Asset (STA) Safely and securely transport nuclear weapons, weapons components, and Special Nuclear Materials (SNM) to meet projected Department of Energy (DOE), Department of Defense (DoD), and other customer requirements.**

Results: In FY 2006, STA continued to provide safe and secure transportation of nuclear weapons, nuclear weapons components, and special nuclear material. Some of the convoys supported the W76 Life Extension Program and the W62 dismantlements and retirements. Customer delays in FY 2006 reduced the total number of convoys for the year, resulting in higher average convoy costs and unused capacity. STA achieved only 91 percent of its year-end agent strength target (324 instead of 355), due to larger than expected losses. STA is revising its recruiting and retention program to improve agent strength management that will support anticipated customer requirements.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Complete 100 percent of the shipments safely and securely without compromise/loss of nuclear weapons/components or a release of radioactive material. (NA GG 1.36.01)**

Results: Successfully completed all 93 secure transportation convoys of nuclear material without incident supporting the Nuclear Security Enterprise. The achievement demonstrates the Department's ability to fully meet its customer secure transportation requirements.

Supporting Documentation: Office of Secure Transportation internal monitoring and reports and site receipt reports.

FY06	FY05	FY04	FY03	
Y	NA	NA	NA	**Keep the cost per convoy to less than $1.80 million. (NA GG 1.36.02)**

Results: For FY 2006, the annual cost per convoy was $2.1 million (missing the $1.8 million target by 19 percent), a reduction from the $2.65 million baseline cost in FY 2002. This metric is directly related to the number of convoys completed - the fewer the convoys, the higher the average cost. This result illustrates the impact of customer delays to the overall cost of secure transportation. Capacity needs are forecasted and funded using the customer's transportation forecasts.

Supporting Documentation: Program analysis based on number of convoys conducted, budget, and MRT reports.

Action Plan: Work with customers to strengthen the forecasting of secure transportation schedules and continue to identify and implement measures to control convoy costs. Since this metric is dependent on number of convoys, increasing convoys will improve the result. Outyear targets have been pushed out one year to reach $1.57 million by FY 2009.

FY06	FY05	FY04	FY03	
Y	G	G	NA	**Complete 115 secure convoys. (NA GG 1.36.03)**

Results: Completed 93 convoys. Shipments were delayed for a variety of external reasons: the planned work for DOE Environmental Management was delayed until FY 2007; strike and safety shutdowns at Erwin; the workload for DoD was significantly below the forecast; and an additional Joint Testing Exercise, conducted to validate measures to meet the Design Basis Threat, stopped shipments for three weeks. This result reflects unutilized capacity that the current agent strength would have supported.

Supporting Documentation: Shipment reports and data from TRIPS, a program convoy-tracking database.

Action Plan: The program is working with its customers to try to more accurately forecast shipping requirements and provide alternatives/backups. Outyear convoy target numbers have been adjusted to reach 139 convoys by FY 2009.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Have a cumulative 36 Safeguard Transporters (SGTs) in operation. (NA GG 1.36.04)**

Results: Achieving this target represents an increase of 3 operational transporters in FY 2006 and significant progress towards an FY 2014 goal of 51 SGTs. An increase in the SGT capability supports the Secure Transportation Asset increase in mission capacity for stakeholders.

Supporting Documentation: Quality Assurance Inspection program documents from Kansas City Site Office.

FY06	FY05	FY04	FY03	
Y	Y	G	NA	**End the year with 355 Federal Agents. (NA GG 1.36.05)**

Results: The FY 2006 year-end Federal agent strength was 324. In FY 2006, agent gains were offset by a higher than expected 47 agent losses (retirements, resignations, transfers, etc.). This progress toward a year-end FY 2009 goal of 420 agents is important for reaching the agent strength necessary to support a forecasted increase in mission activity.

Supporting Documentation: Program Federal Personnel database.

Action Plan: Maintain systematic approach to advertisement, recruiting, screening, and qualification of agents to overcome fluctuations in both class size and personnel losses; out year target for agent strength have been extended by one year to reach 420 agents by FY 2009.

FY06	FY05	FY04	FY03	**Program Goal: Nuclear Weapons Incident Response (NWIR)**
Y	Y	Y	NA	Respond to and mitigate nuclear and radiological incidents worldwide.

Results: NWIR readily responds to and mitigates nuclear and radiological accidents and incidents worldwide. Included in the FY 2006 events were the State of the Union; Super Bowl; Winter Olympics; Marine Corp Marathon; Rolling Thunder; 26 Radiological Assistance Program (RAP) Deployments; and two Ongoing Search Operations. While a shortage of equipment and trained personnel limited the program from achieving an even higher state of readiness, the program demonstrated improved performance during the year.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
Y	NA	NA	NA	**Achieve an Emergency Operations Readiness Index of at least 91 percent. The index measures the overall organizational readiness to respond to and mitigate radiological or nuclear incidents worldwide. (This index is measured from 1 to 100 with higher numbers meaning better readiness).. (NA GG 1.37.01)**

Results: Achieved a readiness index of 82 because of a shortage of critical personnel and equipment availability, due to maintenance. This result indicated the level of readiness of the Department to respond to and mitigate nuclear and radiological accidents and incidents worldwide.

Supporting Documentation: Office of Nuclear Emergency Operations (NA-40) Emergency Operations Policy Note #10.

Action Plan: An offer has been tendered and accepted for the critical hire pilot position and equipment maintenance has been scheduled for the item in need which will allow us to meet our target by the end of the first quarter of FY 2007.

FY06	FY05	FY04	FY03	**Program Goal: Facilities and Infrastructure Recapitalization Program (FIRP)** **Restore, rebuild and revitalize the physical infrastructure of the nuclear weapons complex.**
G	G	G	G	

Results: Restoring, rebuilding, and revitalizing the physical infrastructure of the nuclear weapons complex results in improved facilities conditions and increased operational effectiveness and efficiency. The continued stabilization of deferred maintenance is a major FIRP accomplishment that indicates physical deterioration of the nuclear weapons complex has been arrested. Also during FY 2006, FIRP eliminated more than 2,400,000 gross square feet of excess facilities.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	NA	**Fund at least $60 million (cumulative 28 percent) of FY 2003 deferred maintenance baseline of $1.2 billion planned for elimination by FY 2009. (NA GG 1.38.01)**

Results: Exceeded the annual target by funding the elimination of $118 million of the FY 2003 NNSA deferred maintenance baseline. This result demonstrates progress in improving nuclear weapons complex facilities conditions by reducing the deferred maintenance backlog.

Supporting Documentation: FY 2006 Facilities and Infrastructure Recapitalization Program Work Authorizations.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Fund for elimination at least 175,000 gross square feet (gsf) of excess NNSA facilities (cumulative 79 percent) of FY2002-FY2009 total goal of three million gsf eliminated. (NA GG 1.38.02)**

Results: Exceeded the annual target by funding the elimination of 319,000 gsf (an 84 cumulative percent) of the three million gsf goal. This represents significant progress towards eliminating excess facility space and improving nuclear weapons complex facilities cost effectiveness. By the end of FY 2009, three million gsf of excess facilities are scheduled to be eliminated.

Supporting Documentation: FY 2006 Facilities and Infrastructure Recapitalization Program Work Authorizations.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Achieve a NNSA complex-wide aggregate Facility Condition Index (FCI) of less than 7.4 percent, as measured by deferred maintenance per replacement plant value, for all mission-essential facilities and infrastructure (the industry standard is below 5 percent). (NA GG 1.38.03)**

Results: Exceeded the annual target by reducing the aggregate Facility Condition Index (FCI) for all mission essential facilities and infrastructure to 6.7 percent. This achievement demonstrates progress towards improving facilities conditions and increasing operational effectiveness and efficiency.

Supporting Documentation: Facilities Information Management System (FIMS).

FY06	FY05	FY04	FY03	
Y	Y	Y	Y	**Program Goal: Defense Nuclear Security** **Provide protection for National Nuclear Security Administration (NNSA) personnel, facilities, nuclear weapons, and information from a full spectrum of threats, most notably from terrorism, which has become of paramount concern post the September 11, 2001, attacks in the homeland.**

Results: Safeguards and Security (S&S) protects NNSA personnel, facilities, nuclear weapons, and information from a full spectrum of threats. S&S attained compliance with the 2003 Design Basis Threat and established a security risk management framework to better manage and allocate security resources in FY 2006. Delays in scheduling inspections and reviews were the cause for not fully achieving two annual targets.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
Y	G	R	NA	**Ensure that 70 percent of the physical security reviews conducted by the Office of Independent Oversight and Performance Assurance (OA) at NNSA sites receive a rating of at least "effective" (based on last OA review at each site over 6 physical security topical areas). (NA GG 1.39.01)**

Results: In FY 2006, 64 percent of the reviews received a rating of at least "effective." Although steps have been taken to improve security in a number of areas at all NNSA sites, formal inspections have not been conducted at all sites to confirm the improvements. Security inspections help the Department maintain security standards by identifying areas for improvement in the security programs across the NNSA complex.

Supporting Documentation: Latest OA inspection report for each NNSA site.

Action Plan: Schedule and conduct formal inspections in early FY 2007.

FY06	FY05	FY04	FY03	
G	Y	NA	NA	**Complete the processing needed to grant Q Security Clearance for federal and contractor employees in the NNSA complex, other than Headquarters in 110 days or less (does not include days for Office of Personnel Management or the Federal Bureau of Investigation to conduct background checks). (NA GG 1.39.02)**

Results: In FY 2006, the completed process took an average of 97 days to complete. This achievement helps to expedite the hiring process for and improve the effectiveness of NNSA employees requiring access to classified data.

Supporting Documentation: Monthly Service Center Clearance Status Reports.

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Complete implementation of the May 2003 Design Basis Threat (DBT) Policy at NNSA sites. (NA GG 1.39.03)**

Results: This achievement helps to strengthen security at NNSA sites against post-9/11 threats and complies with secretarial direction.

Supporting Documentation: May 2003 DBT Implementation Plans and progress reports from each NNSA site.

FY06	FY05	FY04	FY03	
R	R	G	NA	**Ensure that 57 percent of the Cyber Security reviews conducted by the Office of Independent Oversight and Performance Assurance (OA) at NNSA sites receive at least a rating of "effective" (based on last OA review at each site over 2 Cyber Security topical areas). (NA GG 1.39.04)**

Results: In FY 2006, 41 percent of the reviews received a rating of "effective" or better. This result is important because the reviews conducted are independent of the program and the results provide expert unbiased ratings of site cyber security effectiveness that the program can use to implement corrective actions.

Supporting Documentation: Latest OA inspection report for each NNSA site.

Action Plan: The program will work with OA to schedule additional Cyber Security reviews in FY 2007 and work with the NNSA sites to implement recommendations within budgetary parameters.

FY06	FY05	FY04	FY03	
G	G	Y	NA	**Program Goal: Office of the Administrator Create a well-managed, inclusive, responsive, and accountable organization through the strategic management of human capital; enhanced cost-effective utilization of information technology; and greater integration of budget and performance data.**

Results: Cost performance is on target as the program's cost variance is less than 10 percent from its annual baseline plan. Schedule performance is on target as key technical milestones have been completed or remain on track to meet year-end targets. This result is important because it provides the human, logistical, and IT resources needed to achieve the Department's Defense Strategic Goals.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	NA	**Achieve a cumulative average NNSA Program score of 80 percent on the OMB PART assessment indicating progress in budget performance integration and results. (NA GG 1/2.50.02)**

Results: Exceeded the annual target by achieving a cumulative average NNSA OMB PART (Office of Management and Budget Program Assessment Rating Tool) score of 82 percent. For the FY 2006 PARTed programs, OMB has finalized its review and accepted all scores as submitted. This result is important because it indicates NNSA's progress in fully achieving the President's Management Agenda goals for budget performance integration and achieving results.

Supporting Documentation: OMB Program Assessment Rating Tool (PART)

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

General Goal 2:

Nuclear Nonproliferation

Provide technical leadership to limit or prevent the spread of materials, technology, and expertise relating to weapons of mass destruction; advance the technologies to detect the proliferation of weapons of mass destruction worldwide; and eliminate or secure inventories of surplus materials and infrastructure usable for nuclear weapons.

FY 2006 Annual Performance Targets

G-Green	Y-Yellow	R-Red	U-Undetermined
22	5	0	0

Program Costs ($ in Millions): $ 1,210

FY06	FY05	FY04	FY03
G	Y	Y	G

Program Goal: Nonproliferation and Verification R&D

Develops new technologies to improve United States (U.S.) capabilities to detect and monitor nuclear weapons production, proliferation, and prohibited nuclear explosions worldwide.

Results: Nonproliferation and Verification R&D develops new technologies to improve U.S. capabilities to detect and monitor nuclear weapons production, proliferation, and testing worldwide. During FY 2006, operational space-based nuclear explosion monitoring sensors were delivered to the Air Force on a schedule that supported Air Force launch timelines. In addition, updated calibration and geophysical models to improve the nation's capability to monitor and report underground nuclear detonations were delivered.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Progress 10 percent (cumulative) toward demonstrating the next generation of technologies and methods to detect Uranium-235 Enrichment activities. (NA GG 2.40.01)**

Results: The target was achieved by completing the "Goals, Objectives and Requirement" document. This progress advances the Department towards improving the U.S. capability to detect clandestine nuclear weapons production activities.

Supporting Documentation: Classified "Goals, Objectives and Requirements" document for U-235 Production Detection.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Progress 10 percent (cumulative) toward demonstrating the next generation of technologies and methods to detect Plutonium Reprocessing activities. (NA GG 2.40.02)**

Results: The target was achieved by completing the "Goals, Objectives and Requirement" document. This progress advances the Department towards improving the U.S. capability to detect clandestine nuclear weapons production activities.

Supporting Documentation: Classified "Goals, Objectives and Requirements" document for Plutonium Production Detection.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Progress 10 percent (cumulative) toward demonstrating the next generation of technologies and methods to detect Special Nuclear Material (SNM) movement. (NA GG 2.40.03)**

Results: The target was achieved by completing the "Goals, Objectives and Requirement" document. This result advances the Department towards improving the U.S. capability to detect the illicit transport and diversion of special nuclear material.

Supporting Documentation: "Goals, Objectives and Requirements" document for SNM Movement Detection & Radiation Sensing.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Achieve a 90 percent on an annual index that summarizes the status of all NNSA nuclear explosion monitoring (NEM) R&D deliveries that improve the nation's ability to detect nuclear explosions. (NA GG 2.40.04)**

Results: This result indicates the Department's is on track to deliver its NEM products within customer schedules and potential impacts on the nation's ability to detect nuclear explosions.

Supporting Documentation: Project quarterly reports listing incremental performance against long-term delivery goals and reports of product delivery.

FY06	FY05	FY04	FY03	
G	G	Y	NA	**Achieve 100 percent (cumulative) on active research projects for which an independent R&D peer assessment of the project's scientific quality and mission relevance has been completed during the second year of effort (and again within each subsequent three year period for those projects found to be of merit). (NA GG 2.40.05)**

Results: This result is important to verify scientific quality and mission relevance of each research project.

Supporting Documentation: WebPMIS Independent Review Summary Report #16.6, individual project independent review reports and site visits.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Publish 200 articles in peer reviewed professional journals/ forums representing leadership in advancing science and technology knowledge. (NA GG 2.40.06)**

Results: This result demonstrates the program is a leader in advancing science and technology knowledge.

Supporting Documentation: Project quarterly reports that list publications for each project.

FY06	FY05	FY04	FY03	
Y	Y	R	NA	**Program Goal: Elimination of Weapons-Grade Plutonium Production (EWGPP)** **Enable the Russian Federation to permanently cease production of weapons-grade plutonium by replacing plutonium-producing nuclear reactors with fossil-fueled power plants to provide alternative sources of heat and electricity and provide for the shutdown of the reactors.**

Results: Reducing the risk of nuclear proliferation and nuclear terrorism by ultimately eliminating the production of 1,200 kilograms of new Russian weapons-grade plutonium is the main focus of EWGPP. Minor schedule delays at Seversk kept EWGPP from achieving all FY 2006 annual targets but will not jeopardize its December 2008 completion. A second project in Zheleznogorsk continues on schedule for a December 2010 shutdown.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
Y	Y	Y	NA	**Complete 55 percent (cumulative) of the refurbishment of a fossil plant in Seversk, shutting down two weapons-grade plutonium production reactors. (NA GG 2.42.01)**

Results: Completed 50 percent of the project to refurbish a fossil plant at Seversk. The target was missed due to delays in awarding task orders due to incomplete contracting data from the Russian Federation. The completion of the fossil plant will replace energy production capacity from two of the three Russian plutonium production reactors allowing them to be shutdown.

Supporting Documentation: The Seversk monthly progress report for September.

Action Plan: A recovery plan to improve procedures has been implemented, and a full recovery of the schedule is expected in FY 2007.

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Achieve a 1.0 Annual Costs Performance Index (CPI) for Seversk construction as measured by the ratio of budgeted costs of work performed to actual costs of work performed. (NA GG 2.42.02)**

Results: This assessment is based on I-Manage Data Warehouse data through September 2006. This result represents efficiency in constructing the Seversk fossil plant.

Supporting Documentation: The Seversk monthly progress report for September.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Complete 9.6 percent (cumulative) of the construction of a fossil plant in Zheleznogorsk, shutting down one weapons-grade plutonium production reactor. (NA GG 2.42.03)**

Results: Exceeded the cumulative target by completing 11.4 percent of the project to construct a fossil plant at Zheleznogorsk. This result is important because completion of the fossil plant will replace energy production capacity from one of the three Russian plutonium production reactors allowing it to be shutdown.

Supporting Documentation: The Zheleznogorsk monthly progress report for September.

FY06	FY05	FY04	FY03	
G	G	R	Y	**Program Goal: Nonproliferation and International Security (N&IS) Prevent and counter weapons of mass destruction (WMD) proliferation by providing policy and technical support to implement and monitor transparent WMD reductions; strengthen indigenous international safeguards and export controls systems in other countries; transition WMD expertise and infrastructure to peaceful purposes; and improve international and multinational safeguards, export control and interdiction regimes.**

Results: N&IS helps prevent and counter WMD proliferation by providing policy and technical support to US and international WMD nonproliferation activities and institutions. In addition to meeting all FY 2006 N&IS metrics, the N&IS Global Initiatives to Prevent Proliferation (GIPP) program successfully coordinated redirection efforts to help engage former Libyan WMD scientists in peaceful employment and conducted one of the first civil nuclear facility security engagements with China. N&IS also exceeded metrics by training over 1,930 foreign and domestic experts in nonproliferation norms, and transferring 23 technologies to help strengthen IAEA verification activities.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Eliminate 282 metric tons (cumulative) of Russian weapons-usable Highly Enriched Uranium (HEU) which U.S. experts have confirmed as permanently removed from the Russian stockpile under the HEU Purchase Agreement. (NA GG 2.44.01)**

Results: Exceeded the annual target by eliminating a cumulative 285 metric tons. This result shows that the activities of the HEU Purchase Agreement continue to be completed as planned and that the HEU is diluted so it can no longer be used in a weapon.

Supporting Documentation: Monthly summary reports of HEU and LEU shipments, amounts, and schedule.

FY06	FY05	FY04	FY03	
G	Y	G	NA	**The cumulative number of the Global Initiatives to Prevent Proliferation (GIPP) target population of displaced Russian and FSU WMD experts who are currently employed in GIPP grants or long-term private sector jobs is 11,800 (and cumulative number who are employed in long-term private sector jobs resulting from NIS grants is 4,100). (NA GG 2.44.02)**

Results: This result helps to prevent the migration of weapons of mass destruction expertise, to terrorists or states of concern, by redirecting displaced scientists and personnel to peaceful, sustainable civilian work.

Supporting Documentation: GIPP survey conducted by the United States Industry Coalition (USIC), NCI quarterly narrative lab reports and GIPP lab reports.

FY06	FY05	FY04	FY03	
G	G	G	NA	**The cumulative percentage of non-United States Government (non-USG) (private sector and foreign government) project funding contributions obtained relative to cumulative USG Global Initiatives to Prevent Proliferation (GIPP) funding contributions is 70 percent. (NA GG 2.44.03)**

Results: This result supports sustainable projects that prevent the migration of weapons of mass destruction expertise to terrorists or states of concern.

Supporting Documentation: USIC Company survey; CRADAs; NCI Lab Survey; NCI MIS database.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Transfer five technologies to international regimes and other countries to prevent and counter Weapons of Mass Destruction (WMD) proliferation and nuclear-related terrorism. (NA GG 2.44.04)**

Results: Exceeded the annual target by transferring 23 technologies. This result provides support to the International Atomic Energy Agency (IAEA) on verification technologies concerning countries suspected of having clandestine nuclear weapons programs.

Supporting Documentation: USIC Company Survey; NCI Lab Survey; NCI MIS database.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Train 1,160 international and domestic experts (e.g., IAEA inspectors, export control officers, physical protection personnel) in nonproliferation to fulfill the President's policy delineated on February 11, 2004 and implement the U.S.-sponsored UN Security Council Resolution 1540 criminalizing proliferation. (NA GG 2.44.05)**

Results: Exceeded the annual target by training 1,930 experts. This result is important to fulfill the President's policy delineated on February 11, 2004 and to implement the U.S.-sponsored UN Security Council Resolution 1540 criminalizing proliferation because it educates experts in the prevention of proliferation of nuclear and nuclear-related materials, equipment and technology.

Supporting Documentation: Attendance sign in sheets, training records and participant lists all collected and documented by monthly lab reports, periodic trip reports, and tracking systems such as the International Nonproliferation Export Control Program's AAR system.

FY06	FY05	FY04	FY03	
Y	Y	Y	Y	**Program Goal: International Nuclear Materials Protection and Cooperation** **Prevent nuclear terrorism by working in Russia and other regions of concern to (1) secure and eliminate vulnerable nuclear weapons and weapons-usable material; and (2) install detection equipment at border crossings and Megaports to prevent and detect the illicit transfer of nuclear material.**

Results: The risk of nuclear proliferation can be reduced by securing vulnerable nuclear sites and key transit and shipping points. In FY 2006, a cumulative total of 5,599 students were trained in Material, Control and Accounting related technologies and a cumulative total of 1,913 students were trained in Physical Protection/Protective Force related technologies. Complete attainment of the FY 2006 targets was limited only by the availability of feedstock for downblending Russian highly enriched uranium (HEU).

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Secure 175 (cumulative) buildings with weapons-usable material. (NA GG 2.46.01)**

Results: This result helps to prevent the theft/diversion of vulnerable weapons usable material for use by terrorists.

Supporting Documentation: Various contract deliverable documents including photos, periodic site visits, and assurance reports.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Complete 53 security upgrades at warhead sites. (NA GG 2.46.02)**

Results: This result helps to prevent the theft/diversion of vulnerable nuclear weapons for use by terrorists.

Supporting Documentation: Various contract deliverable documents including photos, periodic site visits, and assurance reports.

FY06	FY05	FY04	FY03	
Y	Y	Y	NA	**Convert 8.6 metric tons (cumulative) of highly enriched uranium (HEU) to low enriched uranium (LEU). (NA GG 2.46.03)**

Results: Converted a cumulative total of 8.4 metric tons of HEU to LEU. An unexpected reduction of feed material at Luch in the last quarter of FY 2006 prevented the Department from fully meeting the target. Converting HEU to LEU reduces the risk of theft or diversion of excess HEU.

Supporting Documentation: Material Consolidation and Conversion project and Down Blending Conversion Summary.

Action Plan: Continue to work with Rosatom to finalize new agreement and RIAR/Luch to increase the amount of feed material made available for blend down.

FY06	FY05	FY04	FY03	
Y	Y	Y	NA	**Install 114 (cumulative) Second Line of Defense (SLD) sites with nuclear detection equipment installed. (Complete a cumulative 10 Megaports.) (NA GG 2.46.04)**

Results: Installed a cumulative total of 104 sites, including 6 Megaports. The annual target was missed due to delays in signing agreements and issues in several host countries. The installation of detection equipment provides host governments with the technical means to detect, deter and interdict illicit trafficking of nuclear and other radioactive materials.

Supporting Documentation: All sites can be verified as completed via the documentation of an Acceptance Testing Report.

Action Plan: Agreements with governments of the Republic of Georgia and Kazakhstan have been signed and issues within Ukraine and Azerbaijan have been resolved, so work can proceed. For Megaports, issues have been resolved and implementation is now on track and scheduled to be complete in FY 2007.

FY06	FY05	FY04	FY03	
G	G	Y	NA	**Achieve a $5.5 million (cumulative) cost per metric ton to complete rapid security upgrades on Russian weapons usable nuclear material. (NA GG 2.46.05)**

Results: This result represents efficiency in securing vulnerable weapons usable material from theft/diversion.

Supporting Documentation: Completed task order deliverables, site visits, and assurance reports.

FY06	FY05	FY04	FY03	Program Goal: Fissile Materials Disposition Eliminate surplus Russian plutonium and surplus United States (U.S.) plutonium and highly enriched uranium.
G	R	Y	R	

Results: FMD helps dispose of surplus weapons-grade fissile materials in the United States and Russia and supports U.S. national security interests by reducing the risk of nuclear proliferation and potential consequences. During FY 2006, FMD started site preparation for the U.S. Mixed Oxide Fuels (MOX) Facility, the Pit Disassembly and Conversion Facility (PDCF), and the Waste Solidification Building. In addition, FMD downblended a cumulative total of 93 MT of surplus U.S. highly enriched uranium (HEU).

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	Y	Y	NA	Complete 17 percent (cumulative) of the Mixed Oxide (MOX) Fuel Fabrication facility and equipment design, construction, and cold start-up activities. (NA GG 2.47.01)

Results: This result demonstrates progress toward the Department's goal of disposing of 34 metric tons of surplus U.S. weapon-grade plutonium.

Supporting Documentation: Results reported in monthly Earned Value Management System reports prepared by design contractor.

FY06	FY05	FY04	FY03	
G	R	Y	NA	Complete 24 percent (cumulative) of the design, construction, and cold start-up activities completed for the Pit Disassembly and Conversion Facility (PDCF). (NA GG 2.47.02)

Results: This result demonstrates progress toward the Department's goal of disposing of 34 metric tons of surplus U.S. weapon-grade plutonium.

Supporting Documentation: Results reported in monthly Earned Value Management System reports prepared by design contractor.

FY06	FY05	FY04	FY03	
G	G	G	NA	The cumulative amount of surplus U.S. highly enriched uranium (HEU) down-blended or shipped for down-blending is 93 metric tons. (NA GG 2.47.03)

Results: This result contributes to the Department's goal of disposing of surplus U.S. HEU.

Supporting Documentation: Results reported in monthly receipt reports provided by BWX Technologies Nuclear Products Division, Nuclear Fuel Services, and Savannah River Site.

FY06	FY05	FY04	FY03	**Program Goal: Global Threat Reduction Initiative (GTRI)**
Y	Y	NA	NA	**Identify, secure, remove and/or facilitate the disposition of high-risk, vulnerable nuclear and radioactive materials around the world that pose a potential threat to the United States and the international community.**

Results: Technical delays and lengthy negotiations with other countries kept two GTRI targets from being achieved. Despite these issues, GTRI demonstrated progress in reducing the threat worldwide posed by nuclear and radiological materials through repatriation and other activities. During FY 2006, 45 research reactors were converted from highly enriched uranium (HEU) to low enriched uranium (LEU) fuel and 228 kilograms of HEU were returned to Russia.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
Y	Y	Y	NA	**Convert 46 (cumulative) targeted research/test reactors from highly enriched uranium (HEU) to low enriched uranium fuel (LEU). (NA GG 2.64.01)**

Results: Converted a cumulative total of 45 research reactors, an additional five research reactors over the year from the Czech Republic, Netherlands, Libya, and two in the United States. The one missed was due to the Libya IRT-1 conversion, scheduled for September, slipping by one month because of a technical delay in preparations for conversion. To date, conversion of these reactors has reduced the amount of civil commerce in HEU by 250kg per year.

Supporting Documentation: Annual letter from Argonne National Laboratory.

Action Plan: Libya IRT-1 conversion is underway. Spent HEU fuel from the Libya IRT-1 research reactor was discharged on October 4 2006. Planned completion is scheduled no later than the end of October 2006.

FY06	FY05	FY04	FY03	
Y	R	NA	NA	**Repatriate 232 (cumulative) kilograms of fresh highly enriched uranium and/or spent fuel from Soviet-supplied research reactors to Russia. (NA GG 2.64.02)**

Results: Removed a cumulative total of 228 kilograms of Russian-origin HEU, an additional 106 kilograms over the year from Uzbekistan, Libya, and Poland. The target was missed due to delays in reaching agreements with countries to return HEU fuel to Russia. This effort will reduce the amount of weapons-usable material around the world.

Supporting Documentation: Official NNSA Press Releases and other news reports.

Action Plan: Working with the governments of Ukraine and Vietnam at high levels to repatriate Russian-origin fresh HEU fuel.

FY06	FY05	FY04	FY03	
G	G	NA	NA	**7,115 (cumulative) fuel assemblies containing U.S.-origin spent fuel returned from foreign research reactors. (NA GG 2.64.03)**

Results: Exceeded the annual target by removing a cumulative total of 7,145 fuel assemblies containing U.S.-origin spent fuel, an additional 362 fuel assemblies over the year containing 72 kilograms of HEU. The recovery of foreign research reactor spent nuclear fuel works to minimize spent HEU worldwide.

Supporting Documentation: FRR SNF Scorecard (Lab report issued after receipt of shipments).

FY06	FY05	FY04	FY03	
G	Y	Y	NA	**Recover 13,650 U.S. excess sealed sources. (NA GG 2.64.04)**

Results: Exceeded the annual target by recovering a cumulative total of 13,901 U.S. excess sealed sources, an additional 2,113 sources over the year containing 64,000 curies. The recovery of excess sealed sources reduces the amount of excess and unwanted radioactive material that could be used in radiological dispersal devices.

Supporting Documentation: Bi-weekly recovery report.

FY06	FY05	FY04	FY03	
G	G	Y	NA	**Secure 498 (cumulative) high priority sites with vulnerable radiological material. (NA GG 2.64.05)**

Results: Exceeded the annual target by securing a cumulative total of 500 sites, an additional 266 sites containing 2.7 million curies. Securing these sites reduces the risk posed by radioactive materials worldwide that could be used in radiological dispersal devices.

Supporting Documentation: Monthly report from the IRTR integrated contract database.

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

General Goal 3: Naval Reactors	FY 2006 Annual Performance Targets			
Provide the Navy with safe, militarily effective nuclear propulsion plants and ensure their continued safe and reliable operation.	G-Green	Y-Yellow	R-Red	U-Undetermined
	6	0	0	0
	Program Costs ($ in Millions): $ 782			

FY06	FY05	FY04	FY03	**Program Goal: Naval Reactors** **Principally a technology program in the business of power generation for military application. The Program's development work ensures that nuclear propulsion technology provides options for maintaining and upgrading current capabilities, as well as for meeting future threats to U.S. security.**
G	G	G	G	

Results: During FY 2006, NR continued to provide the U.S. Navy with safe, reliable, and militarily effective nuclear propulsion plants with no adverse health or environmental impacts. The results from a new annual target indicated that the condition of NR facilities meets industry standards.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	G	**Achieve 134 million miles (cumulative) of safe, reliable, militarily effective nuclear propulsion plant operation supporting National security requirements. (NA GG 3.49.01)**

Results: Exceeded the annual target by completing 135.7 million miles safely steamed through June 30, 2006. The availability of safe and reliable nuclear propulsion is essential for meeting the demands of the U.S. Navy.

Supporting Documentation: Commissioned Ship Operating Reports

FY06	FY05	FY04	FY03	
G	G	G	NA	**Complete 34 percent (cumulative) of the Transformational Technology Core (TTC) reactor plant design. (NA GG 3.49.02)**

Results: Next-generation propulsion plant technology will provide an energy increase to the Navy's submarines, extending the ship life by as much as 30 percent. The Naval Reactors program continues on schedule for a 2015 completion date for delivery of this capability.

Supporting Documentation: TTC Planning Estimates

FY06	FY05	FY04	FY03	
G	G	G	G	**Complete 75 percent of the next-generation aircraft carrier reactor plant design. (NA GG 3.49.03)**

Results: The next-generation aircraft carrier propulsion plant technology will increase core energy, provide nearly three times the electric plant generating capability and require half of the reactor department sailor's needed as compared to today's technology. This technology, which is on schedule for a 2015 completion date, will enable the Navy to meet current forecasted operational requirements.

Supporting Documentation: CVN 21 Propulsion Plant Planning Estimate.

FY06	FY05	FY04	FY03	
G	G	G	G	**Achieve 100 percent of Program operations that have no adverse impact on human health or the quality of the environment. (NA GG 3.49.04)**

Results: A review of radiation monitoring results through September 30, 2006, confirms that no personnel have exceeded a five REM exposure this fiscal year. A REM is a unit of ionizing radiation exposure and typical background radiation levels on the Earth are about 0.360 REM per year. Safety remains the highest priority for the Naval Reactors program.

Supporting Documentation: Report RA-05, Occupational Safety, Health and Occupational Medicine Report, the Annual Environmental Monitoring Report and Report NT-05-3, Occupational Radiation Exposure for NR Department of Energy Facilities.

FY06	FY05	FY04	FY03	
G	G	G	G	**Achieve a 90 percent utilization factor for operation of test reactor plants. (NA GG 3.49.05)**

Results: The Naval Reactors program exceeded the annual target by achieving a utilization rate of 91 percent. A high utilization rate represents a cost-effective way of training Naval nuclear plant operators.

Supporting Documentation: Prototype Annual Activity Schedule

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Achieve a five percent annual Naval reactors complex-wide aggregate Facility Condition Index, as measured by deferred maintenance per replacement plant value for all program facilities and infrastructure. (NA GG 3.49.06)**

Results: This result indicates that deferred maintenance is being properly managed such that Naval reactor facilities are safe and can reliably, effectively and efficiently support mission activities.

Supporting Documentation: Results are documented and data is collected through the DOE Facility Information Management System. The Facility Condition Index is defined by DOE Order 430.1B.

General Goal 4: Energy Security	FY 2006 Annual Performance Targets
Improve energy security by developing technologies that foster a diverse supply of reliable, affordable, and environmentally sound energy by providing for reliable delivery of energy, guarding against energy emergencies, exploring advanced technologies that make a fundamental improvement in our mix of energy options, and improving energy efficiencies.	G-Green: 77 | Y-Yellow: 3 | R-Red: 3 | U-Undetermined: 0 **Program Costs ($ in Millions): $ 6,832**

FY06	FY05	FY04	FY03	Program Goal: Hydrogen, Fuel Cells and Infrastructure Technologies
G	Y	Y	G	**Develop hydrogen production, storage, and delivery technologies to the point that they are cost and performance competitive and are being used by the Nation's transportation, energy, and power industries.**

Results: Meeting technology and cost targets in the concurrent technology paths of hydrogen production and delivery, storage, and fuel cell power are key contributions to meeting the Hydrogen Posture Plan goals. This will ultimately provide the nation with hydrogen from diverse domestic resources, and enable its use in a clean, safe, reliable, and affordable manner in fuel cell vehicles and stationary power applications.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	R	NA	**Complete fabrication and testing of a sub-scale prototype metal hydride storage system; evaluate progress toward the 2007 target of 1.5 kilowatt-hours per kilogram (kWh/kg) (4.5 wt. percent), and complete preliminary design of system with potential to meet 2010 targets (2.0 kWh/kg (6 wt. percent), 1.5 kilowatt-hour per liter (kWh/L)). (EE GG 4.01.1)**

Results: A sub-scale prototype has been fabricated and evaluated against 2007 system targets, showing the expected progress towards the 2007 targets. A preliminary design has been completed on a storage system to meet 2010 system targets. These results are key steps towards meeting hydrogen storage targets for commercially viable hydrogen powered vehicles to ultimately reduce dependence on imported oil.

Supporting Documentation: FY 2006 Quarterly progress reports, FY 2006 annual progress reports, correspondence and presentations by United Technologies Research Center, Argonne National Laboratory and TIAX LLC.

FY06	FY05	FY04	FY03	
G	G	G	G	**Complete installation and 1,000 hours of testing of a refueling station; determine system performance, fuel quality and availability, and demonstrate the ability to produce 5,000 psi hydrogen from natural gas for a projected cost of $3.00 per gallon of gasoline equivalent, (untaxed at the station, assuming commercial deployment with large equipment production volumes (e.g., 100 units/year) by 2009. (EE GG 4.01.2)**

Results: The commissioning of the 110 kilogram per day fueling system at Penn State University was completed. Over a three month period, the system operated for more than 2000 hours. This system, projected to 1500 kg/day scale and large production volumes, is expected to produce hydrogen at a cost of $3.00 per gallon of gasoline production. These activities support the Program's 2015 goal of $2 to $3/gge for hydrogen production.

Supporting Documentation: Presentation to FreedomCAR and Fuel Partnership Hydrogen Production Tech Team, February 23-24, 2006; 3Q FY2006 Quarterly Progress Report; FY 2006 Annual Progress Report.

FY06	FY05	FY04	FY03	
G	Y	G	NA	**Operate fuel cell vehicle fleets to determine if 1,000 hour vehicle fuel cell durability, using fuel cell degradation data was achieved by industry. (EE GG 4.01.3)**

Results: Fuel cell vehicles were operated as planned and demonstrated a projected lifetime of 950 hours fuel cell durability. Durability is a critical factor in determining technology readiness of hydrogen fuel cell vehicles, and the Program's result is a key step towards achieving lifetimes that compete with gasoline internal combustion engine vehicles (5,000 hours).

Supporting Documentation: Fuel cell stack durability composite data product produced by National Renewable Energy Laboratory, September 26, 2006.

FY06	FY05	FY04	FY03	
G	G	G	NA	**DOE sponsored laboratory scale research will reduce the modeled technology cost to $110 per kilowatt (kW) for a hydrogen-fueled 80 kW fuel cell power system. (EE GG 4.01.4)**

Results: DOE-sponsored laboratory advancements in catalyst loading were incorporated into the modeled technology cost analysis by TIAX, Inc. and Directed Technologies, Inc. for an 80kW hydrogen fuel cell power system achieving the goal of $110/kW. This accomplishment is an important step towards the 2015 target of $30/kW.

Supporting Documentation: Quarterly technical progress reports and correspondences from the various researchers and the National Renewable Energy Laboratory report "BK-150-40160."

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Maintain total program direction costs in relation to total program costs in the range of 8-12 percent to demonstrate efficient and effective EERE-wide business and technical support to mission direct programs. (EE GG 4.01.5)**

Results: Total program direction (including Program Support line item) costs represented 9.5 percent of overall appropriated budget. The Office of Energy Efficiency & Renewable Energy continues to implement business process improvement to create efficient and effective management of its R&D portfolio so that more federal dollars are available for research and development of energy technologies. The baseline for administrative overhead rate is currently being validated. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: Program Direction spent as provided by the Department's Standard Accounting and Reporting System.

FY06	FY05	FY04	FY03	
G	Y	G	NA	**Complete the development of a laboratory scale distributed natural gas-to-hydrogen production and dispensing system that can produce 5,000 psi (pounds per square) hydrogen for $3.00/gge (gallon of gasoline equivalent) (projected, untaxed) at the station in 2006. (EE GG 4.01.6)**

Results: DOE-sponsored advancements in natural gas reforming were made and incorporated into the modeled technology cost analysis resulting in a hydrogen total cost of $3.00 per kilogram. These technology advancements were confirmed by an independent panel of experts commissioned by the National Renewable Energy Laboratory, verifying that the Program is on track towards meeting long term goals that would provide viable options for reducing U.S. gasoline consumption.

Supporting Documentation: These technology advancements were confirmed by an independent panel of experts commissioned by the National Renewable Energy Laboratory, verifying that the Program is on track. Written document is on file.

FY06	FY05	FY04	FY03	Program Goal: Freedom Car & Vehicle Technologies
Y	Y	Y	G	**Develop technologies that enable cars and trucks to become highly efficient, through improved power technologies and cleaner domestic fuels, and to be cost and performance competitive.**

Results: Technical advances, such as, increased combustion efficiency (for both passenger and commercial vehicles), reductions in parasitic losses, carbon fiber cost reductions, and reductions in battery costs demonstrate progress that will enable cars and trucks to become highly efficient by means of research and development on clean power technologies, improved domestic fuel specifications, and advanced power systems.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	G	**Reduce parasitic energy loss to 24 percent of total engine output. (EE GG 4.02.1)**

Results: This program demonstrated that implementing technology advancements and utilizing better materials and designs leads to improved operating efficiencies. Manufacturers and consumers will be able to use these technologies to help the Nation reduce both energy use and greenhouse gas emissions, thus improving energy security.

Supporting Documentation: The Tien Duong 2006, Eaton Corporation study at Argonne National Laboratory.

FY06	FY05	FY04	FY03	
G	G	G	G	**Reduce the projected cost at high volume of a high power, 25 kilowatt (kW), light vehicle, lithium ion battery to $750.00 per battery system. (EE GG 4.02.2)**

Results: The program was able to lower the projected cost of a lithium battery system to $750 (based on a production volume of 100,000 batteries per year). This contributes to achieving the 2010 cost goal of $500 per 25 kW battery system while meeting hybrid electric vehicle performance requirements.

Supporting Documentation: A summary of preliminary results of the Johnson Controls-Sahn (JCS) cost model were presented to the United States Advanced Battery Consortium (USABC) Technical Work Group in September.

FY06	FY05	FY04	FY03	
G	G	G	G	**Achieve 41 percent brake thermal efficiency for light vehicle combustion engines and 50 percent brake thermal efficiency, while meeting EPA 2010 emission standards (0.2 grams per horsepower-hour (g/hp-hr) NOx), for heavy vehicle combustion engines. (EE GG 4.02.3)**

Results: The Vehicles Technologies Program was able to meet this target using technology advances in demonstrations at the Oak Ridge National Laboratory (ORNL) (light vehicle engine efficiency) and at Cummins Incorporated (heavy vehicle engine efficiency). These achievements will enable cars and trucks to become more efficient and cost & performance competitive, and ultimately help reduce both oil use and greenhouse gas emissions.

Supporting Documentation: ORNL will document their results in an annual report to DOE. Progress toward meeting the TIER 2 Bin 5 emissions standards has been presented at the 2006 SAE Powertrain & Fluid Systems Conference, DOE Advanced Combustion Engines Merit Review (May 2006), and the Diesel Engine Efficiency and Emissions Research (DEER) conference (August 2006). Achievement of 50 percent Brake Thermal Efficiency was documented in the Second Quarter Report of the Heavy Truck Engine Program submitted by Cummins Incorporated.

FY06	FY05	FY04	FY03	
R	G	G	G	**Complete R&D on technologies, which, if implemented in high volume, could reduce the projected (i.e., modeled) bulk cost of automotive-grade carbon fiber to less than $3.00/pound. (EE GG 4.02.4)**

Results: MeadWestvaco, Oak Ridge National Laboratory and Pacific Northwest National Laboratory acquired specialized melt spinning equipment and begun to experiment with alternative lignin chemical purification approaches. They have not yet produced carbon fiber from lignin that meets the mechanical property targets for automotive grade carbon fiber. This limitation restricted the program from meeting the carbon fiber material cost target.

Supporting Documentation: R&D documents and memorandums located at Pacific Northwest National Laboratory.

Action Plan: A Cooperative Research and Development Agreement was initiated between Pacific Northwest National Laboratory and MeadWestvaco in mid-FY 2006 with the objective of improving lignin based carbon fiber properties by the end of FY 2007. In addition, a revised cost study will be conducted by Kline and Company in FY 2007 that will re-evaluate the factors of production and process variables for low cost carbon fiber production.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Maintain total program direction costs in relation to total program costs in the range of 8-12 percent to demonstrate efficient and effective EERE-wide business and technical support to mission direct programs. (EE GG 4.02.5)**

Results: Total program direction (including Program Support line item) costs represented 9.5 percent of overall appropriated budget. The Office of Energy Efficiency & Renewable Energy continues to implement business process improvement to create efficient and effective management of its R&D portfolio so that more federal dollars are available for research and development of energy technologies. The baseline for administrative overhead rate is currently being validated. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: Program direction cost data as provided by the Department's Standard Accounting and Reporting System.

FY06	FY05	FY04	FY03	
G	G	G	G	**Program Goal: Solar** **Improve performance of solar energy systems and reduces development, production, and installation costs to competitive levels.**

Results: The increase in conversion efficiency of commercial production crystalline silicon photovoltaic modules to 14 percent and thin-film photovoltaic (PV) modules to 11.7 percent maintains the program's technical progress. This will allow solar energy system prices to be reduced to contribute to the Department's Energy Security Goal

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	G	**Verify, using standard laboratory measurements, and a conversion efficiency of 13.8 percent of U.S. made commercial crystalline silicon PV modules. Production cost of such modules is expected to be $1.90 per Watt. (EE GG 4.03.1)**

Results: The program achieved the conversion efficiency target. The goal for the Solar America Initiative is to reduce the cost of solar electricity to $0.05-$0.10/kWh by 2015.

Supporting Documentation: Test results showing actual performance outputs and current-voltage curves are on file at the National Renewable Energy Laboratory.

FY06	FY05	FY04	FY03	
G	G	G	G	**Develop thin-film photovoltaic (PV) modules with an 11.2 percent conversion efficiency that are capable of commercial production in the U.S. (EE GG 4.03.2)**

Results: The National Renewable Energy Laboratory (NREL), a DOE laboratory, measured a conversion efficiency rate of 11.7 percent for a commercial-capable copper-indium-galliun-sulfur-diselenide (CIGSS) thin-film PV module in September, 2006, made by Shell Solar Industries.

Supporting Documentation: Test results showing actual performance outputs and I-V curves have been made available by the National Renewable Energy Laboratory through Memorandum/Technical Report.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Conduct advanced research on trough collectors and receivers that will lead to a reduction in the modeled cost of energy from concentrating solar power (CSP) troughs to $0.12-$0.14 per kilowatt-hour (kWh). (EE GG 4.03.3)**

Results: By advancing the receiver thermal performance and reducing the cost of the solar collector field in partnership with industry, the program has demonstrated cost of energy from CSP troughs that will support attainment of the long term target of $.08-$.10/ kWh. The trough systems are well suited for large-scale power applications and the thermal storage allows dispatchability.

Supporting Documentation: Memorandum/Technical Report from DOE's National Renewable Energy Laboratory giving detailed descriptions of the progress, the Solar Energy Technologies Program contributions during FY 2006, and documents in the analysis used to assess the effectiveness.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Maintain program direction costs in relation to total program costs in the range of 8 to 12 percent to demonstrate efficient and effective EERE-wide business and technical support to mission direct programs. (EE GG 4.03.4)**

Results: For FY 2006, the total program direction (including Program Support line item) cost was 9.5 percent of overall appropriated budget. The Office of Energy Efficiency & Renewable Energy continues to implement business process improvement to create efficient and effective management of its R&D portfolio so that more federal dollars are available for research and development of energy technologies. The baseline for administrative overhead rate is currently being validated. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: Program Direction spent as provided by the Department's Standard Accounting and Reporting System.

FY06	FY05	FY04	FY03	Program Goal: Building Technologies Develop cost effective tools, techniques and integrated technologies, systems and designs for buildings that generate and use energy so efficiently that buildings are capable of generating as much energy as they consume.
G	Y	Y	Y	

Results: Progress in building technologies, such as, Building America, Solid State Lighting, Appliance Standards and Test Procedures, Commercial Building Integration, and Energy Star are advancing the Building Technologies goals. This will support reaching goals that include zero energy homes by 2020, that are 70 percent more energy efficient and zero energy commercial buildings by 2025 that are 60 to 70 percent more efficient.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	Complete system research with lead builders in two climate zones demonstrating production-ready new residential buildings that are 30 percent more efficient than the whole-house Building America benchmark and document the results in Technology Package Research Reports. (EE GG 4.04.1)
G	G	G	G	

Results: In collaboration with the Building America teams, this target was achieved through development of technology package research reports that are 30 percent more efficient in the marine and mixed humid climate zones. This achievement will support the 2020 target of building residential homes that are 70 percent more energy efficient which leads to a reduction in greenhouse gases and energy consumption.

Supporting Documentation: Final Technology Package Research Reports.

FY06	FY05	FY04	FY03	Complete the development of one design technology package to achieve 30 percent or better energy savings, focusing on a single, high priority building type, such as, small commercial retail or office buildings, based on the technical and market assessments completed in 2005. (EE GG 4.04.2)
G	G	G	G	

Results: The Department completed technology design packages for 30 percent savings in small retail buildings for a variety of U.S. climates. This progress advances the program towards the 2025 goal of commercial buildings that are 60 to 70 percent more energy efficient.

Supporting Documentation: Final report from Pacific Northwest National Laboratory. (PNNL -16031)

FY06	FY05	FY04	FY03	Conduct cost-shared, competitively selected research on technology to achieve 65 lumens per Watt (in a laboratory device) of white light from solid-state devices with industry, National Laboratories, and universities. (EE GG 4.04.3)
G	G	G	NA	

Results: Through competitively selected, cost shared research, DOE has successfully fabricated a solid state white light prototype with luminous efficacy of 79 lumens per watt, exceeding the target of 65 lumens per watt. This result supports progress for attaining the goal of 160 lumens per watt for commercial devices in 2025 that would be double the efficiency of the best lighting technologies now.

Supporting Documentation: Research reports containing the documentation from cost-shared research which is competitively selected.

FY06	FY05	FY04	FY03	
G	G	G	R	**Appliance Standard Rulemakings: Complete analytical and regulatory steps necessary for DOE issuance of 4 rules, consistent with enacted law, to amend appliance standards and test procedures that are economically justified and will result in significant energy saving. Develop for DOE issuance notices of proposed rulemaking (NOPRs) regarding energy conservation standards for electric distribution transformers, commercial unitary air conditions and heat pumps, and residential furnaces and boilers. (EE GG 4.04.4)**

Results: DOE published standards required for support of Energy Policy Act of 2005 (EPACT 2005),which included commercial unitary air conditioner and heat pumps, as well as Notice of Proposed Rulemakings for distribution transformers and residential furnace and boiler standards.

Supporting Documentation: Publications in the Federal Register. (70 FR 59 122, 70 FR 60 407, 71 FR 24 872, 71 FR 44 356, 71 FR 42 178, 71 FR 59 204)

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Increase market penetration of appliances (clothes washers, dishwashers, room air conditioners and refrigerators) to 38 percent to 42 percent (baseline of 30 percent, 2003 calendar year) to two percent to three percent for compact fluorescent lamps (baseline two percent, 2003 calendar year), and 40 percent to 45 percent for windows (baseline 40 percent, 2004). Estimated energy savings will be 0.030 quads and $657 million in consumer utility billing savings. (EE GG 4.04.5)**

Results: Through the ENERGY STAR Appliance Promotion, the program has exceeded the targets for market penetration of the appliances, compact fluorescent lamps and windows. Estimated annual energy savings are .037 quads (resulting in $797 million in consumer utility bill savings). Savings calculations do not factor in purchase cost of appliances and assume appliances are purchased due to ENERGY STAR program activities. These figures may not be consistent with DOE's net benefits modeling. This voluntary program helps consumers purchase more efficient technologies which saves money for these households as well as reduces energy consumption.

Supporting Documentation: Contractor's report documents the calculations and data used to achieve the target.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Maintain total program direction costs in relation to total program costs in the range of 8 to 12 percent to demonstrate efficient and effective EERE-wide business and technical support to mission direct programs. (EE GG 4.04.6)**

Results: Total program direction (including Program Support line item) costs were 9.5 percent of overall appropriated budget. The Office of Energy Efficiency & Renewable Energy continues to implement business process improvement to create efficient and effective management of its R&D portfolio so that more federal dollars are available for research and development of energy technologies. The baseline for administrative overhead rate is currently being validated. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: Program Direction spent as provided by the Department's Standard Accounting and Reporting System.

FY06	FY05	FY04	FY03	
Y	Y	G	G	**Program Goal: Wind Energy** **By 2012, complete program technology research and development, collaborative efforts, and provide the technical support and outreach needed to overcome barriers – energy cost, energy market rules and infrastructure, and energy sector acceptance- to enable wind energy to complete with conventional fuels throughout the nation serving and meeting the Nation's energy needs.**

Results: The Wind Technology Program made progress toward the 2012 goal of reducing the cost of electricity from low wind speed technologies - land-based offshore, and in distributed wind technology. Additionally, technology acceptance activities with the states have helped to increase the amount of wind installed.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
Y	G	G	G	**Low Wind Speed Technology (LWST): Annual COE target: 4.2 cents per kilowatt-hour (kWh) in offshore Class 4 winds, and 9.3 cents per kWh for offshore systems. Distributed Wind Technology (DWT), COE target: 11-16 cents per kWh in Class 3 winds. Technology acceptance: 19 states with over 100 MW wind stalled. (EE GG 4.05.1)**

Results: For FY 2006, the Department exceeded its 4.2 cents per kWh target for land-based low wind speed technologies in Class 4 winds by achieving 3.9 cents per kWh; reached its target of 9.3 cents per kWh for offshore systems in Class 6 winds; met its goal of 11-16 cents per kWh for distributed in Class 3 winds by achieving 11.5 cents per kWh for residential and 11 cents per kWh for commercial technologies. However, the Department missed its technology acceptance target as only 16 states have achieved the 100 MW installation of wind. The delay was associated with moratoria on projects due to wind-radar and a number of other market issues. The Department will continue to work with state and local governments to increase the use of clean wind power.

Supporting Documentation: September 29, 2006, letter from the National Renewable Energy Laboratory.

Action Plan: The Technology Acceptance target of 19 States is expected to be met in 2007. Work will continue once the moratorium on the projects is lifted.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Maintain total program direction costs in relation to total program costs in the range of 8-12 percent to demonstrate efficient and effective EERE-wide business and technical support to mission direct programs. (EE GG 4.05.2)**

Results: Total program direction (including Program Support line item) costs were 9.5 percent of overall appropriated budget. The Office of Energy Efficiency & Renewable Energy continues to implement business process improvement to create efficient and effective management of its R&D portfolio so that more federal dollars are available for research and development of energy technologies. The baseline for administrative overhead rate is currently being validated. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: Program Direction spent as provided by the Department's Standard Accounting and Reporting System.

FY06	FY05	FY04	FY03	Program Goal: Hydropower Conduct the R&D necessary to improve hydropower operational and environmental performance, so that, hydropower generation is increased because of its affordability, abundance, reliability and environmental benefits.
G	G	G	NA	

Results: Program has made progress in the advancement of aerating turbines that improved dissolved oxygen concentrations, which in turn helps address a key environmental barrier to hydropower re-licensing - fish survivability. This allows the Nation to maintain its energy production diversity.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	Complete final report for operations and maintenance monitoring of large turbine test sites. (EE GG 4.06.1)
G	NA	NA	NA	

Results: The report "Performance Evaluation of the New Advanced Hydro Turbine System (AHTS) at Wanapum Dam, Columbia river, Washington" was delivered in April 2006. This report documents the impact that the new technology supported by the hydropower program can have for those operators that choose to adopt it. This will enable the hydropower industry to maintain its capacity, as the new technology overcomes a key environmental factor that often leads to reduced capacity during re-licensing.

Supporting Documentation: Performance Evaluation of the New Advanced Hydro Turbine System (AHTS) at Wanapum Dam, Columbia River, Washington," April 2006 by Normandeau Associates, Inc. and John R. Skalski and Richard L. Townsend of University of Washington.

FY06	FY05	FY04	FY03	Maintain total program direction costs in relation to total program costs in the range of 8-12 percent to demonstrate efficient and effective EERE-wide business and technical support to mission direct programs. (EE GG 4.06.2)
G	NA	NA	NA	

Results: Total program direction (including Program Support line item) costs were 9.5 percent of overall appropriated budget. The Office of Energy Efficiency & Renewable Energy continues to implement business process improvement to create efficient and effective management of its R&D portfolio so that more federal dollars are available for research and development of energy technologies. The baseline for administrative overhead rate is currently being validated. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: Program Direction spent as provided by the Department's Standard Accounting and Reporting System.

FY06	FY05	FY04	FY03	Program Goal: Geothermal Technologies
G	G	R	G	**Improve performance and reduce market entry costs of geothermal energy to competitive levels. In quantitative terms, the goal is to reduce the leveled cost of power generated from conventional geothermal sources from 5 to 8 cents per kWh (kilowatt-hour) in 2000 to three to five cents per kWh by 2010.**

Results: Technical progress made in the Geothermal Technologies Program has increased the efficiency of energy production from conventional geothermal resources. Currently modeled costs of geothermal technologies are 8.5 cents per kWh for binary cycle systems and 9.9 cents per kWh for flash systems. This allows an option of increasing the diversity of the Nation's energy production supply mix. The program is in the process of phasing out, efforts have focused on making research to date available in an electronic repository.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Develop an electronic repository which makes available via the internet, digitized copies of all Geothermal Technology Program Research Development and Deployment Technical Reports. (EE GG 4.07.1)**

Results: This program is in the process of phasing out. The electronic repository will allow access to digitized copies of all Geothermal research development and deployment technical work.

Supporting Documentation: DOE website: www.osti.gov/geothermal/promo.jsp

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Maintain total program direction costs in relation to total program costs in the range of 8-12 percent to demonstrate efficient and effective EERE-wide business and technical support to mission directed programs. (EE GG 4.07.2)**

Results: Total program direction (including Program Support line item) costs were 9.5 percent of overall appropriated budget. The Office of Energy Efficiency & Renewable Energy continues to implement business process improvement to create efficient and effective management of its R&D portfolio so that more federal dollars are available for research and development of energy technologies. The baseline for administrative overhead rate is currently being validated. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: Program Direction spent as provided by the Department's Standard Accounting and Reporting System.

FY06	FY05	FY04	FY03	
G	G	Y	Y	**Program Goal: Biomass** To develop bio-refinery-related technologies to the point that they are cost- and performance-competitive and are used by the Nation's transportation, energy, chemical and power industries to meet their market objectives.

Results: Advances and completions in the biomass targets maintain the technology road map goals needed for biomass products to move into the marketplace at competitive prices. This research, development and demonstration aimed at bringing to the market domestically produced bio-based transportation fuels, power, and products (chemicals and materials) will help reduce our dependence on foreign oil.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	G	**Identify at least one sugar-derived or biomass oil-derived bio-based chemical or material (among those being evaluated) that possesses sufficient potential to enter into the scaled-up developmental phase of research and development (R&D) from the previous bench-scale phase. (EE GG 4.08.1)**

Results: Pilot scale hydrolysis testing was conducted to process corn fiber and extract corn fiber oil. The oil has potential as a value added product, containing high value sterols and stanols, and as a source to produce ethanol. Fermentation testing was conducted from bench-scale (4 liter) to pilot-scale (50 gallons) demonstrating the potential for deriving high-value bio-based chemicals and oils from corn fiber.

Supporting Documentation: The associated Pacific Northwest National Laboratory report.

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Complete laboratory and economic assessment of 2 different feedstocks, identifying operating conditions that link pretreatment with enzymes that could be scaled-up and have the potential of achieving the goal of $0.125 per pound of sugar by 2007. (EE GG 4.08.2)**

Results: Two different feedstocks (wheat straw and switch grass) were assessed through laboratory testing and economic analysis. These feedstocks have been identified as having the potential of reach the $0.125 per pound sugar costs through combined pretreatment and enzymatic hydrolysis processing. This is a part of the Biomass Program's research into the breakdown of biomass into raw component sugars using a range of chemical and biological processes. The objective of the Sugar Platform is to develop the capability of biomass to produce inexpensive sugar streams that can be used to make fuels, chemicals, and other materials that are cost competitive with conventional commodities

Supporting Documentation: Pacific Northwest National Laboratory Report Action Plan

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Maintain total program direction costs in relation to total program costs in the range of 8-12 percent to demonstrate efficient and effective EERE-wide business and technical support to mission direct programs. (EE GG 4.08.3)**

Results: Total program direction (including Program Support line item) costs were 9.5 percent of overall appropriated budget. The Office of Energy Efficiency & Renewable Energy continues to implement business process improvement to create efficient and effective management of its R&D portfolio so that more federal dollars are available for research and development of energy technologies. The baseline for administrative overhead rate is currently being validated. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: Program Direction spent as provided by the Department's Standard Accounting and Reporting System.

FY06	FY05	FY04	FY03	Program Goal: Weatherization Increase the energy efficiency of dwellings occupied by low-income Americans, thereby, reducing their energy costs, while safeguarding their health and safety.
Y	G	G	Y	

Results: The Department worked directly with the States to weatherize almost 100,000 low-income homes with DOE funding that is advancing the President's commitment to make energy more affordable for low-income consumers while reducing the nation's use of conventional fossil fuels.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	G	Weatherize 97,300 homes, with DOE funds, and supports the weatherization of approximately 100,000 additional homes with leveraged funds. (EE GG 4.09.1)

Results: The Department exceeded the target by weatherizing 97,450 low-income homes with DOE funding and an additional 100,000 homes with funding from other sources.

Supporting Documentation: The "Systems Approach to Grants Administration for Windows" (WinSAGA) Database.

FY06	FY05	FY04	FY03	
Y	G	NA	NA	Complete planning for and initiate implementation of the new comprehensive national evaluation of the Weatherization Assistance Program. The evaluation is a multi-year task that will provide new, accurate baselines for average energy savings, benefit cost ratios, and BTU energy savings per Federal dollar expended. (EE GG 4.09.2)

Results: The program has completed the planning for the new comprehensive national evaluation of the Weatherization Assistance program, but has delayed initiating implementation into the next fiscal year. The program has developed a draft evaluation plan, established a peer review panel, distributed survey instruments to the panel. The program has not finalized the survey instrument. This evaluation will help ensure weatherization activities make energy more affordable for low-income consumers.

Supporting Documentation: Revised evaluation plan entitled "National Evaluation of the Weatherization Assistance program; evaluation for program year 2006" (draft dated 3/2006); and DOE Office of Energy Efficiency and Renewable Energy Standard Operating Procedure for Quality Assurance and General Program Evaluation Studies, 2006.

Action Plan: Finalize survey instrument in early fiscal year 2007.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	Maintain total program direction costs in relation to total program costs in the range of 8-12 percent to demonstrate efficient and effective EERE-wide business and technical support to mission direct programs. (EE GG 4.09.3)

Results: Total program direction (including Program Support line item) costs were 9.5 percent of overall appropriated budget. The Office of Energy Efficiency & Renewable Energy continues to implement business process improvement to create efficient and effective management of its R&D portfolio so that more federal dollars are available for research and development of energy technologies. The baseline for administrative overhead rate is currently being validated. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: Program Direction spent as provided by the Department's Standard Accounting and Reporting System.

FY06	FY05	FY04	FY03	Program Goal: State Energy Strengthen and support the capabilities of States to promote energy efficiency and to adopt renewable energy technologies.
G	G	G	NA	

Results: The State Energy Program assisted states in the developing energy efficiency and renewable energy plans and fostered clean, reliable and diverse renewable energy supplies by developing meaningful and effective energy efficiency and renewable energy programs specific to state level needs and delivery systems.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	NA	Achieve an average annual energy savings of 8-10 trillion source BTUs (an estimated $50-60 million in annual energy cost savings) with DOE funds. Achieve an additional average energy savings of 26-30 trillion source BTUs (an estimated $190-200 million in annual energy cost savings) from leveraged funds. (EE GG 4.10.1)

Results: Based on peer reviewed methodology, the program has determined that it has provided both immediate and future reductions in energy consumption for residential consumers, state and local governments, schools, hospitals, small businesses and agriculture using DOE funds and leveraged funds to achieve estimated annual energy savings of $50 million with DOE funds and $190 million with leveraged funds. DOE is working to improve its estimates of energy savings to address concerns raised by the IG office in April 2006.

Supporting Documentation: The "Systems Approach to Grants Administration for Windows" (WinSAGA) Database.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	Maintain total Program Direction costs, in relation to, total program costs in the range of 8-12 percent to demonstrate efficient and effective EERE-wide business and technical support to mission direct programs. (EE GG 4.10.2)

Results: Total program direction (including Program Support line item) costs were 9.5 percent of overall appropriated budget. The Office of Energy Efficiency & Renewable Energy continues to implement business process improvement to create efficient and effective management of its R&D portfolio so that more federal dollars are available for research and development of energy technologies. The baseline for administrative overhead rate is currently being validated. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: Program Direction spent as provided by the Department's Standard Accounting and Reporting System.

FY06	FY05	FY04	FY03	Program Goal: Federal Energy Management Program
G	Y	R	G	**Federal Energy Management Program (FEMP)/ Departmental Energy Management Program (DEMP), provide the efficiency and renewable energy-related technical assistance Federal agencies need to lead the Nation by example through the government's own actions, expressly obtaining Federal renewable energy use of by 2.5 percent by 2005 and reducing energy intensity in Federal buildings by 35 percent by 2010 (using 1985 as a baseline).**

Results: The Federal Energy Management Program through technical assistance on third-party finance projects, training, technical and design assistance, and the funding of retrofit projects has supported improvements in the energy efficiency of the Federal buildings stock. As of 2005, energy intensity in Federal buildings has been reduced by 29.6 percent from the 1985 baseline. In FY 2005, renewable energy accounted for 4.7 percent of Federal facility electricity consumption, thereby exceeding the 2.5 percent goal.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	R	G	**Will achieve between $80 and $120 million in private sector investment through Super Energy Savings Performance Contracts and/or Utility Energy Service Contracts which is expected to result in about a 0.2 percent annual reduction in energy intensity. These projects are cost-effective resulting in a positive net present value gain for the taxpayer. (EE GG 4.13.1)**

Results: The Department exceeded its target in FY 2006 as agencies were awarded $186 million in private sector investment using the Department's Super Energy Savings Performance Contracts (ESPCs) and Utility Energy Service Contracts (UESCs). This will provide an approximate 0.4 percent annual reduction in Federal building energy intensity.

Supporting Documentation: ESPC contracts (with database maintained by McNeil Technologies) and memorandum from agencies on UESCs (with database maintained by FEMP staff).

FY06	FY05	FY04	FY03	
G	G	G	G	**Provide technical and design assistance for 27 Federal projects (e.g., energy efficiency, renewable energy, operations and maintenance, distributed energy resources, combined heat and power, assessment of load and energy reduction techniques (ALERTS) and water conservation projects) which are expected to result in energy savings of about 60 billion British Thermal Units (BTUs). (EE GG 4.13.2)**

Results: The Federal Energy Management Program in providing technical and design assistance for 56 energy efficiency, renewable energy and other projects, that will help attain the goal set forth in Executive Order 13123, of reducing energy intensity in Federal buildings by 35 percent in 2010, as compared to the 1985 baseline. Estimated energy savings are greater than 500 billion British Thermal Units (BTUs).

Supporting Documentation: Reports or memorandum from National Laboratories that provide information on each project.

FY06	FY05	FY04	FY03	
G	G	G	G	**Complete the selection for funding of three energy retrofit projects that will provide the required dollar savings to achieve a 20 percent return of the investment of the Departmental Energy Management Program funding. These projects will save over 12 billion British Thermal Units (BTUs) per year. (EE GG 4.13.3)**

Results: By funding four energy efficiency projects through a competitive selection process that chooses those projects with the greatest return on investment, the Department of Energy Management Program (DEMP) has contributed to the overall goal of reducing the energy intensity at Department of Energy facilities. Estimated dollar savings attributable to DEMP funding in FY 2006 provides a return on investment of 35 percent. Estimated energy savings for these projects is 52 billion BTUs.

Supporting Documentation: The Department's Corporate Planning System which includes detailed information for each project selected.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Maintain total Program Direction costs, in relation to, total program costs in the range of 8-12 percent to demonstrate efficient and effective EERE-wide business and technical support to mission direct programs. (EE GG 4.13.4)**

Results: Total program direction (including Program Support line item) costs were 9.5 percent of overall appropriated budget. The Office of Energy Efficiency & Renewable Energy continues to implement business process improvement to create efficient and effective management of its R&D portfolio so that more federal dollars are available for research and development of energy technologies. The baseline for administrative overhead rate is currently being validated. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: Program Direction spent as provided by the Department's Standard Accounting and Reporting System.

FY06	FY05	FY04	FY03	Program Goal: Industrial Technologies To have partnerships with our most energy-intensive industries in strategic planning and energy-specific Research, Development & Demonstration (RD&D) to develop the technologies needed to use energy efficiently in their industrial processes and cost-effectively generate much of the energy they consume. The result of these activities will save feedstock and process energy, create domestic supply, improve the environmental performance of industry, and help America's economic competitiveness.
G	G	G	G	

Results: By commercializing seven new technologies and adding 2,153 more energy intensive plants that are applying EERE technologies and services, the program has contributed to the Administration's goal of improving energy efficiency in the industrial sector.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	Commercialize three new technologies in partnership with the most energy-intensive industries. (EE GG 4.60.1)
G	G	G	G	

Results: The seven new technologies commercialized included the SpryoCo TM Radiant Tube Insert, the Smart Screening System for Mining, the Isothermal Melting Technology, the Adjustable Speed Drive Technology, the Improved Magnesium Molding Process, the Three-Phase Rotary Separator Turbine, and the Dual Pressure Turbine. These commercialized technologies will improve the energy efficiency in the industrial sector.

Supporting Documentation: Pacific Northwest National Laboratory monthly reports and annual report.

FY06	FY05	FY04	FY03	An additional 200 (leading to a cumulative 8,600) energy intensive U.S. plants will apply EERE technologies and services contributing to the goal of a 20 percent reduction in energy intensity from 2002 levels by 2020. (EE GG 4.60.2)
G	G	G	G	

Results: With the accomplishment of this target, there are now over 14,000 more unique plants applying energy technologies which help to reduce emissions and increase energy efficiency and productivity. The estimated energy intensity percent reduction from 2002 to 2006 is 4.8 percent, on track towards the 2020 goal of 20 percent. The overall result of this effort will save feedstock and process energy, improve the environmental performance of these industries, and help maintain America's economic competitiveness.

Supporting Documentation: Quarterly Lawrence Berkeley National Laboratory report.

FY06	FY05	FY04	FY03	Maintain total Program Direction costs, in relation to, total program costs in the range of 8-12 percent to demonstrate efficient and effective EERE-wide business and technical support to mission direct programs. (EE GG 4.60.3)
G	NA	NA	NA	

Results: Total program direction (including Program Support line item) costs were 9.5 percent of overall appropriated budget. The Office of Energy Efficiency & Renewable Energy continues to implement business process improvement to create efficient and effective management of its R&D portfolio so that more federal dollars are available for research and development of energy technologies. The baseline for administrative overhead rate is currently being validated. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: Program Direction spent as provided by the Department's Standard Accounting and Reporting System.

FY06	FY05	FY04	FY03	Program Goal: Near-Zero Atmospheric Emissions Coal-Based Electricity & Hydrogen Production
G	G	Y	G	**Create public/private partnerships to provide technology to ensure continued electricity generation and hydrogen production from the extensive U.S. fossil fuel resource (especially coal), including control technologies to permit reasonable-cost compliance with emerging regulations, and ultimately, by 2015, near -zero atmospheric emission plants (including carbon) that are fuel-flexible, and capable of multi-product output and efficiencies over 60 percent with coal and 75 percent with natural gas.**

Results: During FY 2006, Fossil Energy has successfully entered into public/private partnerships, executing Research, Development and Demonstration projects while meeting its annual performance goals in all of its six technology areas with projects that performed pilot scale testing in Carbon Sequestration, constructing gas separation technologies for oxygen and hydrogen production, and improving Fuel Cell performance and reliability. These interim successes all contribute toward meeting the long term goal of providing technology to ensure continued electricity generation and hydrogen production from the extensive U.S. fossil fuel resource (especially coal).

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	G	**Conduct initial pilot scale slipstream field testing of at least one technology capable of 90 percent mercury removal. (FE GG 4.55.1)**

Results: The Department selected three Phase III projects aimed at field testing technologies capable of achieving 90 percent mercury control. As part of one of the awards, the University of North Dakota Energy & Environmental Research Center conducted initial (SEA1) field testing of a technology capable of 90 percent mercury removal in September 2006 at Kansas City Power & Light's Hawthorn Unit 5. Subsequent testing (SEA2) was initiated and will continue into FY 2007. The long term results of this test are expected in July 2007.

Supporting Documentation: FY 2006 Fourth Quarter Report for the "Long Term Demonstration of Sorbent Enhancement added Technology for Mercury Control" project with University of North Dakota Energy & Environmental Research Center discusses the initiation of testing.

FY06	FY05	FY04	FY03	
G	G	G	G	**Begin construction and testing of advanced gas separation technologies. In FY 2006, the Gasification Technologies program will move gas separation, including ceramic membrane, hydrogen separation, CO2 hydrate formation and ceramic membrane air separation, closer to commercialization, eventually leading to capital cost reductions of $60-$80 per kiloWatt (kW) from the baseline of $1,200 per kW for Integrated Gasification Combined Cycle (IGCC) systems and efficiency improvements of greater than 1 efficiency point. (FE GG 4.55.2)**

Results: Progress was made in developing technologies for both oxygen and hydrogen separation. In the area of creating pure oxygen from air, full-size Ion Transport Membrane (ITM) Oxygen modules successfully produced 95 percent pure oxygen in the subscale engineering prototype facility. This will aid in the scale-up to a pre-commercial development facility. In the area of separating hydrogen, construction of the 1.3 lb per day Process Development Unit (PDU) began; the PDU will test hydrogen separation membrane performance on simulated syngas.

Supporting Documentation: Monthly Highlights Report, "Development of ITM Oxygen Technology for Integration in IGCC & Other Advanced Power Generation Systems (ITM Oxygen)," May 2006

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Initiate a prototype combustor module test for large frame engines of low NOx combustion technology (trapped vortex, catalytic, lean premix, or modified diffusion flame) using simulated coal-based synthesis gas to demonstrate progress towards a 2 parts per million (ppm) NOx emissions goal. (FE GG 4.55.3)**

Results: In the second quarter of FY 2006, GE Global Research completed a prototype combustor module test for an advanced trapped vortex combustor using a simulated coal based synthesis gas. Additional combustor modules (lean pre-mix and dilute diffusion based) are scheduled for additional testing in FY 2007. In the third quarter of FY 2006, Siemens Power Generation completed a prototype combustor module test for an advanced rich catalytic-lean combustor using a simulated coal based synthesis gas. Laboratory combustor testing completed to date has shown that the 2 ppm NOx emissions goal to be extremely challenging particularly with high hydrogen fuels and high firing temperatures. The success of these laboratory tests has provided the technological basis for realizing this emissions goal.

Supporting Documentation: The prototype combustor module test completed in March 2006 was reported in the June 2006 semi-annual report. The advanced rich catalytic-lean combustor test completed in July 2006 was reported in the October 2006 semi-annual report.

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Perform pilot-scale testing and also laboratory testing of different CO2 capture technologies to lead to significant improvement in cost and performance, and initiate field sequestration activities within the Regional Partnerships leading to future sequestration tests. (FE GG 4.55.4)**

Results: The University of Texas completed a pilot plant testing campaign to evaluate a technology that is capable of at least 90 percent CO2 capture. Laboratory scale evaluation of membranes developed by Los Alamos National Laboratory and Praxair were also completed. National Energy Technology Laboratory researchers completed the evaluation of solid sorbents for application to both post combustion and pre-combustion CO2 capture. The tests results for the novel tertiary showed potential for significant improvement in cost and performance. All seven Phase II Regional Partnerships were awarded and field testing of CO2 sequestration was initiated at the Zama Oil Field in Zama, Alberta as part of the activities under the Plains CO2 Reduction Partnership.

Supporting Documentation: Proceedings of the 5th Annual Carbon Sequestration Conference, and the Office of Fossil Energy Techlines dated June 9, 2005 and June 26, 2006, respectively and Proceedings from the Regional Partnership Phase II kickoff meeting held October 12-14, 2005. Available at the website - http://www.netl.doe.gov/technologies/carbon_seq/index.htm

FY06	FY05	FY04	FY03	
G	G	G	G	**One or more Solid State Energy Conversion Alliance (SECA) Industry Teams (ITs) complete Phase I prototype validation test and evaluation against SECA Phase I minimum technical requirements and cost goals. (FE GG 4.55.5)**

Results: Solid State Energy Conversion Alliance (SECA) Industry Teams, General Electric (GE) and Delphi, completed their respective phase one of three prototype tests and submitted the required documentation to the National Energy Technology Laboratory, including Prototype Test Reports and independently-audited Factory Cost Reports, in FY 2006. GE met the SECA minimum technical requirements and interim-progress cost target with an efficiency of 38 percent (35 to 55 percent goal) and a cost of $724/kW ($800/kW interim cost target). Delphi achieved an efficiency of 37 percent and a cost of $761/kW. Both of these projects have been authorized to proceed into phase two. Validation that SECA Prototype systems are capable of achieving phase one goals ensures that the program is on track for the ultimate program goal of modular fuel cells with 10-fold cost reduction ($400/kW) at 40-60 percent efficiency.

Supporting Documentation: Prototype Test and independently-audited Factory Cost Reports document prototype performance and cost, respectively. Further details and presentations for all of the SECA Industry Teams are available on the SECA website (http://www.seca.doe.gov/), especially the 2006 Fuel Cell Annual Report and Fossil Energy Techlines.

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Improve cell performance and reliability through reduction of area specific resistance (ASR) and interconnect reliability improvement to aid SECA ITs in achieving technical requirements and cost goals. (FE GG 4.55.6)**

Results: Lawrence Berkeley National Laboratory used a low-cost single-step infiltration method to reduce the area specific resistance (ASR) of a standard Strontium-doped Lanthanum Manganite (LSM)/Yttria Stabilized Sirconia (YSZ) cell cathode. Under harsh test conditions, the interconnect coating remained intact and achieved an acceptable projected 40,000 hr lifetime ASR.

Supporting Documentation: Third Quarter FY 2006 Progress Report, "Quarterly Progress Report for SECA Core Technology Program," submitted by Pacific Northwest National Laboratory to National Energy Technology Laboratory and progress updates from Pacific Northwest National Laboratory and Lawrence Berkeley National Laboratory. Details and presentations, particularly the 2006 Fuel Cell Annual Report, are available on the web at http://www.seca.doe.gov.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Develop industry standards for the design and operation of a commercial-scale advanced hydrogen separation system, and complete screening tests of a pre-engineering scale prototype unit to validate design parameters. (FE GG 4.55.7)**

Results: The standard performance objectives for the design and operation of hydrogen separation systems were established and have been included within the Hydrogen-from-Coal Program Research, Development and Demonstration Plan (RD&D) for the Period 2005 through 2015. Screening tests of a pre-engineering scale hydrogen production prototype unit were completed and construction of 1.3 pounds per day Process Development Unit (PDU) is underway. The PDU will test hydrogen separation membrane performance on simulated syngas.

Supporting Documentation: Hydrogen-from-Coal Program RD&D Plan at DOE's National Energy Technology Laboratory (NETL) website (http://www.netl.doe.gov/technologies/hydrogen_clean_fuels/refshelf/pubs/hold/MYRDDP.pdf)

FY06	FY05	FY04	FY03	
G	G	G	NA	**Make go/no go decisions regarding award of cooperative agreements for all projects selected under Round 2 CCPI. (FE GG 4.55.8)**

Results: Go/no-go decisions regarding award of cooperative agreements have been made for all projects selected under Round 2 CCPI. Round 2 projects will demonstrate: (1) coal gasification system advances that enhance efficiency, environmental performance and reliability, and (2) advancements that support the President's Clear Skies Initiative to reduce power plant emissions, particularly mercury, by about 70 percent by 2018, and the Global Climate Change Initiative to reduce carbon emissions growth over the next ten years.

Supporting Documentation: Documentation is available upon request from National Energy Technology Laboratory and includes signed cooperative agreements and correspondence from the contracting officer. Public information also available at http://www.netl.doe.gov/technologies/coalpower/cctc/r2projects.html.

FY06	FY05	FY04	FY03	
G	G	G	G	**Program Goal: Natural Gas Technologies** **Provide technology and policy options capable of ensuring abundant, reliable, and environmentally sound gas supplies.**

Results: The successful completion of the prototype near term products and field tests for the downhole seismic receiver array, the novel sparker-coupler seismic source, and the Prototype High Pressure, High Temperature Measurement-While-Drilling Tool will provide a higher probability of success in the finding and producing of domestic natural gas resources.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	G	**Complete four of the prototype near-term products or field tests from the following critical technology areas: advanced drilling, advanced diagnostics/imaging, stripper-well enhancement, and gas storage. Conduct exploratory and characterization studies that confirm and/or advance development of methane hydrate exploration technologies or help assess the viability of future production scenarios. (FE GG 4.56.1)**

Results: The completed products/tests in FY 2006 included developing a geologic basin playbook and completing three experimental tests: a prototype down-hole seismic receiver test, a novel sparker-coupler seismic source test and a high-pressure, high-temperature, measurement-while-drilling tool test. Additionally in FY 2006, the Department successfully recovered and characterized a methane hydrate core sample. When these technologies are fully developed and transferred to industry, they will help industry increase efficiency in gas exploration, production and storage.

Supporting Documentation: Documented in DOE's Project Database, 'ProMIS'.

FY06	FY05	FY04	FY03	Program Goal: Oil Technology The goal of the Oil Technology program is to enhance U.S. energy security by managing and funding oil exploration and production (E&P) research and policy which results in development of domestic oil resources in an environmentally sound and safe manner.
G	G	G	Y	

Results: All milestones toward developing technologies to help increase domestic oil supplies were met. The success of the field applications tested for the horizontal wells in the Wilmington field, the 3D survey work, and the sliding sleeve technology will provide a higher probability of success in the finding and producing of domestic oil resources.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	Y	Develop technologies through up to 4 projects which will contribute to increasing domestic oil supplies in an environmentally friendly manner. **(FE GG 4.57.1)**

Results: The Oil Program successfully evaluated the use of "sliding sleeve" technology to isolate oil producing intervals; enhanced heavy oil recovery in the Wilmington Oil Field using thermal technology in horizontal wells; employed 3D seismic techniques to monitor the use of carbon dioxide for enhance oil recovery in the Hall-Gurney Field, KS; and initiated CO2 injection as part of a 4-D seismic test in the Charleton Field, MI for improved CO2/Enhanced Oil Recovery Management. These advances will help industry increase efficiency in oil exploration, production and storage.

Supporting Documentation: Documented in the Department's Project Database, 'ProMIS'.

FY06	FY05	FY04	FY03	Program Goal: Strategic Petroleum Reserve Maintain operational readiness of the Strategic Petroleum Reserve to drawdown at a sustained rate of 4.4 million barrels per day for 90 days, within 15 days notice by the President.
G	G	G	Y	

Results: The Strategic Petroleum Reserve is the cornerstone of the U.S. energy security program. It provides the United States with strategic and economic protection against disruptions in oil supplies. The Reserve's current inventory of 687.8 million barrels provides 59 days of net import protection. Assurance that the Reserve is maintained in a high state of readiness is measured by how quickly the program can respond to a Presidential direction to draw down; how much of the oil inventory in SPR storage is available; and the cost efficiency of operations.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Achieve maximum sustained (90 day) drawdown rate of 4.4 MMB. (FE GG 4.58.1)**

Results: At the end of FY 2006, the Strategic Petroleum Reserve's (SPR) drawdown rate was 4.4 million barrels per day. This metric reflects the drawdown rate (in barrels per day) that the Strategic Petroleum Reserve can sustain for an initial 90 days in order to distribute crude oil from underground storage sites to distribution points.

Supporting Documentation: SPR Drawdown Readiness and Capability (RECAP) Report and the Online Readiness Computerized Assessment (ORCA) System

FY06	FY05	FY04	FY03	Achieve operating cost per barrel of capacity of $0.201 (FE GG 4.58.2)
G	NA	NA	NA	

Results: The Strategic Petroleum Reserve exceeded the annual target by achieving an operating cost per barrel of capacity of $0.186. This measure equals the annual operations-related costs ($135 million) divided by the total storage capacity in barrels (727 million barrels). During FY 2006, the Department set quarterly cost goals to meet the annual target of $0.201 based on the program's appropriation. The Department surpassed the target by optimizing program facilities operations.

Supporting Documentation: Year-End financial reports from the Department's accounting system, STARS.

FY06	FY05	FY04	FY03	Program Goal: New Nuclear Generation Technologies Develop new nuclear generation technologies that foster the diversity of the domestic energy supply through public-private partnerships that are aimed in the near-term (2015) at the deployment of advanced, proliferation-resistant light water reactor and fuel cycle technologies and in the longer-term (2025) at the development and deployment of next-generation advanced reactor and fuel cycles.
G	G	Y	Y	

Results: The successful achievement of the associated annual targets represents progress toward the near term and long term aspects of this program goal. The Office of Nuclear Energy (NE) will continue to build upon these R&D activities in FY 2007 and beyond to encourage the development and deployment of nuclear energy to meet our country's need for carbon-free energy. NE will begin to develop and incorporate PART performance metrics while continuing to work to develop meaningful, measurable outcome-based performance metrics.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	Complete Generation IV research and development activities to inform a design selection for the next generation nuclear power plant by FY 2011. (NE GG 4.14.1a)
G	G	G	NA	

Results: In FY 2006, the program focused on R&D activities associated with materials and fuels testing necessary for determining the design of the next generation nuclear power plant. This work moves the program closer to meeting the requirements of the EPACT of 2005.

Supporting Documentation: Various technical reports documenting completion and results of FY 2006 experiments, on file with the program office in Germantown, MD.

FY06	FY05	FY04	FY03	Complete NHI research and development activities that support the commercialization decision in 2015, as required in the Department's Hydrogen Posture Plan (a presidential initiative). (NE GG 4.14.1b)
G	NA	NA	NA	

Results: In FY 2006, the program focused on R&D activities associated with thermochemical processes designed to demonstrate the viability of using heat and/or electricity from Generation IV nuclear energy systems to with the goal of producing hydrogen at the price that is cost competitive with other alternative fuels. Successful achievement of the target directly contributes to the goals of the Department's Hydrogen Posture Plan, and contributes to the design of the next generation nuclear power plant.

Supporting Documentation: Various technical reports documenting completion and results of FY 2006 experiments, on file with the program office in Germantown, MD.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Complete research and development activities that allow the AFCI program to support the Secretary of Energy's determination of the need for a second geologic repository for spent nuclear fuel by FY 2008. (NE GG 4.14.1c)**

Results: In FY 2006, the program focused on R&D activities associated with advanced separations and fuels testing and initiating preconceptual design work on an advanced fuel cycle facility. Successful achievement of the target increases our understanding of the nuclear fuel cycle and will significantly contribute to the Department's recommendation on whether to build a second geologic repository for high level nuclear waste, due to the President and to Congress no later than 2010. These activities also contribute to the Global Nuclear Energy Partnership (GNEP), the goal of which is to enable expansion of nuclear energy worldwide, in an economical and carbon-free manner, by demonstrating and deploying new advanced technologies using a nuclear fuel cycle that enhances proliferation resistance.

Supporting Documentation: Advanced Fuel Cycle Technology Options for Repository Optimization 2006 draft report on file with the Office of Advanced Fuel Research and Development in Germantown, MD.

FY06	FY05	FY04	FY03	
G	G	G	Y	**Complete engineering and licensing demonstration activities necessary to implement the NP 2010 program in accordance with the principles of project management, to help ensure that program performance goals are achieved on schedule and within budget. (NE GG 4.14.2)**

Results: In FY 2006, the program focused on activities associated with achieving NRC certification of two advanced nuclear reactor designs, and continued work with industry on combined construction and operating licenses for new nuclear power plants. Achievement of the annual target moves the program closer toward enabling an industry decision to deploy new nuclear power plants by 2010.

Supporting Documentation: Reports on continuous project management oversight and schedule and progress monitoring; earned value management data and progress reports; detailed analysis of COL project restructuring proposals and the associated revised baselines; and NE senior management coordination meetings with the utility and reactor vendors project management.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Maintain total administrative overhead costs in relation to total program costs of less than 8 percent. (Baseline for administrative overhead rate is currently being validated). (NE GG 4.14.3)**

Results: Achievement of the annual target establishes the baseline for FY 2007 for improving R&D program management efficiency. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: Performance is captured in Approved Funding Plans for FY 2006 and in Monthly Performance and Finance Reports

FY06	FY05	FY04	FY03	Program Goal: National Nuclear Infrastructure
G	G	G	G	**Maintain, enhance, and safeguard the national nuclear infrastructure to meet the Nation's energy, environmental, medical research, space exploration, and national security needs.**

Results: The successful achievement of this program goal indicates the continued strengthening of the national nuclear infrastructure, which is comprised of the Idaho National Laboratory, and facilities at Oak Ridge National Laboratory and Los Alamos National Laboratory. This infrastructure is vital to the success of the Department's nuclear energy R&D efforts, and supports the missions of other federal agencies, including NASA.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	Y	**Maintain operability of Radiological Facilities Management and Idaho Facilities Management-funded facilities to enable accomplishment of Nuclear Energy, other DOE and Work-for-Others milestones by achieving a Facility Operability Index of 0.9. (NE GG 4.17.1)**

Results: This target focuses on essential infrastructure and associated activities that represent key indicators critical to maintaining an effective infrastructure. Successful achievement of this annual target represents an assurance that the Department's unique nuclear infrastructure, required for advanced nuclear energy technology research and development, is available to support national priorities.

Supporting Documentation: End of year reports to the IFM Headquarters Team Leader from Field IFM Program Managers.

FY06	FY05	FY04	FY03	
G	G	G	G	**Install all physical protective system upgrades outlined in the approved May 2003 Design Basis Threat (DBT) Implementation Program Management Plan that remains consistent with the requirements of the 2004 DBT. (NE GG 4.17.2)**

Results: In FY 2006, the program focused on safeguards and security activities at Idaho National Laboratory, including conceptual design on security upgrades for the Materials and Fuels Complex (MFC). Successful achievement of the target helps ensure that the Department's critical nuclear infrastructure, required for advanced nuclear energy technology research and development, is available to support national priorities.

Supporting Documentation: Monthly status reports from the Idaho Operations Office.

FY06	FY05	FY04	FY03	
G	G	G	G	**Complete activities to enhance the nation's nuclear education infrastructure by providing financial support to universities for facility and reactor modernization, and to students to enable the pursuit of careers in nuclear energy-related fields; through these activities, DOE is demonstrating its commitment to the development of nuclear technology for the Nation. (NE GG 4.17.3)**

Results: In FY 2006, the program focused on activities associated with the solicitation, peer review and awards for Office of Nuclear Energy grant programs. Funds were issued to all award recipients to support nuclear education activities. Successful achievement of the target significantly contributes to enhancing the nation's nuclear education infrastructure to support the future development of nuclear technology.

Supporting Documentation: Signed funding letters and Notice of Financial Assistance Awards (NFAA) instruments.

FY06	FY05	FY04	FY03	
G	G	G	Y	**Consistent with safe operations, achieve cumulative variance of less than 10 percent from cost and schedule baselines for the Reactor Technology Complex (RTC) and the Materials and Fuels Complex (MFC). (NE GG 4.17.4)**

Results: Surpassed the target by achieving cumulative cost and schedule variances at both complexes of less than 10 percent. The MFC had a cumulative cost variance (CV) of +1 percent and schedule variance (SV) of – 1 percent. The RTC had a cumulative CV of + 1 percent and SV of – 6 percent. Monitoring of cost and schedule performance against established baselines ensures program managers are achieving the desired program results consistent with the budget execution strategy, and provides early identification of possible problems in program execution.

Supporting Documentation: Idaho Facilities Management Infrastructure Program Monthly Reports.

FY06	FY05	FY04	FY03	
G	Y	Y	G	**Program Goal: Electricity Delivery and Energy Reliability** **Electricity Delivery and Energy Reliability: Lead national efforts to modernize the electric grid, enhance security and reliability of the energy infrastructure, and facilitate recovery from disruptions to the energy supply.**

Results: In FY 2006, the successful operation of the superconducting cable on the electric grid; the deployment of real-time measuring units and archiving and analysis locations on the Eastern Interconnect; the commissioning of three pioneering storage projects; and the development of a packaged Combined Heat and Power (CHP) system were all significant accomplishments needed to modernize the Nation's electric grid. Through this program, the Department also contributed to the Energy Policy Act through analysis and studies, and improved energy infrastructure emergency response capabilities.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	R	NA	NA	**Operate a first-of-a-kind superconductive power line on the electric grid for 240 hours. (OE GG 4.12.1)**

Results: By August 2006, operation of the superconductive power line on the electric grid exceeded the 240 hours specified in OE's annual performance target by more than 1,000 hours. The cable was installed in the American Electric Power's Columbus, Ohio electricity system, and provided innovative, first-of-a-kind, superconducting power to customers.

Supporting Documentation: High Temperature Superconducting Underground Cable Annual Report.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Facilitate the installation and operation of 30 additional measurement units and 2 additional archiving and analysis locations in a real-time measurement network, for a cumulative total of 80 measuring units and 8 archiving and analysis locations. (OE GG 4.12.2)**

Results: In partnership with the Tennessee Valley Authority (TVA), the North American Electric Reliability Council (NERC), and the Consortium for Electric Reliability Technology Solutions (CERTS), the program installed over 30 additional measurement and 2 additional archiving units in the Eastern Interconnection region. This has improved situational awareness and has provided real-time visibility of the system over wide areas of the country.

Supporting Documentation: Progress Report: Contributions by the Pacific Northwest National Laboratory (PNNL) to the U.S. Department of Energy (DOE) Transmission Reliability Program as part of the Consortium for Electric Reliability Technology Solutions (CERTS)."

FY06	FY05	FY04	FY03	
G	R	G	NA	**Commission three pioneering energy storage systems in collaboration with the Control Electric Company (CEC) and New York State Energy Research and Development Authority (NYSERDA) and produce preliminary reports using collected technical and economic data. (OE GG 4.12.3)**

Results: All three pioneering energy storage systems were completed during FY06. In November, 2005, the Gaia energy storage system was commissioned through a joint initiative between DOE and the New York State Energy Research and Development Authority (NYSERDA); in March, 2006, a Beacon flywheel energy storage system was commissioned at test facility in San Ramon, California in a joint venture between DOE and the California Energy Commission; in June, 2006, a Beacon flywheel energy storage system was commissioned in Amsterdam, New York, again, in a joint initiative between DOE and NYSERDA.

Supporting Documentation: NYSERDA Project Director and Sandia Project Director E-mails; Report # EX9648-040606, Monitoring Report: Delaware County Electric Cooperative Energy Storage Demonstration Project, July 2005 - Mar 2006; Report # EX9648-061506, Quarterly Report: Delaware County Electric Cooperative Energy Storage Demonstration Project, Mar 2006 - June 2006; FY06 Commissioning and Initial Technical and Economic Data Collection on Three Pioneering Energy Storage System Projects in Collaboration with the CEC and NYSERDA.

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Maintain total Research and Development Program Direction costs in relation to total Research and Development costs at less than 12 percent. (OE GG 4.12.4)**

Results: During FY 2006, OE surpassed its target by maintaining its total program direction funding relative to research and development (R&D) funding at 6.3 percent using a combination of competitive contracting, competitive sourcing, and leveraging limited resources with DOE corporate resources. Lowering overhead means that more dollars go directly to conducting research and developing technologies aimed at increasing the reliability and efficiency of our national electrical grid. The baseline for administrative overhead rate is currently being validated. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: OE's Official Spreadsheet of R&D Program Direction vs. R&D Program Funding.

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Develop one packaged CHP system which operates at a 70+ percent efficiency. (OE GG 4.12.5)**

Results: The packaged CHP system installed at the Dell Children's Medical Center in Austin, Texas achieved a 73 percent (HHV)/ 80 percent (LHV) efficiency level in September, 2006. CHP systems capture and utilize the heat that otherwise would be rejected in traditional separate generation of electric and mechanical energy, achieving a much greater total efficiency.

Supporting Documentation: Oak Ridge National Laboratory Distributed Energy Program, Quarterly Progress Report 4th Quarter (July 1 – September 30, 2006); Fact Sheet (Distributed Energy Program FY05/06 Accomplishments) "Hospital IES Provides Clean, Secure Energy"; Letter Report to ORNL from Burns & McDonnell Engineering

FY06	FY05	FY04	FY03	
Y	G	G	G	**Program Goal: Southeastern Power Administration** Ensure Federal hydropower is marketed and delivered while passing the North American Electric Reliability Council's Control Compliance Ratings, meeting planned repayment targets, achieving a recordable accident frequency rate at or below our safety performance standard and providing rational economic development benefits.

Results: Southeastern delivered available power to the transmission grid in compliance with National Electric Reliability Control Performance Standards. Rainfall was significantly lower than expected which decreased revenue available for repayment and a subsequent decrease in forecast economic benefits.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	G	**Meet NERC Control Performance Standards (CPS) of CPS1>100 and CPS2>90. CPS1: minute by minute measures a generating system's ability to match supply to changing demand requirements and support desired system frequency (about 60 cycles per second); CPS2: measures systems ability to limit the magnitude of generation and demand imbalances. (PMA GG 4.51.1)**

Results: For all four quarters of FY 2006, the Southeastern Power Administration (SEPA) achieved passing scores both on both CPS 1 (annually 201.34) and CPS 2 (annually 99.77).

Supporting Documentation: CPS 1 and CPS 2 reported to Southeastern Electricity Reliability Council Web Portal on Form P1T1.

FY06	FY05	FY04	FY03	
R	G	G	G	**Repay $31.6 million annually under average water conditions to meet required payments as they come due and assure that all aged investments will be replaced on a timely basis now and in the future. (PMA GG 4.51.2)**

Results: In FY 2006, the southeast area of the United States experienced the eighth worst period of drought in the past 100 years. Cyclical drought conditions resulted in below average power generation and a subsequent decrease in repayment. Persistent drought conditions thru the fourth quarter resulted in year-end repayment being only 44 percent of planned.

Supporting Documentation: SERC/NERC Compliance reported to SERC Web Portal: Disturbance Control (Form P1T2); Compliance Issues (Form P2T1); Operator Training (Form P8T2).

Action Plan: Greater than average rainfall over the previous 2 fiscal years enabled Southeaster's repayment to be significantly greater than planned. The cyclical nature of rainfall should be considered when evaluating off-year results that are less than expected.

FY06	FY05	FY04	FY03	
R	G	NA	NA	**Provide $635 million in annual economic benefits to the region under average water conditions. (PMA GG 4.51.3)**

Results: Continuing through the fourth quarter of FY 2006, cyclical drought conditions in the southeast resulted in below average power generation and lower than expected economic benefits. Cumu lative economic annual benefits are only 72 percent of average (approximately $457 million).

Supporting Documentation: Power Repayment Studies, Annual Report & Audited Financial Statements

Action Plan: Greater than average rainfall over the previous 2 fiscal years enabled economic benefits associated with the sale of Federal hydroelectric power to be significantly greater than planned. The cyclical nature of rainfall should be considered when evaluating off-year results that are less than expected.

FY06	FY05	FY04	FY03	Program Goal: Southwestern Power Administration Market and Deliver Federal Power: Provide the benefits of Federal power to customers by selling and reliably delivering power from Federal multi-purpose hydroelectric dams at the lowest cost-based rates possible that produce revenues sufficient to repay all power costs to the American taxpayers.
Y	G	G	Y	

Results: The Southwestern Power Administration (Southwestern) supports the Department's energy goal by marketing and delivering reliable, affordable and environmentally sound energy, and operating a reliable transmission system which is an integral part of the Nation's transmission grid. Southwestern, in conjunction with the U.S. Army Corps of Engineers, participates in this effort by managing the multipurpose operation of the Federal hydropower system. This enables effective marketing, generation, and delivery of clean, reliable, cost-based electric power

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	Meet industry averages (CPS1: 162.3 and CPS2: 96.7) and at a minimum, meet NERC Control Performance Standards (CPS) of CPS1>100 and CPS2>90. CPS1: minute by minute measures a generating system's ability to match supply to changing demand requirements and support desired system frequency (about 60 cycles per second); CPS2: measures systems ability to limit the magnitude of generation and demand imbalances. (PMA GG 4.52.1)
G	G	G	G	

Results: During FY 2006, Southwestern achieved 6 out of 6 control compliance ratings. Southwestern's average annual results are 180.23 for CPS1 and 99.18 for CPS2. Achieving this target reflects Southwestern's ability to maintain acceptable power system operation for control area performance, thereby operating the power system efficiently and effectively.

Supporting Documentation: CPS 1&2 - NERC Monthly Control Compliance Rating Report for 2000 through 2006. Data can be found at http://www.nerc.com/~filez/cps.html.

FY06	FY05	FY04	FY03	Operate the transmission system so there are no more than 3 preventable outages annually. (PMA GG 4.52.2)
G	G	G	NA	

Results: During FY 2006, Southwestern Power Administration had no one preventable customer outages, during the second, third, and fourth quarters of FY 2006, but had 1 during the first quarter. Achieving this target reflects Southwestern's ability to provide reliable service to customers each year, thereby maintaining power system reliability.

Supporting Documentation: Southwestern's Point of Delivery Incidents Log.

FY06	FY05	FY04	FY03	Repay the Federal Investment within the required repayment period. (PMA GG 4.52.3)
G	G	G	Y	

Results: Year-to-date During FY 2006, Southwestern has achieved 100.0 percent, or $1,047,467, of required repayment of the Federal investment. Achieving this target reflects Southwestern's commitment to meet repayment of the Federal investment, thereby achieving and maintaining financial integrity.

Supporting Documentation: Power Repayment Studies, Annual Report, Audited Financial Statements

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Provide power at the lowest possible cost by keeping average operation and maintenance cost per kilowatt-hour below the National average for hydropower. (PMA GG 4.52.4)**

Results: Southwestern Power Administration delivered electricity from hydropower at an average cost of $0.0116 per kilowatt-hour, approximately 15 percent lower than the National industry average of $0.0136 per kilowatt-hour. Achieving this target reflects Southwestern's ability to control annual Operations and Maintenance costs, thereby providing power at the lowest possible cost.

Supporting Documentation: Southwestern's Financial Management System, U.S. Army Corps of Engineers Financial Data Reporting, Surveyed Utilities Financial Reporting to FERC.

FY06	FY05	FY04	FY03	
Y	G	NA	NA	**Provide $462 million in economic benefits to the region from the sale of hydroelectric power (under average water conditions). (PMA GG 4.52.5)**

Results: During FY 2006, Southwestern has achieved 69.7 percent, or $322 million, of the $462 million annual goal. The severe drought affected Southwestern's ability to achieve a "Green" rating for this target. Southwestern remains vigilant in the effort to provide economic benefits within its marketing area through the delivery of Federal hydropower, thereby advancing the President's commitment to provide both renewable and affordable energy to the nation, while reducing the nation's use of conventional fossil fueled energy.

Supporting Documentation: Energy dollar values were obtained from U.S. Army Corps of Engineers' (Corps) Greers Ferry Lake Reallocation Study dated September 1997. Capacity dollar values were developed by the Corps' Hydropower Analysis Center using Federal Energy Regulatory Commission procedures. Actual generation was obtained from the Corps power plant reports. Southwestern has 2,247.8 megawatts of capacity for support of the 2052.6 megawatts of marketed capacity with 5,570 gigawatt-hours (GWH) of energy produced from average water conditions.

Action Plan: Southwestern continues to experience severe drought conditions that hamper its ability to generate sufficient energy to fulfill its contractual obligations and provide expected economic benefits. In order to accomplish this goal with a "GREEN" rating, the system will have to generate approximately 720 GWh, or about 73 percent of average for the first quarter of FY 2007.

FY06	FY05	FY04	FY03	Program Goal: Western Area Power Administration:
G	G	G	G	Ensure Federal hydropower is marketed and delivered while passing the North American Electric Reliability Council's Control Compliance Ratings.

Results: Achievement of the annual target related to power system reliability indicates that the Department continues to meet its goal of efficiently and effectively delivering Federal hydropower.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	G	**System Reliability Performance: Attain acceptable North American Electric Reliability Council (NERC) ratings for the following Control Performance Standards (CPS) measuring the balance between power generation and load: 1) CPS1 which measures generation/load balance and support system frequency on 1-minute intervals (rating>100); and 2) CPS2 which limits any imbalance magnitude to acceptable levels (rating>90). (PMA GG 4.53.1)**

Results: Overall Western Area Power Administration FY 2006 CPS1 and CPS2 averages were: CPS1 - 184.42; CPS2 - 98.69. Balanced supply and demand ensures sage and stable electric power grid operation.

Supporting Documentation: Regional monthly compliance results are published on the NERC website (http://www.nerc.com/~filez/cpc.html). Data recorded and submitted to NERC on NERC Form CPS-1, NERC Control Performance Standard Survey All Interconnections, Form CPS-2, NERC Control Performance Standard Survey Regional Summary, and NERC CPS Calculation Spreadsheet (for calculating CPS compliance). The data is captured by a computer routine in each of Western's control center's Energy Management System (EMS) computer.

FY06	FY05	FY04	FY03	Program Goal: Bonneville Power Administration
G	G	G	G	**Ensure Federal hydropower is marketed and delivered while passing the North American Electric Reliability Council's Control Compliance Ratings, meeting planned repayment targets, and achieving a recordable accident frequency rate at or below our safety performance standard.**

Results: Achieving the performance targets for FY 2006 demonstrates Bonneville's commitment and ability to market and deliver Federal hydropower reliably, safely, and in keeping with its planned repayment obligations.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	G	**Attain average NERC compliance ratings for the following NERC Control Performance Standards (CPS) measuring the balance between power generation and load, including support for system frequency: (1) CPS1, which measures generation/load balance on one-minute intervals (rating greater than or equal to 100); and (2) CPS2, which limits any imbalance magnitude to acceptable levels (rating greater than or equal to 90). (PMA GG 4.54.1)**

Results: Achieving 6 of 6 possible CPS pass ratings in FY 2006 demonstrates Bonneville's commitment and ability to provide reliable transmission for the region.

Supporting Documentation: Quarterly Findings Memorandums from the Bonneville Chief Operating Officer to the Bonneville Administrator.

FY06	FY05	FY04	FY03	
G	G	G	G	**Meet planned annual repayment of principal on Federal power investments. (PMA GG 4.54.2)**

Results: Bonneville made its annual Treasury payment in full and on time, with a FY 2006 Treasury principal amortization payment of $646.2 million which included $303.8 million of planned principal amortization, $337.1 million of advanced principal amortization and $5.3 million of advanced principal amortization related to the sale of transmission facilities. Cumulative advanced amortization (principal repaid earlier than planned) at the end of FY 2006 totaled $1,802 million. For the twenty-third straight year, Bonneville has made its annual Treasury payment in full and on time -- meeting this performance target demonstrates Bonneville's commitment to meeting its obligations to U.S. taxpayers.

Supporting Documentation: Quarterly Findings Memo from the Bonneville Chief Operating Officer to the Bonneville Administrator.

FY06	FY05	FY04	FY03	
G	G	G	G	**Achieve a recordable accident frequency rate (RAFR) of no more than 3.3 recordable injuries per 200,000 hours worked or the Bureau of Labor Statistics' industry rate, whichever is lower. (PMA GG 4.54.3)**

Results: The Bonneville Power Administration surpassed its target with a 2.4 RAFR for FY 2006. BPA implemented several programs to reduce injuries including Supervisor Safety Training (designed to enhance the injury prevention skills of our field supervisors and clearly inform them of their active role in injury prevention) and safety briefings that heightened awareness of job hazard analysis. As a result, Bonneville experienced a low number of accidents in its higher risk occupations, including a clear reduction in field crew injuries. Exceeding this annual safety target demonstrates Bonneville's ongoing commitment to proactively ensuring a safe work environment for its employees. The latest reported injury rate by the Bureau of Labor was for 2004 and was 4.8 per 100 equivalent full-time workers. (100 full-time workers work approximately 200,000 hours in a year).

Supporting Documentation: Quarterly Findings Memorandum from the Bonneville Chief Operating Officer to the Bonneville Administrator.

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Achieve 97 percent Heavy-Load-Hour Availability (HLHA) through efficient performance of Federal hydro-system processes and assets, including joint efforts of BPA, Army Corps of Engineers, and Bureau of Reclamation. HLHA is actual machine capacity available during heavy-load hours (0700-2200 Monday-Saturday), divided by planned available capacity during heavy-load hours. (PMA GG 4.54.4)**

Results: Bonneville, along with its The Federal Columbia River Power System hydropower partners (Bureau of Reclamation, and Corps of Engineers) exceeded this operational target for the hydropower system with 98.3 percent for end of fiscal year performance. The HLHA measure is designed to improve the alignment of generation availability with water supply and market demand. Exceeding this target for FY 2006 demonstrates Bonneville's commitment and ability to provide reliable power to the region. By optimizing planned maintenance and taking into consideration expected forced outages, BPA's HLHA performance ensured that BPA had the system capacity to serve its system load.

Supporting Documentation: Quarterly Findings Memorandum from the Bonneville Chief Operating Officer to the Bonneville Administrator.

FY06	FY05	FY04	FY03	Program Goal: Energy Information Administration
G	G	G	G	**EIA's information program is relevant, reliable, and consistent with changing industry structures, and EIA's products are accurate and timely.**

Results: EIA evaluates its progress toward meeting this goal by monitoring release schedules and customer satisfaction levels. Successful completion of its corresponding annual targets indicates that EIA is achieving its program goal of informing sound policymaking, efficient energy markets and public understanding.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Products meeting release schedules – 90 percent of selected products (data publications and forecasts) will meet release schedules ranging from weekly to multi-year. (EIA GG 4.61.1)**

Results: The Department exceeded the target by meeting 94 percent of the release schedules selected for monitoring. The products monitored include both data and forecasts and are from all major EIA offices. Many energy markets rely on EIA data being available on schedule, and by meeting these needs, EIA helps to promote efficient energy markets, and, to a lesser extent, sound policy making and public understanding. Together, these help to promote a diverse supply and delivery of reliable, affordable, and environmentally sound energy, both now and in the future.

Supporting Documentation: Product Tracking Report.

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Complete customer satisfaction survey - At least one customer survey will be conducted during the year to measure customer satisfaction with the quality of EIA information. (EIA GG 4.61.2)**

Results: EIA conducted one customer satisfaction survey during the FY 2006. EIA believes that the ratings and comments from our customers provide us with important insights into how our information is used, who the customers are, what they are looking for, and areas for future improvements. EIA also obtains feedback in other ways, including a recently completed external study team review of our major activities. All of this feedback helps EIA to continue to provide high-quality and relevant information, which assists in the management of energy in the U.S. both now and in the future.

Supporting Documentation: The customer satisfaction survey and the associated survey responses.

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

General Goal 5:

World-Class Scientific Research Capacity

Provide world-class scientific research capacity needed to ensure the success of Department missions in national and energy security; advance the frontiers of knowledge in physical sciences and areas of biological, medical, environmental , and computational sciences; and provide world-class facilities for the Nation's science enterprise.

FY 2006 Annual Performance Targets

G-Green	Y-Yellow	R-Red	U - Undetermined
25	0	1	0

Program Costs ($ in Millions): 3,720

FY06	FY05	FY04	FY03	
Y	Y	G	Y	**Program Goal: High Energy Physics (HEP) Understand the unification of fundamental particles and forces and the mysterious forms of unseen energy and matter that dominate the universe; search for possible new dimensions of space; and investigate the nature of time itself.**

Results: Experiments at HEP accelerators are providing a better understanding of the origin of the universe and the relationship of fundamental forces. By studying the combining of particles and interactions into basic building blocks at high particle energies, we are increasing our knowledge of the forces that control the universe.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	G	**Deliver within 20 percent of baseline estimate a total integrated amount of data (in inverse picobarns) to the CDF and D-Zero detectors at the Tevatron. The FY06 baseline is 675 pb^{-1}, so within 20 percent of baseline is 540 pb^{-1}. (SC GG 5.19.1)**

Results: Delivered 621 inverse picobarns (pb^{-1}) of data during FY 2006. Achieving this target produces experimental data that advances our knowledge of the nature of fundamental particles and the physical laws that govern matter, energy, space and time.

Supporting Documentation: http://www-bdnew.fnal.gov/operations/lum/supertable.html This page, "Quarterly Performance Numbers," lists the number of inverse picobarns for each quarter of 2006.

FY06	FY05	FY04	FY03	
G	G	G	R	**Deliver within 20 percent of baseline estimate a total integrated amount of data (in inverse femtobarns) delivered to the BABAR detector at the Stanford Linear Accelerator (SLAC) B-factory. The FY06 baseline is 100 fb^{-1}, so within 20 percent of baseline is 80 fb^{-1}. (SC GG 5.19.2)**

Results: Delivered 100 inverse femtobarns (fb^{-1}) of data during FY 2006. Achieving this target produces experimental data that advances our knowledge of the nature of fundamental particles and the physical laws that govern matter, energy, space and time.

Supporting Documentation: http://www.slac.stanford.edu/grp/ad/PEPII_Run_Time_Statistics/PEP%20FY2003-5%20totals%20for%20DOE.pdf This page, "SLAC-PEPII Run Statistics," for the BABAR Detector and PEP-II B-factory, records its "data delivery" (in fb-1) and "unscheduled downtime."

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Achieve less than 10 percent for both the cost-weighted mean percentage variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects. (SC GG 5.19.3)**

Results: Annual cost-weighted percentage cost-variance for two HEP projects was 0 percent and 1 percent. Annual cost-weighted percentage schedule-variance for the two HEP projects was -1 percent and 0 percent. Controlling project costs and meeting construction schedules enables the Department to conduct world-class scientific research across a wide-range of disciplines.

Supporting Documentation: Derived from Quarterly Project Reports for the following projects: U.S. Compact Muon Solenoid (CMS) and U.S. A Toroidal LHC Apparatus both located at the Large Hadron Collider near Geneva Switzerland. Cost and schedule variance calculated by Earned Value for each project is averaged, weighted by the Total Project Cost for that project. The supporting documentation resides in the files of the HEP Office (SC-25); a web site is under development.

FY06	FY05	FY04	FY03	
R	R	G	G	**Achieve greater than 80 percent average operation time of the scientific user facilities (the Fermilab Tevatron and the Stanford Linear Accelerator (SLAC) B-factory) as a percentage of the total scheduled annual operating time. (SC GG 5.19.4)**

Results: Average operational time was 78.4 percent. The Stanford Linear Accelerator (SLAC) met its goal, but the Fermilab Tevatron experienced magnet failures in both the first and second quarter of FY 2006 which reduced optimal functionality of the facility in delivery of data to researchers.

Supporting Documentation: Derived from letters from Lab Directors or designee. Fermi data are reported at same website as for SC GG 5.19.1 (http://www-bdnew.fnal.gov/operations/lum/supertable.html); SLAC data at same website as for SC 5.19.2 (http://www.slac.stanford.edu/grp/ad/PEPII_Run_Time_Statistics/PEP%20FY2003-5%20totals%20for%20DOE.pdf.)

Action Plan: The magnets at the Tevatron were repaired and uptime was reported at 92 percent and 89 percent for the third and fourth quarters of FY 2006, respectively.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Measure within 20 percent of the total integrated amount of data (in protons-on-target) delivered to the MINOS detector using the NuMI facility. The FY06 baseline is 1 x10^20, so within 20 percent of baseline is 0.8 x 10^20. (SC GG 5.19.5)**

Results: Delivered 1.01 x 10^20 protons-on-target. This level of data delivery enables research at the NuMI facility to proceed on schedule, where scientist discovery additional properties of the neutrino and test aspects of the Standard Model of the physical universe.

Supporting Documentation: http://www-bdnew.fnal.gov/operations/lum/supertable.html. This page, "Quarterly Performance Numbers," lists the number of protons-on-target for each quarter of 2006.

FY06	FY05	FY04	FY03	
G	G	G	G	**Program Goal: Nuclear Physics (NP) Understand the evolution and structure of nuclear matter, from the smallest building blocks, quarks and gluons; to the elements in the universe created by stars; to unique isotopes created in the laboratory that exist at the limits of stability, possessing radically different properties from known matter.**

Results: Experiments at Nuclear Physics Accelerator User Facilities are substantially advancing our understanding of nuclear matter and the early universe. This, in turn, is helping to maintain the Nation's leadership role in nuclear physics research.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	NA	**Record at least 80 percent of the weighted average number of billions of events recorded at the Argonne Tandem Linac Accelerator System and Holifield Radioactive Ion Beam facilities, respectively. The FY06 Baseline weighted average is 9.5 (17.5, 1.4); so at least 80 percent of the weighted average is 7.5 (14, 1.1). (SC GG 5.20.1)**

Results: Exceeded the target by achieving a weighted average number of 15.8 billion events at ATLAS and HRIBF (24.6 billion events at ATLAS and 7.1 billion events at HRIBF) for FY 2006. Achieving these high recording rates is accelerating scientific research in the areas of nuclear properties. Scientists accelerate and collide radioactive and stable beams on targets to investigate new regions of nuclear structure, studying interactions in nuclear matter like those occurring in neutron stars, and determining the reactions that created the nuclei of the chemical elements inside stars and supernovae.

Supporting Documentation: Official letters from Argonne National Laboratory and Oak Ridge National Laboratory management to NP Office reporting and certifying accuracy of recorded number of events at ATLAS and HRIBF (per documented control process). Documentation resides in the Office of Nuclear Physics (SC-26) files.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Record at least 80 percent of the weighted average number of billions of events recorded by experiments in Hall A, Hall B, and Hall C at the Continuous Electron Beam Accelerator Facility. The FY06 Baseline weighted average is 3.62 (1.45, 7.70, 1.70); so at least 80 percent of the weighted average is 2.89 (1.16, 6.16, 1.36). (SC GG 5.20.2)**

Results: Exceeded the target by achieving a weighted average number of 4.53 billion events (Recorded 1.77 billion events in Hall A; 9.93 billion events in Hall B; and 1.9 billion events in Hall C) during FY 2006. Achieving this target allows scientists to study the structure of the nucleon and light nuclei. These accomplishments allow precise measurements of fundamental properties of the proton, neutron and simple nuclei for comparison with theoretical calculations to provide a quantitative understanding of the quark sub-structure.

Supporting Documentation: Official letter from Thomas Jefferson National Laboratory management to NP Office reporting and certifying accuracy of recorded number of events in Hall A, B, C at CEBAF (per documented control process). Documentation resides in the Office of Nuclear Physics (SC-26) files.

FY06	FY05	FY04	FY03	
G	G	G	G	**Achieve at least 80 percent average operation time of the scientific user facilities as a percentage of the total scheduled annual operating time. (SC GG 5.20.3)**

Results: Exceeded the target by NP user facilities achieving a 94 percent liability of uptime/scheduled time during FY 2006. By achieving this target, scientists can maximize use of the facility's capabilities and optimize studying nuclear physics. The level of reliability is a key characteristic of a world-class research facility.

Supporting Documentation: Official letters from Argonne National Laboratory (ATLAS), Brookhaven National Laboratory (RHIC), Oak Ridge National Laboratory (HRIBF), and Thomas Jefferson National Laboratory (CEBAF) management to NP Office reporting and certifying annual achieved operation time of the user facility (per documented control process); NP program office worksheet showing subsequent calculation and compiled average of the achieved operation time as a percent of total scheduled annual operating time. Documentation resides in the Office of Nuclear Physics (SC-26) files.

FY06	FY05	FY04	FY03	
G	Y	G	G	**Program Goal: Biological and Environmental Research (BER) Harness the Power of Our Living World – Provide the biological and environmental discoveries necessary to clean and protect our environment, offer new energy alternatives, and facilitate the entrainment of physical sciences advances in the biomedical field.**

Results: Manipulation of matter by BER at the micro, nano, and molecular scales is fueling progress towards revealing the mechanisms and fundamental secrets of biological and environmental systems. This progress will allow modeling and facilitate the entrainment of physical sciences advances in the biomedical field.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	N/A	**Develop predictive model for contaminant transport that incorporates complex biology, hydrology, and chemistry of the subsurface. Validate model through field tests. (SC GG 5.21.1)**

Results: For the FY 2006 model development effort, ground contaminants measured at the field site were in agreement with the model's predicted dissolved phase contaminant concentrations, indicating accurate prediction of how contaminants move in the soil and identify areas that would benefit from further study.

Supporting Documentation: Emails reporting the results reside at http://www.lbl.gov/NABIR/generalinfo/

FY06	FY05	FY04	FY03	
G	G	G	G	**Increase the rate of DNA sequencing -- Number (in billions) of base pairs of high quality (less than one error in 10,000 bases) DNA microbial and model organism genome sequence produced annually. In FY 2006 at least 30 billion base pairs will be sequenced. (SC GG 5.21.2)**

Results: Exceeded the target by sequencing over 32.7 billion base pairs of high quality DNA during FY 2006. Achieving this target increases our body of knowledge about DNA from which scientists hope to find new ways to treat or avoid illness, as well as develop new pharmaceutical and agricultural products, energy sources, industrial processes, and solutions to a variety of environmental problems.

Supporting Documentation: Emails reporting the results reside at http://www.jgi.doe.gov/sequencing/statistics.html

FY06	FY05	FY04	FY03	
G	G	G	G	**Improve climate models: Produce a new continuous time series of retrieved cloud properties at each Atmospheric Radiation Measurement (ARM) site and evaluate the extent of agreement between climate model simulations of water vapor concentration and cloud properties and measurements of these quantities on time scales of 1 to 4 days. (SC GG 5.21.3)**

Results: The program produced the necessary continuous time series data in FY 2006 and found general agreement between two (out of three) ARM sites and the climate model simulations for those two areas of the U.S. Achieving this target permits the implementation of climate models and moves the program closer to climate simulations that will help determine energy policy relative to global climate change.

Supporting Documentation: Emails reporting the results reside at http://asd.llnl.gov/asc/

FY06	FY05	FY04	FY03	
G	G	G	G	**The average achieved operation time of the (climate change) scientific user facilities as a percentage of the total scheduled annual operating time in FY06 is greater than 96 percent at the Free Air Carbon Dioxide Enrichment (FACE) and 98 percent at the ARM. (SC GG 5.21.4)**

Results: The BER climate change scientific user facilities operated on schedule in FY 2006 to exceed the annual target. Achieving this target ensures that these climate change scientific facilities are open and available to users to the maximum extent possible.

Supporting Documentation: Emails reporting the results and reside at http://www.sc.doe.gov/ober/ccrd/FACE.htm and http://www.arm.gov/acrf/opsstats.stm

FY06	FY05	FY04	FY03	
G	G	G	G	**The average achieved operation time of the (environment) scientific user facilities as a percentage of the total scheduled annual operating time is greater than 95 percent. (SC GG 5.21.5)**

Results: Exceeded the target. The Environmental Molecular Sciences Laboratory (EMSL) operated for a total of 4361 hours (99.7 percent of available hours) during FY 2006. Achieving this level of performance ensures that the ESML is open and available to users to the maximum extent possible.

Supporting Documentation: Emails reporting the results reside at http://www.emsl.pnl.gov/homes/hours.shtml

FY06	FY05	FY04	FY03	
G	G	G	G	**The average achieved operation time of the (life sciences) scientific user facilities as a percentage of the total scheduled annual operating time is greater than 99 percent for the Center for Comparative and Functional Genomics (CCFG) and 98 percent for the Production Genomics Facility (PGF). (SC GG 5.21.6)**

Results: BER life sciences user facilities operated on schedule in FY 2006 to exceed the annual target. This level of performance ensures that these life science facilities are open and available to users to the maximum extent possible.

Supporting Documentation: Emails reporting the results reside at: http://www.ornl.gov/sci/mgrf/facilities.shtml and http://www.jgi.doe.gov/sequencing/statistics.html

FY06	FY05	FY04	FY03	
G	R	G	NA	**Complete design of a nominal 256 microelectrode array retinal prosthesis. Construct and test individual components for electronic integrity and biocompatibility in *in vitro* and animal test systems. (SC GG 5.21.7)**

Results: Several design iterations of the nominal 256 microelectrode have been evaluated, assembled and implanted in models at the Doheny Eye Institute located at the University of Southern California. The achievement of this goal brings closer the possibility of restoring some sight to patients with retinal disorders.

Supporting Documentation: Quarterly - Emails reporting the results are available at http://www.doemedicalsciences.org/abt/retina/retinas.shtml

FY06	FY05	FY04	FY03	
G	G	G	G	**Program Goal: Basic Energy Sciences (BES)** **Provide the scientific knowledge and tools to achieve energy independence, securing U.S. leadership and essential breakthroughs in basic energy sciences.**

Results: Progress continues to be made towards supporting fundamental research—such as understanding the behavior of large assemblies of interacting components and observing and manipulating matter at the molecular scale—to expand the scientific foundations for new and improved energy technologies.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	G	NA	**Improve Temporal Resolution: Demonstrate an X-ray pulse of less than 100 femtoseconds in duration and containing more than 100 million photons per pulse. (SC GG 5.22.1)**

Results: In FY 2006, scientists achieved the target by generating 70 femtosecond X-ray light pulses, each containing more than 100 million photons. This improvement in time-resolved imaging will enable a deeper understanding of complex chemical reactions and biological processes such as the folding of proteins.

Supporting Documentation: Report(s) from the research performer(s) with references to the source documentation that contains the final results for this Annual Target reside in the files of the Office of Basic Energy Sciences within the Department's Office of Science.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Improve Spatial Resolution: Demonstrate first measurement of spatial resolutions for imaging in the hard and soft x-ray regions (less than 100 and 18 nanometers respectively), and spatial information limit for an electron microscope (less than 0.08 nanometers). (SC GG 5.22.2)**

Results: In FY 2006, scientists were able to image to a spatial resolution of 90 and 15 nanometers in the hard and soft X-ray regions, respectively and 0.078 nanometers for an electron microscope. These new levels of spatial resolution imaging allows scientists to improve the clarity from which they can "see" very small objects such as viruses or even atoms, which have a size on the scale of nanometers.

Supporting Documentation: Report(s) from the research performer(s) with references to the source documentation that contains the final results for this Annual Target will reside in the files of the Office of Basic Energy Sciences within the Office of Science.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Achieve greater than 30 reacting species and 20 million grid points in a three-dimensional combustion reacting flow computer simulation, as a part of the Scientific Discovery through Advanced Computing (SciDAC). (SC GG 5.22.3)**

Results: In FY 2006, scientists exceeded the targets by achieving 33 reacting species and 21.2 million grid points that allow them to improve our ability to simulate real-world conditions for combustion. Understanding combustion and the ability to accurately conduct simulations is essential to developing more efficient catalysis technologies.

Supporting Documentation: Report(s) from the research performer(s) with references to the source documentation that contains the final results for this Annual Target will reside in the files of the Office of Basic Energy Sciences with in the Office of Science.

FY06	FY05	FY04	FY03	
G	G	G	G	**Cost-weighted mean percent variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects. In FY06, it is at least 10 percent and 10 percent, respectively. (SC GG 5.22.4)**

Results: During FY 2006, a -0.5 percent cost variance and a -2.9 percent schedule variance was achieved. Achieving this target improves our scientific efficiency and capability in major construction, upgrades, or equipment procurement. Controlling construction costs and meeting project schedules enables state-of-the-art research facilities to be available in time to maintain our world-leader status.

Supporting Documentation: Supporting documents reside in the DOE Office of Engineering and Construction Management's Project Assessment and Reporting System (PARS) and with Basic Energy Science's Division of Scientific User Facilities, within the Office of Science.

FY06	FY05	FY04	FY03	
G	G	G	G	**Achieve an average operation time of the scientific user facilities as a percentage of the total scheduled annual operating time of greater than 90 percent. (SC GG 5.22.5)**

Results: During FY 2006, the Department exceeded the annual target as BES facilities were available on average of 96.7 percent of the available operating time (average annual operating time at BES facilities as a percentage of planned scheduled time; i.e., 29,595 actual total hours delivered to users versus 30,610 total planned hours). Achieving this target ensures full use of the seven scientific user facilities and justifies investments in these crucial facilities.

Supporting Documentation: Supporting documents consist of the required annual reports submitted to BES by all BES user facilities at the completion of each fiscal year. These final reports reside in the files of the Office of Basic Energy Sciences within the Office of Science.

FY06	FY05	FY04	FY03	Program Goal: Advanced Scientific Computing Research (ASCR) Deliver forefront computational and networking capabilities to scientists nationwide that enable them to extend the frontiers of science, answering critical questions that range from the function of living cells to the power of fusion energy.
G	G	Y	Y	

Results: The Department made significant gains in supercomputer efficiency in FY 2006 – dedicating more supercomputer time to the largest, most complex computations and accelerating those computations by optimizing the associated application codes. Progress continues to be made towards propelling scientific computing to the forefront of discovery. Scientific computing joins theory and experiment to enable researchers to make scientific progress.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	R	NA	**Focus usage of the primary supercomputer at the National Energy Research Scientific Computing Center (NERSC) on capability computing. Percentage of the computing time used that is accounted for by computations that require at least 1/8 of the total resource. In FY06, the time used is at least 40 percent. (SC GG 5.23.1)**

Results: In FY2006, the Department exceeded its target. 50.9 percent of Seaborg (NERSC computer) computational time was for jobs that required at least 768 or more CPUs (1/8 of the total resource). Increasing the use of primary supercomputer for large-scale problems enables the Office of Science to answer complex scientific questions sooner - keeping US research on the frontiers of science.

Supporting Documentation: The data (per documented control process) is available at https://athena.nersc.gov/SPdocs/ (userid and password required, to be provided to reviewers). This data comes directly from the batch queue accounting system at NERSC.

FY06	FY05	FY04	FY03	
G	G	G	NA	**Average annual percentage increase in the computational effectiveness (either by simulating the same problem in less time or simulating a larger problem in the same time) of a subset of application codes within the Scientific Discovery through Advanced Computing (SciDAC) effort. In FY06, the computational effectiveness is greater than 50 percent. (SC GG 5.23.2)**

Results: In FY 2006, the Department exceeded its target by more than double. The average percentage increase in computational effectiveness was 135 percent. The enhanced performance of these codes enable scientist to obtain computational solutions previously unachievable using earlier versions of the computer applications.

Supporting Documentation: Reports detailing these evaluations reside in the files of the ASCR Office within the Office of Science.

FY06	FY05	FY04	FY03	**Program Goal: Fusion Energy Sciences (FES)** **Answer the key scientific questions and overcome enormous technical challenges to harness the power that fuels a star, realizing by the middle of this century a landmark scientific achievement by bringing "fusion power to the grid."**
G	G	G	Y	

Results: On May 24, 2006, Dr. Raymond L. Orbach, the Department's Under Secretary for Science initialed the international ITER Agreement in Brussels, Belgium. The United States, along with countries representing more than half of the world's population, is participating in ITER, an international fusion experiment that will be the penultimate step to economical, abundant and environmentally benign fusion energy. To support the ITER project, the Office of Fusion Energy Sciences conducted a number of experiments at its three major experimental fusion facilities to study plasma containment and materials in support of ITER. FES continues to make progress in advance plasma science, fusion science, and fusion technology – the knowledge base need for and economically and environmentally attractive fusion energy source.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	**Conduct experiments on the major fusion facilities (DIII-D, Alcator C-Mod, NSTX) leading toward the predictive capability for burning plasmas and configuration optimization. In FY 2006, FES will inject 2 mega watts (MW) of neutral beam power in the counter direction on DIII-D and begin physics experiments. (SC GG 5.24.1)**
G	G	NA	NA	

Results: By September 7, 2006, the new counter injection capability had been used as a critical tool in seven key fusion plasma physics experiments. In addition for FY 2006, 5 MW of neutral beam power was injected in the counter direction on DIII-D from the modified neutral beam line. These experiments provide critical data on plasma behavior needed to eventually predict the performance of burning plasma at the ITER.

Supporting Documentation: http://www.ofes.fusion.doe.gov/ProgramTargets/ProgramTargets.htm - This website provides documentation of achievement for this target.

FY06	FY05	FY04	FY03	**Increase resolution in simulations of plasma phenomena -- optimizing confinement and predicting the behavior of burning plasmas require improved simulations of edge and core plasma phenomena, as the characteristics of the edge can strongly affect core confinement. In FY 2006 FES will simulate nonlinear plasma edge phenomena using extended magnetohydrodynamic (MHD) codes with a resolution of 40 toroidal modes. (SC GG 5.24.2)**
G	G	NA	NA	

Results: In FY 2006, the program increased the resolution in simulations of plasma phenomena from 20 to 40 toroidal modes thus enhancing our understanding of the conditions that exist in plasma confinement (within a small scale nuclear fusion reactor) and how it interacts with materials such as the facing components (i.e., components that placed on the internal walls of the reactor). Achieving this target provides lessons learned about the behavior of plasma at its edges that can be transferred over to ITER as it is being designed.

Supporting Documentation: http://www.ofes.fusion.doe.gov/ProgramTargets/ProgramTargets.htm - This website provides documentation of achievement for this annual target.

FY06	FY05	FY04	FY03	
G	G	G	R	**Average achieved operation time of the major national fusion facilities (DIII-D, Alcator C-Mod, NSTX) as a percentage of the total planned operation time in FY06 of greater than 90 percent. (SC GG 5.24.3)**

Results: During FY 2006, the Department exceeded its goal for this target by achieving a 131 percent of the total planned operation time. Additional funding was made available to run one of the experimental reactors longer than planned and represents a performance of 114 percent based on a revised planned operation time that accounts for the additional funding. Achieving this target ensured the maximum availability of these three major national fusion facilities for conducting experiments designed to address plasma confinement questions critical to the U.S. support of ITER.

Supporting Documentation: http://www.science.doe.gov/ofes/performancetargets.shtml
This website provides quarterly progress reports and documentation of achievement for this annual target. The results will be updated on a timely basis.

FY06	FY05	FY04	FY03	
G	G	G	G	**Cost-weighted mean percent variance from established for major construction, upgrade, or equipment procurement projects in FY 2006 is less than 10 percent. (SC GG 5.24.4)**

Results: In FY 2006, the Department achieved its target by deviating less than 10 percent (cost-weighted mean percent) from established cost (3 percent) and schedule (1 percent) baselines for major construction, upgrade, or equipment procurement projects. Achieving this target improves our scientific efficiency and capability advancing the President's commitment to make science a national priority.

Supporting Documentation: http://ncsx.pppl.gov/Management/CPR.html
This website provides quarterly progress reports and documentation of achievement for this annual target.

General Goal 6: Environmental Management	FY 2006 Annual Performance Targets			
Accelerate cleanup of nuclear weapons manufacturing and testing sites, completing cleanup of 108 contaminated sites by 2025.	G-Green	Y-Yellow	R-Red	U-Undetermined
	7	0	1	0
	Program Costs ($ in Millions): $ 5,601			

FY06	FY05	FY04	FY03	
G	Y	R	Y	**Program Goal: Environmental Management** **Complete the safe cleanup of the environmental legacy brought about from five decades of nuclear weapons development and government-sponsored nuclear energy research.**

Results: The Office of Environmental Management's FY 2006 achievements include exceeding targets for packaging enriched uranium, packaging high level waste for secure storage until disposition in a geologic repository, and completing remediation work at release sites as well as nuclear and radioactive facilities. These achievements demonstrate the focus of the Environmental Management program to deliver significant reduction in environmental, safety, and security risks.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	NA	R	**Enriched Uranium Packaged for Disposition. Package for disposition a cumulative total of 5,877 enriched uranium containers. This is an estimated increase of 1,980 containers over the planned cumulative total of 3,897 enriched uranium containers to be packaged for disposition at the end of FY 2005. (EM GG 6.18.1)**

Results: The Department has exceeded its goals for FY 2006 by packaging 6,479 containers. Accomplishment of this measure will result in the Department meeting its goals for accelerated cleanup.

Supporting Documentation: Shipping Manifests and Disposal Records.

FY06	FY05	FY04	FY03	
G	G	NA	Y	**High Level Waste Packaged for Disposition. Package for disposition a cumulative total of 2,477 containers of high level waste. This is an estimated increase of 250 containers over the planned cumulative total of 2,227 containers of high level waste to be packaged for disposition at the end of FY 2005. (EM GG 6.18.2)**

Results: The Department has exceeded its goals for FY 2006 by packaging 2489 containers. Accomplishment of this measure will result in the Department meeting its goals for accelerated cleanup.

Supporting Documentation: Quality Assurance Inspection Records for waste packaging.

FY06	FY05	FY04	FY03	
R	R	R	G	**TRU Waste Disposed at WIPP. Dispose at the Waste Isolation Pilot Plant (WIPP) a cumulative total of 55,211 cubic meters of transuranic (TRU) waste. This is an estimated increase of 14,500 cubic meters over the planned cumulative total of 40,711 cubic meters of TRU waste to be disposed at WIPP at the end of FY 2005. (EM GG 6.18.3)**

Results: The Department was only able to dispose a cumulative total of 37,289 cubic meters by the end of FY 2006. This smaller cumulative total is due both to disposing of fewer cubic meters than planned in FY 2006 (9,414 vs. a planned 14,500) and a low cumulative total in FY 2005 of 27,875 cubic meters. Fortunately, the Department is still on track to meeting its long term goals for accelerated cleanup. The Department is reevaluating its schedule for shipments and may establish more realistically achievable targets for FY 2007.

Supporting Documentation: Shipping Manifests.

Action Plan: DOE is working with Idaho and the other sites to meet its goals. Also, a complex-wide evaluation of the current goals that were originally set for this metric are being re-evaluated.

FY06	FY05	FY04	FY03	
G	G	G	G	**Release Site Remediation Completions. Complete remediation work at a cumulative total of 6,069 release sites. This is an estimated increase of 400 release sites over the planned cumulative total of 5,669 release site remediation completions at the end of FY 2005. (EM GG 6.18.4)**

Results: The Department began the fiscal year having completed a cumulative 5,858 release sites. In FY 2006, 398 additional release sites were completed for a year-end total of 6,256. Accomplishment of this measure will result in the Department meeting its goals for accelerated cleanup.

Supporting Documentation: State and federal regulator acceptance of the Remedial Action Report.

FY06	FY05	FY04	FY03	
G	Y	Y	G	**Nuclear and Radioactive Facility Completions. Complete remediation work at a cumulative total of 357 nuclear and radioactive facilities. This is an estimated increase of 58 facilities over the planned cumulative total of 299 nuclear and radioactive facility completions at the end of FY 2005. (EM GG 6.18.5)**

Results: The Department exceeded it target by achieving a cumulative total of 365 completely remediated facilities in FY 2006. Many sites, facilities in Rocky Flats are physically completed and awaiting final regulatory approval. When the regulators approve the facility completion reports, the Department can take credit for those facilities.

Supporting Documentation: Decommissioning Project Final Report. State and federal regulator acceptance of completion report.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**The Efficiency Measure. Remain within the limits of no greater than a 10 percent negative cost and schedule variance for the overall cost – weighted mean cost and schedule performance indices for the 80 operating projects and nine line item projects that are baselined and under configuration control. (EM GG 6.18.6)**

Results: The Department has exceeded its goals for FY 2006. Accomplishment of this measure will result in the Department meeting its goals for efficient accelerated cleanup. This measure does not reflect the fact that some projects, notably the Waste Treatment Plant (WTP) and the Solid and Liquid Waste Treatment and Disposal (SLWTD) projects at Hanford, were unrecoverable due to performance and have been re-baselined.

Supporting Documentation: Earned value data reported monthly by sites into the Integrated Planning, Accountability, and Budgeting System (IPABS).

FY06	FY05	FY04	FY03	
G	G	G	NA	**Program Goal: Legacy Management** The mission of the Office of Legacy Management (LM) is to manage the Department's post-closure responsibilities and ensure the future protection of human health and the environment.

Results: The Office of Legacy Management has successfully met the Department's post-closure responsibilities during FY 2006. The pensions and benefits funding needs were completely met and the long-term surveillance and maintenance activity achieved full compliance with all legal, regulatory, and contractual commitments.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Surveillance and Maintenance Activities. Conduct surveillance and maintenance activities at a cumulative total of 69 sites to ensure the effectiveness of cleanup remedies in accordance with legal agreements, or identify sites subject to additional remedial action in order to ensure effectiveness. (LM GG 6.26.1)**

Results: The Department exceeded its target for FY 2006 by completing surveillance and maintenance activities at 70 sites, including Pinellas and Maxey Flats, in accordance with legal agreements. Accomplishment of this measure ensures continued effectiveness of cleanup remedies, and thereby protection of human health and the environment.

Supporting Documentation: Documentation is contained in the Grand Junction Office files.

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Reduce Program Direction Expenditures. Reduce the ratio of program direction expenditures to the total expenditures (excluding Congressionally Directed Activities) by 1 percent from the FY 2005 baseline (approximately 20 percent; exact ratio TBD) (LM GG 6.26.2)**

Results: The Office of Legacy Management met its goal for FY 2006 of reducing the ratio of program direction expenditures to the total appropriation by 4.1 percent. Accomplishment of this measure ensures a lower cost of administering the program activities.

Supporting Documentation: Documentation is contained in the Morgantown Office files and is also available on the STARS system.

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

General Goal 7: Nuclear Waste	FY 2006 Annual Performance Targets			
License and construct a permanent repository for nuclear waste at Yucca Mountain and begin acceptance of waste by 2017.	G-Green	Y-Yellow	R-Red	U-Undetermined
	2	0	1	0
	Program Costs ($ in Millions): $ 475			

FY06	FY05	FY04	FY03	
G	R	G	R	**Program Goal: Civilian Radioactive Waste** **Manage and dispose of high-level radioactive waste and spent nuclear fuel in a manner that protects health, safety and the environment; enhances national and energy security; and merits public confidence.**

Results: The combination of achieving the Modified Critical Decision -1 Package and Reduced Management Program Funding targets will directly contribute to the Office of Civilian Radioactive Waste Management (OCRWM) submitting a docketable License Application (LA) by June 30, 2008. The draft rail alignment environmental impact statement is rescheduled to be published in the Federal Register by June 2007. The submission and approval of an LA is critical if OCRWM is going to meet the 2017 waste acceptance date at Yucca Mountain.

FY 2006 Annual Targets

FY06	FY05	FY04	FY03	
G	NA	NA	NA	**Modified Critical Decision-1 (CD-1) Package. Submit for Energy Systems Acquisition Advisory Board (ESAAB) approval a modified critical decision-1 package that describes the design and operating plan for the repository, and provides a schedule for license application completion and docketing. (RW GG 7.25.1)**

Results: The Energy Systems Acquisition Advisory Board convened on July 6, 2006 and approved the Office of Civilian Radioactive Waste Management (OCRWM) CD-1 proposal for changes to the repository operational concept and facilities. The new direction will address the technical challenges with handling commercial spent nuclear fuel in dry transfer cells. The benefits of the new direction include reduced worker exposure to radiation at the Yucca Mountain site and maximized use of existing utility infrastructure. These improvements will help support a successful License Application submission on June 30, 2008, and ultimately Yucca Mountain's waste acceptance in 2017.

Supporting Documentation: The CD-1 package that is submitted to ESAAB.

FY06	FY05	FY04	FY03	
R	G	NA	NA	**Environmental Impact Statement. Publish draft rail alignment environmental impact statement (EIS) in the Federal Register. (RW GG 7.25.2)**

Results: Due to litigation regarding the Department's Environmental Impact Statement (EIS) for Yucca Mountain, the draft rail alignment EIS was not published in the Federal Register in FY 2006. The Department is currently expanding the scope of the draft rail alignment EIS to include the study of a new corridor, the Mina Rail Corridor, as an alternative in addition to the previously proposed Caliente Rail Corridor. The updated draft rail alignment EIS will be published in the Federal Register by June 2007. This will enable the Department to produce a final EIS that will be incorporated into the License Application (LA) submission on June 30, 2008. The LA will allow the Department to stay on schedule and achieve waste acceptance at Yucca Mountain in 2017.

Supporting Documentation: Fedearl Register Notice "Amended Notice of Intent to Expand the Scope of the Environmental Impact Statement for the Alignment, Construction, and Operation of a Rail Line to a Geological Repository at Yucca Mountain, Nye County, NV," Vol. 71, No. 198, Friday, October 13, 2006. pp. 60484-60490

Action Plan: The Department is currently expanding the scope of the draft rail alignment EIS to include the study of a new corridor, the Mina Rail Corridor, as an alternative in addition to the previously proposed Caliente Rail Corridor. The Department has extended the public comment period to December 12, 2006, which will provide the opportunity for the public to meet with project officials and to discuss issues concerning the newly proposed Mina Rail Corridor. The updated EIS will be published in the Federal Register by June 2007.

FY06	FY05	FY04	FY03	
G	G	NA	NA	**Reduce Management Program Funding. Reduce the ratio of program direction/contractor management program funding to total program funding by 10 percent from the FY 2005 baseline ratio of 0.274. (RW GG 7.25.3)**

Results: The Office of Civilian Radioactive Waste Management (OCRWM) surpassed its target by maintaining its FY 2006 ratio of administrative costs to total program costs at .220 ($101,622,166/$462,615,987), which is a 20 percent reduction from the FY 2005 ratio of .274. The management program funding is essentially the general and administrative (G&A) costs. By reducing the G&A costs, the Office of Civilian Radioactive Waste Management (OCRWM) can dedicate a greater portion on the total program funding to direct activities which support a successful submission of the License Application (LA). The LA will allow OCRWM to stay on schedule and achieve waste acceptance at Yucca Mountain in 2017. The baseline for administrative overhead rate is currently being validated. Further, the creation of a common approach for calculating total administrative overhead costs in applied R&D programs within the Department will allow some measure of comparability among program offices.

Supporting Documentation: OCRWM monthly cost performance reports

STATUS OF UNMET FY 2005 PERFORMANCE TARGETS

Goal	Measure (PAR)	Status	Description of Performance Target	FY 2005 PAR (page No.)	Crosswalk to FY 2006 Program Goal
Goal 1: Nuclear Weapons Stewardship					
	NA GG 1.27.02	**Status: MET**	**Complete 95 percent of items supporting Enduring Stockpile Maintenance (annual percentage of prior-year non-completed items completed).**	p. 60	NA 1.27
	The unmet portions of FY 2005 target was rolled into FY 2006 target as "prior year" and completed in FY 2006.				
	NA GG 1.27.03	**Status: MET**	**Complete 30 percent of progress (cumulative) in completing NWC-approved B61-7/11 Life Extension Program (LEP) activity.**	p. 60	NA 1.27
	Completed 37 percent of planned activities in FY 2006 in accordance with the B61 LEP baseline schedule.				
	NA GG 1.30.02	**Status: MET**	**Complete 67 percent of progress (cumulative) towards demonstrating ignition (simulating fusion conditions in a nuclear explosion) at the National Ignition Facility (NIF).**	p. 67	NA 1.30
	Completed 71 percent of progress towards demonstrating ignition in FY 2006.				
	NA GG 1.30.04	**Status: MET**	**Complete 26 percent (cumulative) of equipment fabrication to support ignition experiments at National Ignition Facility (NIF).**	p. 67	NA 1.30
	Completed 45 percent of equipment fabrication in FY 2006.				
	NA GG 1.30.06	**Status: UNMET/CLOSED**	**Achieve an average of 9 hours per experiment required by the operational crew to prepare the Z facility for an experiment.**	p. 68	NA 1.30
	The target was reevaluated in light of new required radiation safety procedures and was revised in FY 2006 to 11 hours. This was achieved in FY 2006.				
	NA GG 1.31.03	**Status: UNMET/CLOSED**	**Attain maximum individual platform capacity of 100 teraflops (trillions of floating point operations per second).**	p. 70	NA 1.31
	A programmatic baseline change was made to receive two platforms totaling 100 teraflops of computing capability. This was completed in FY 2006.				
	NA GG 1.31.04	**Status: UNMET/CLOSED**	**Attain total production platform capacity of 172 teraflops.**	p. 70	NA 1.31
	A programmatic baseline change was made and the target was revised in FY 2006 to 160 teraflops of platform computing capability. This was achieved in FY 2006.				
	NA GG 1.35.01	**Status: UNMET/CLOSED**	**Initiate designs, attain Critical Decision (CD) Phase One, or cancel for cause, 3 projects.**	p. 75	NA 1.35
	Critical Decision Phase One for the third remaining project (Pantex Component Evaluation facility) has not been accomplished and is currently not scheduled. The project scope is being reevaluated and, for target purposes, the project should be considered cancelled for cause. If it is reinstated, it will not be separately tracked for accomplishment.				
	NA GG 1.35.02	**Status: MET**	**Initiate construction (CD-3) on, or cancel for cause, 4 projects.**	p. 76	NA 1.35
	The fourth remaining project (Pantex Building 12-064 Production Cells Upgrade) started construction in FY06/1Q.				

Goal	Measure (PAR)	Status	Description of Performance Target	FY 2005 PAR (page No.)	Crosswalk to FY 2006 Program Goal
	NA GG 1.35.03	**Status: MET**	**Completed or attained CD-4 within approved scope, cost, and schedule baselines, for 9 projects.**	p. 76	NA 1.35
	The CD-4 for the 3 remaining projects was completed in FY 2006 as follows: Y-12 Purification Facility was completed in the first quarter of FY 2006; Sandia Test Capabilities Revitalization was completed in the second quarter of FY 2006; and Sandia Weapons Evaluation Test Laboratory was completed in the third quarter of FY 2006.				
	NA GG 1.36.04	**Status: UNMET/CLOSED**	**Maintain 335 Federal Agents at the end of the year.**	p.77	NA 1.36
	The target shortfall of 17 agents was rolled into a revised cumulative target of 355 agents in FY 2006. The FY 2005 shortfall was not tracked separately in FY 2006.				
	NA GG 1.36.06	**Status: UNMET/CLOSED**	**Limit annual average scheduled overtime hours to 900 overtime hours per agent.**	p. 78	NA 1.36
	The target shortfall of 37 hours can not be made up. Because of forecast increase in agent overtime, this measure was cancelled in FY 2006.				
	NA GG 1.37.03	**Status: MET**	**Conduct 9 "no-notice" emergency management exercises.**	p. 80	NA 1.37
	The last of 9 "no-notice" exercises were completed on February 24, 2006.				
	NA GG 1.39.03	**Status: UNMET/CLOSED**	**Ensure that 80 percent (cumulative) of Cyber Security reviews conducted by the Office of Independent Oversight Performance Assurance (OA) at NNSA sites result in the rating of "effective" (based on last OA review at each site over 2 Cyber Security topical areas).**	p. 83	NA 1.39
	Target deemed unrealistic and was revised in FY 2006 to attaining a 57 percent cumulative rating at NNSA sites.				
	NA GG 1.39.06	**Status: UNMET/CLOSED**	**Complete the processing needed to grant Q Security Clearance for federal and contractor employees in the NNSA complex, other than headquarters (does not include days for OPM or FBI background checks), in 85 annual average calendar days per applicant.**	p. 84	NA 1.39
	Target deemed unrealistic and was revised to 110 days per applicant in FY 2006.				
Goal 2: Nuclear Nonproliferation					
	NA GG 2.40.02	**Status: MET**	**Deliver 8 advanced technologies and operational systems (e.g. satellite payloads and seismic stations calibration data sets) to U.S. national security users, improving the accuracy and sensitivity of nuclear weapons test monitoring.**	p. 87	NA 2.40
	Due to an industry-wide recall of a class of space-qualified electronic hardware, the final payload delivery was made to the Air Force in FY 2006. Corresponding delays in space system schedules in the Air Force mitigated the impact of the late NNSA payload delivery on overall satellite launch schedule.				
	NA GG 2.41.02	**Status: MET**	**Conduct 100 percent of 24 allowed Special Monitoring Visits (SMVs) to four Russian facilities HEU-to-LEU processing facilities to monitor conversion of 30 metric tons (MT) per year of HEU to LEU.**	p. 89	NA 2.41
	The remaining visits necessary to meet the target of 100 percent of the allowed visits were completed in the first quarter of FY 2006.				

Goal	Measure (PAR)	Status	Description of Performance Target	FY 2005 PAR (page No.)	Crosswalk to FY 2006 Program Goal
	NA GG 2.42.01	**Status: MET**	**Achieve 32 percent progress (cumulative) towards refurbishing a fossil plant in Seversk, facilitating shut down of two weapons-grade plutonium production reactors.**	p. 90	NA 2.42
	Achieved 50 percent progress (cumulative) towards refurbishing the fossil plant in Seversk in FY 2006.				
	NA GG 2.45.01	**Status: UNMET/CLOSED**	**Engage 8,200 former Soviet weapons scientists, engineers, and technicians.**	p. 92	NA 2.45
	Target deemed unrealistic. Target revised and rolled into the FY 2006 target 2.44.02.				
	NA GG 2.46.03	**Status: UNMET/CLOSED**	**Secure 37 percent of 600 metric tons (MT) of weapons-usable nuclear material.**	p. 95	NA 2.46
	Target deemed unrealistic and was eliminated in FY 2006.				
	NA GG 2.46.04	**Status: MET**	**Convert 7.5 (cumulative) metric tons of Highly Enriched Uranium (HEU) to Low Enriched Uranium (LEU).**	p. 95	NA 2.46
	Converted 8.4 (cumulative) metric tons of HEU to LEU in FY 2006.				
	NA GG 2.46.06	**Status: MET**	**Achieve 98 (cumulative) Second Line of Defense (SLD) sites with nuclear detection equipment installed, along with 5 (cumulative) Mega ports completed.**	p. 96	NA 2.46
	Completed 104 (cumulative) SLD sites in FY 2006.				
	NA GG 2.47.01	**Status: MET**	**Complete 100 percent (cumulative) of the detailed design, and 25 percent (cumulative) of site preparation for the Pit Disassembly and Conversion Facility (PDCF).**	p. 97	NA 2.47
	The target was achieved in FY 2006. Target was revised and broadened for FY 2006 to include a cumulative total of the design, construction, and cold start-up activities.				
	NA GG 2.47.02	**Status: MET**	**Complete 100 percent (cumulative) of the detailed design, and begin site preparation and procurement for the mixed oxide (MOX) Fuel Fabrication Facility.**	p. 97	NA 2.47
	The target was achieved in FY 2006. Target was revised and broadened for FY 2006 to include a cumulative total of the design, construction, and cold start-up activities.				
	NA GG 2.47.05	**Status: UNMET/CLOSED**	**Complete 100 percent (cumulative) of the detailed design, begin site preparation, construction and long-lead procurement for the Russian MOX Fuel Fabrication Facility.**	p. 98	NA 2.47
	Target deemed unrealistic and was eliminated in FY 2006.				
	NA GG 2.64.01	**Status: MET**	**Convert 44 (cumulative) targeted research/test reactors from HEU to LEU fuel.**	p. 99	NA 2.64
	Converted 45 (cumulative) research/test reactors in FY 2006.				
	NA GG 2.64.02	**Status: MET**	**Repatriate 175 kilograms (cumulative) of HEU fresh and/or spent fuel from Soviet-supplied research reactors to Russia.**	p. 100	NA 2.64
	Repatriated 228 (cumulative) kilograms of HEU and/or spent fuel to Russia in FY 2006.				

Goal	Measure (PAR)	Status	Description of Performance Target	FY 2005 PAR (page No.)	Crosswalk to FY 2006 Program Goal
Goal 4: Energy Security					
	EE GG 4.01.05	**Status: MET**	**Complete validation of an energy station that can produce 5,000 psi hydrogen from natural gas for $3.60 per gallon equivalent (including co-production of electricity), untaxed at the station with mature production volumes (e.g., 100 units/year).**	p. 106	EE 4.01
	An energy station producing 5,000 psi hydrogen from natural gas for $3.55 per gallon of gasoline equivalent gge) has been validated. The station was operated for two years in Las Vegas, Nevada. This included more than 4800 hours of operation of the natural-gas-to-hydrogen system. Additional results were obtained from the DTE Energy in Michigan and from Penn State University. The target is now met.				
	EE GG 4.01.10	**Status: UNMET/CLOSED**	**Demonstrate Fuel Cell demonstration vehicles' durability, projected to 1,000 hours based on voltage measurements.**	p. 107	EE 4.01
	The target is partially met, and no further work will be performed on this specific target. An additional six months' operational data have been collected on several teams' fuel cells, and based on those data, the durability of the fuel cells being tested is projected at up to 800 hours. The Program is now moving on to developing and testing more robust fuel cell designs.				
	EE GG 4.02.12	**Status: MET/CLOSED**	**Contribute proportionately to EERE's corporate goal of reducing corporate and program adjusted uncosted obligated balances to a range of 20-25 percent by reducing program annual adjusted uncosteds by 10 percent in 2005 relative to the program's FY 2004 end-of-year adjusted uncosted baseline ($73,102K), until the target range is met.**	p. 108	EE 4.02
	Uncosted obligations totaled $69 million at the end of FY 2005, but roughly half of that was costed during the first quarter of FY 2006.				
	EE GG 4.04.11	**Status: MET**	**Complete a prototype dynamic window that will have a solar heat gain coefficient range of 0.05 to 0.6 and will meet American Society for Testing Materials (ASTM) durability standards for cycling in a high temperature, high ultraviolet light environment.**	p. 113	EE 4.04
	DOE received a prototype deliverable from Rockwell in January 2006. While this prototype passed initial testing, with increased cycling in the high temperature and high UV environment, the prototype exhibited significant degradation. Thus, the prototype did not pass the durability testing. The Rockwell project is complete and DOE did not award any follow-on contract. DOE did award new contracts to two performers in early FY 2006 in this area and have incorporated lessons learned from the FY 2005 activities and the FY 2005 peer review into the new contracts. For example, durability testing will be conducted on small prototypes early before larger prototypes are pursued.				
	EE GG 4.04.13	**Status: MET**	**Contribute proportionately to EERE's corporate goal of reducing corporate and program adjusted uncosted obligated balances to a range of 20-25 percent by reducing program annual adjusted uncosteds by 10 percent in 2005 relative to the program FY 2004 end of year adjusted uncosted baseline ($33,417K) until the target range is met.**	p. 114	EE 4.04
	In order to maximize the period of performance for awardees in FY06, BT has used FY06 funds to make awards to recipients that were chosen based on solicitations made in FY05.				

Goal	Measure (PAR)	Status	Description of Performance Target	FY 2005 PAR (page No.)	Crosswalk to FY 2006 Program Goal
	EE GG 4.05.01	**Status: MET**	**(Low Wind Speed Technology) Complete fabrication and begin testing advanced variable speed power converter. Test first advanced blade, incorporating improve materials and manufacturing techniques. Field test the first full-scale Low Wind Speed Technology prototype turbine.** **(Distributed Wind Technology) Complete prototype testing o f1.8 KW Small Wind Turbine, finishing the International Electrotechnical Commission suite of tests for acoustics, power, durability, and safety. (Technology Acceptance) Achieve 32 states with over 20 MW installed; 16 states with over 100 MW installed.**	p. 117	EE 4.05
	The missed target of 16 states was met by December 31, 2005.				
	EE GG 4.11.02	**Status: MET**	**Provide direct technical assistance to tribal nations including: four development workshops, two to three economic development projects, eight to ten "first steps" efforts, and six to ten feasibility studies, working toward goal of 100 MW of generation in Indian country by 2010.**	p. 125	EE 4.11
	There is no need to take any further action to make up for the reduced number of economic development projects since the program decided to fund a greater number of Feasibility Studies and "First Step" projects.				
	EE GG 4.11.07	**Status: UNMET/CLOSED**	**Recruit 500 additional retail stores, five additional utilities and ten additional manufacturers for the Energy Star program. Complete draft Commercial Window specification. Begin update of Residential Window specification. Expand coordination with all gateway activities.**	p. 127	EE 4.11
	Based on stakeholder input, the Department will not be developing commercial window specifications.				
	EE GG 4.13.02	**Status: MET**	**Contribute proportionately to EERE's corporate goal of reducing corporate and program adjusted uncosted obligated balances to a range of 20-25 percent by reducing program annual adjusted uncosteds by 10 percent in 2005 relative to the FEMP Program FY 2004 end of year adjusted uncosted baseline ($11,266K) until the target range is met.**	p. 128	EE 4.13
	The program has taken actions which will help reduce the uncosted balances such as including the obligation of funds early in the year, the moving up of the decision date for distribution of ad hoc technical assistance funds, and the utilization of uncosted funds through special initiatives.				
	EE GG 4.59.12	**Status: MET**	**Contribute proportionately to EERE's corporate goal of reducing corporate and program adjusted uncosted obligated balances to a range of 20-25 percent by reducing program annual adjusted uncosteds by 10 percent in 2004 relative to the program FY 2004 end of year adjusted uncosted baseline ($21,275K) until the target range is met.**	p. 130	EE 4.59
	The Program is actively working to ensure that the uncosted obligations level is reduced to the appropriate level (20-25 percent) through a variety of means including the obligation of funds early in the year, reviewing performers' cash flow to make appropriate adjustments in funding and developing Annual Operating Plans in the spring in order to be able to obligate funds as soon as appropriations are final.				
	OE GG 4.12.01	**Status: MET**	**Complete the manufacture a 200m superconducting cable for American Electric Power (AEP).**	p. 142	OE 4.12
	Manufacturing of the AEP cable was completed October 28, 2005. The delay beyond September 30 was due to a bottleneck in the manufacturer's production line, that moved back the date for producing this cable.				

Goal	Measure (PAR)	Status	Description of Performance Target	FY 2005 PAR (page No.)	Crosswalk to FY 2006 Program Goal
	OE GG 4.12.03	**Status: UNMET/OPEN**	**Complete the manufacture of and factory testing on a 2MW / 2MWh zinc-bromine battery (ZBB) system (consisting of four 500kW / 500kWh units) for supplying extra power during peak load conditions at a utility substation.**	p. 143	OE 4.12
	A truck-sized 500kW zinc-bromine unit has been delivered to PG&E's DUIT facility in San Ramon, California, where it is undergoing extensive testing. At the request of the main financer, the California Energy Commission, the remaining units will not be moved to California until completion of the testing period, which will probably occur by the end of 2006 (calendar year).				
Goal 5: World-Class Scientific Research Capacity					
	SC GG 5.19.04	**Status: UNMET/CLOSED**	**Achieve 80 percent average operation time of the scientific user facilities (the Fermi lab Tevatron and the Stanford Linear Accelerator (SLAC) B-factory (measured as a percentage of the total scheduled annual operating time).**	p. 154	SC 5.19
	The actual FY2005 operation time for Fermi lab Tevatron was 85 percent. The B-factory was shutdown in October 2004 due to a safety incident but reopened in late April of 2005. As a result of the accident, FY 2005 operation time for the B-Factory was 48 percent. The budget-weighted average achieved operation time for both facilities in FY 2005 was 73 percent. The current status for this metric is reported in the Performance Results Section under General Goal 5 as SC GG 5.19.4.				
	SC GG 5.21.07	**Status: UNMET/CLOSED**	**Complete fabrication of 60 microelectrode array for use as an artificial retina and insert prototype device into blind patient.**	p. 159	SC 5.21
	The fabrication of the 60 microelectrode array to be used as an artificial retina has been completed. However, Federal Drug Administration (FDA) approval to implant the prototype device into blind patients was not achieved as initially planned. Action Plan: Discussions with the FDA are ongoing with the development of an enhanced 256 microelectrode device in FY 2006. The current status for this metric is reported in the Performance Results Section under General Goal 5 as SC GG 5.21.07.				
Goal 6: Environmental Management					
	EM GG 6.18.01	**Status: UNMET/OPEN**	**Dispose at the Waste Isolation Pilot Plant (WIPP) a cumulative total of 40,711 cubic meters of transuranic (TRU) waste.**	p. 165	EM 6.18
	The program reports the negative variance results from delays throughout the complex including Idaho, Savannah River Site, Richland, and LANL. Idaho has met its goal of x m3 TRU waste disposed at WIPP required by the Settlement Agreement (the Batt Agreement). The Advanced Mixed Waste Treatment Facility continued to process waste at or near its design capacity. ACTION PLAN: DOE is working with Idaho and the other sites to meet its targets. Also, a complex-wide evaluation of the current targets that were originally set for this metric is being re-evaluated.				
	EM GG 6.18.02	**Status: UNMET/CLOSED**	**Close a cumulative total of 20 liquid waste tanks.**	p. 166	EM 6.18
	Treatment of liquid waste in tanks, and thereby closure of those tanks, has been limited due to the Waste Incidental to Reprocessing (WIR) lawsuit decision in July 2003, resulting in no tanks closed in FY 2005 for a cumulative total of 2 tanks closed overall. EM has evaluated its schedule priorities for closing liquid waste tanks across the complex and has provided a schedule based on reestablished priorities; the FY 2007 budget submittal to Congress listed no tanks to be scheduled for closure for FY 2006.				
	EM GG 6.18.05	**Status: UNMET/CLOSED**	**Package for disposition a cumulative total of 107,989 kilograms of bulk plutonium and uranium residues.**	p. 167	EM 6.18
	The Department has consolidated plutonium and uranium residues from across the complex to the Savannah River Site and updated its life-cycle estimate to 107,828 kilograms of residues to be packaged for disposition. At the end of FY 2006, the Department had packaged 107,817 kilograms of residues. The Department expects to complete all packaging by the middle of FY 2007.				

Goal	Measure (PAR)	Status	Description of Performance Target	FY 2005 PAR (page No.)	Crosswalk to FY 2006 Program Goal
	EM GG 6.18.07	**Status: MET**	**Complete remediation work at a cumulative total of 257 radioactive facilities.**	p. 167	EM 6.18
	The Department completed remediation work at a total of 365 radioactive facilities in FY 2006.				
Goal 6: Nuclear Waste					
	RW GG 7.25.01	**Status: UNMET/OPEN**	**Complete draft License Application documents incorporating improvements in safety analysis and design.**	p. 169	RW 7.25
	A draft license application will be available for Departmental review no later than March 2008. On July 19, 2006, the Department announced that it will submit a license application to the Nuclear Regulatory Commission no later than June 30, 2008.				

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

FINANCIAL RESULTS

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

MESSAGE FROM THE DEPUTY CHIEF FINANCIAL OFFICER

The Department has continued to make significant progress in improving its financial management processes and practices over the past year. The Secretary, Deputy Secretary and the entire senior leadership team place great emphasis on ensuring that the financial systems, as well as the business processes used by the Department, produce accurate and timely information for decision makers. With the submission of this year's Performance and Accountability Report, we have successfully met, for the third consecutive year, the Office of Management and Budget's accelerated due date of 45 days after the close of the fiscal year.

Fiscal year 2006 was the first full year in which the Department operated with a new, integrated core accounting system that standardizes key business and financial processes used throughout the complex. Combined with its companion data warehouse, our Program Offices have the most up-to-date financial and programmatic information at their fingertips, facilitating better decision making. However, many issues and challenges related to system start-up and reconciliations, data conversion and process definition and training demanded our attention throughout the year.

The Department made great strides toward resolving these issues and the prior material weakness on financial reporting and controls identified during the fiscal year 2005 audit. Many of the conditions which existed at the time of that audit have been successfully remediated and others are well on the road to completion. For example:

- major process improvements were made to facilitate the timely closing and strengthening of controls over month-end accounting processing;
- transaction processing backlogs experienced in the initial start-up of our new accounting system are now under control; and
- key reconciliations between system modules, integrated contractor data feeds and the general ledger are being conducted monthly.

The Department's fiscal year 2006 financial statements have been reviewed by independent auditors. The audit opinion on the Department's Balance Sheet was upgraded from a disclaimer last year to a qualified opinion for fiscal year 2006. The qualification was limited to concerns relating to the Department's controls over the reporting of undelivered orders, and this issue is reported as a material weakness. The auditors did not issue an opinion on the remaining fiscal year 2006 financial statements because of opening balance issues related to fiscal year 2005 for which the auditors issued a disclaimer of opinion. We plan to significantly improve controls over accounting for and reporting undelivered orders in fiscal year 2007, positioning the Department to achieve an unqualified audit opinion on next year's financial statements.

One of the Department's strategic themes is to enable mission success through sound management principles. I believe that this report demonstrates that we are institutionalizing a fully integrated resource management strategy that supports mission needs and postures the Department for continuous business process improvement. In the coming years we look forward to meeting this commitment to the American people.

James T. Campbell
November 15, 2006

CONSOLIDATED AND COMBINED FINANCIAL STATEMENTS

The Department's financial statements have been prepared to report the financial position and results of operations of the Department of Energy, pursuant to the requirements of the Chief Financial Officers Act of 1990, the Government Management Reform Act of 1994, and the Office of Management and Budget's (OMB) Circular A-136, "Financial Reporting Requirements."

The responsibility for the integrity of the financial information included in these statements rests with the management of the Department of Energy. The audit of the Department's principal financial statements was performed by an independent certified public accounting firm selected by the Department's Office of Inspector General. The auditors' report issued by the independent certified public accounting firm is included in this report.

The following provides a brief description of the nature of each required financial statement.

The *Consolidated Balance Sheets* describe the assets, liabilities and net position components of the Department.

The *Consolidated Statements of Net Cost* summarizes the Department's operating costs by the seven long-term general goals identified in the Department's FY 2003 Strategic Plan.

All operating costs reported reflect full costs, including all direct and indirect costs, consumed by a program or responsibility segment. The full costs are reduced by earned revenues to arrive at net costs. The Net Cost of Operations is reported on the *Consolidated Statements of Net Cost* and also on the *Consolidated Statements of Financing*.

The *Consolidated Statements of Changes in Net Position* identify appropriated funds used as a financing source for goods, services, or capital acquisitions. This statement presents the accounting events that caused changes in the net position section of the *Consolidated Balance Sheets* from the beginning to the end of the reporting period.

The *Combined Statements of Budgetary Resources* identify the Department's budget authority. Budget authority is the authority that Federal law gives to agencies to incur financial obligations that will eventually result in outlays or expenditures. Specific forms of budget authority that the Department receives are appropriations, borrowing authority, contract authority, and spending authority from offsetting collections. The *Combined Statements of Budgetary Resources* provides information on budgetary resources available to the Department during the year and the status of those resources at the end of the year. Detail on the amounts shown in the *Combined Statements of Budgetary Resources* is included in the Required Supplementary Information section on the schedule *Budgetary Resources by Major Account*.

The *Consolidated Statements of Financing* reconcile the obligations incurred to finance operations with the net cost of operations. Obligations incurred include amounts of orders placed, contracts awarded, services received, and similar transactions that require payment during the same or future period. Obligations incurred link the *Combined Statements of Budgetary Resources* to the *Consolidated Statements of Financing*.

The *Consolidated Statements of Custodial Activities* identify revenues collected by the Department on behalf of others. These revenues primarily result from power marketing administrations that sell power generated by hydroelectric facilities owned by the Corps of Engineers and the Bureau of Reclamation.

PRINCIPAL STATEMENTS

U. S. Department of Energy
Consolidated Balance Sheets

As of September 30, 2006 and 2005
($ in millions)

	FY 2006	FY 2005 (Unaudited)
ASSETS: (Note 2)		
Intragovernmental Assets:		
Fund Balance with Treasury (Note 3)	$ 17,189	$ 15,634
Investments, Net (Note 4)	23,767	22,197
Accounts Receivable, Net (Note 5)	615	652
Regulatory Assets (Note 6)	5,476	4,536
Other Assets	1	21
Total Intragovernmental Assets	$ 47,048	$ 43,040
Investments, Net (Note 4)	210	230
Accounts Receivable, Net (Note 5)	4,020	3,990
Inventory, Net: (Note 7)		
Strategic Petroleum and Northeast Home Heating Oil Reserve	19,172	19,314
Nuclear Materials	21,199	21,285
Other Inventory	456	444
General Property, Plant, and Equipment, Net (Note 8)	24,122	23,190
Regulatory Assets (Note 6)	5,961	5,653
Other Non-Intragovernmental Assets (Note 9)	3,864	4,591
Total Assets	$ 126,052	$ 121,737
LIABILITIES: (Note 10)		
Intragovernmental Liabilities:		
Accounts Payable	$ 82	$ 56
Debt (Note 11)	10,780	9,958
Deferred Revenues and Other Credits (Note 12)	52	125
Other Liabilities (Note 13)	257	169
Total Intragovernmental Liabilities	$ 11,171	$ 10,308
Accounts Payable	3,663	3,883
Debt Held by the Public (Note 11)	6,605	6,574
Deferred Revenues and Other Credits (Note 12)	23,661	21,592
Environmental Cleanup and Disposal Liabilities (Note 14)	230,321	189,710
Pension and Other Actuarial Liabilities (Note 15)	12,059	11,727
Other Non-Intragovernmental Liabilities (Note 13)	2,831	3,664
Contingencies and Commitments (Note 16)	6,836	5,058
Total Liabilities	$ 297,147	$ 252,516
NET POSITION:		
Unexpended Appropriations		$ 8,978
Unexpended Appropriations - Earmarked Funds (Note 17)	$ 47	
Unexpended Appropriations - Other Funds	9,864	
Cumulative Results of Operations		(139,757)
Cumulative Results of Operations - Earmarked Funds (Note 17)	(1,345)	
Cumulative Results of Operations - Other Funds	(179,661)	
Total Net Position	$ (171,095)	$ (130,779)
Total Liabilities and Net Position	$ 126,052	$ 121,737

The accompanying notes are an integral part of these statements

U. S. Department of Energy
Consolidated Statements of Net Cost
For Years Ended September 30, 2006 and 2005
($ in millions)

	FY 2006 (Unaudited)	FY 2005 (Unaudited)
STRATEGIC GOALS:		
Defense:		
Nuclear Weapons Stewardship:		
Total Program Costs	$ 6,841	$ 6,779
Nuclear Nonproliferation:		
Total Program Costs	$ 1,210	$ 1,191
Naval Reactors:		
Program Costs	782	810
Less: Earned Revenues (Note 18)	(11)	(18)
Net Cost of Naval Reactors	$ 771	$ 792
Net Cost of Defense	$ 8,822	$ 8,762
Energy:		
Program Costs	6,832	6,617
Less: Earned Revenues (Note 18)	(5,025)	(4,182)
Net Cost of Energy	$ 1,807	$ 2,435
Science:		
Total Program Costs	$ 3,720	$ 3,565
Environment:		
Environmental Management:		
Program Costs	5,601	6,719
Less: Earned Revenues (Note 18)	(300)	(151)
Net Cost of Environmental Management	$ 5,301	$ 6,568
Nuclear Waste:		
Program Costs	475	521
Less: Earned Revenues (Note 18)	(220)	(321)
Net Cost of Nuclear Waste	$ 255	$ 200
Net Cost of Environment	$ 5,556	$ 6,768
Net Cost of Strategic Goals	$ 19,905	$ 21,530
OTHER PROGRAMS:		
Reimbursable Programs:		
Program Costs	3,389	3,314
Less: Earned Revenues (Note 18)	(3,385)	(3,251)
Net Cost of Reimbursable Programs	$ 4	$ 63
Other Programs: (Note 19)		
Program Costs	660	667
Less: Earned Revenues (Note 18)	(206)	(235)
Net Cost of Other Programs	$ 454	$ 432
Costs Applied to Reduction of Legacy Environmental Liabilities (Notes 14 and 20)	$ (6,207)	$ (6,637)
Costs Not Assigned (Note 21)	$ 49,724	$ 25,499
Net Cost of Operations	$ 63,880	$ 40,887

The accompanying notes are an integral part of these statements

U. S. Department of Energy

Consolidated Statements of Changes in Net Position (Note 17)

For Years Ended September 30, 2006 and 2005
($ in millions)

	FY 2006 (Unaudited)				FY 2005 (Unaudited)
	Earmarked Funds	All Other Funds	Eliminations	Consolidated	Consolidated
CUMULATIVE RESULTS OF OPERATIONS:					
Beginning Balances	$ 3,264	$ (143,021)	$ -	$ (139,757)	$ (129,187)
Budgetary Financing Sources:					
Appropriations Used	$ 14	$ 22,706	$ -	$ 22,720	$ 23,711
Nonexchange Revenue	60	2	-	62	35
Donations and Forfeitures of Cash	-	13	-	13	13
Transfers - In/(Out) Without Reimbursement	(216)	-	-	(216)	(154)
Other Financing Sources (Non-Exchange):					
Donations and Forfeitures of Cash	1	-	-	1	1
Transfers - In/(Out) Without Reimbursement (Note 27)	(611)	(15)	-	(626)	2,132
Imputed Financing from Costs Absorbed by Others	2	621	-	623	4,279
Other	502	11	(459)	54	300
Total Financing Sources	$ (248)	$ 23,338	$ (459)	$ 22,631	$ 30,317
Net Costs of Operations	(4,361)	(59,978)	459	(63,880)	(40,887)
Net Change	$ (4,609)	$ (36,640)	$ -	$ (41,249)	$ (10,570)
Total Cumulative Results of Operations	$ (1,345)	$ (179,661)	$ -	$ (181,006)	$ (139,757)
UNEXPENDED APPROPRIATIONS:					
Beginning Balances	$ 10	$ 8,968	-	$ 8,978	$ 8,784
Budgetary Financing Sources:					
Appropriations Received (Note 23)	$ 52	$ 23,847	$ -	$ 23,899	$ 23,782
Appropriations Transferred - In/(Out)	-	17	-	17	312
Other Adjustments	(1)	(262)	-	(263)	(189)
Appropriations Used	(14)	(22,706)	-	(22,720)	(23,711)
Total Budgetary Financing Sources	$ 37	$ 896	$ -	$ 933	$ 194
Total Unexpended Appropriations	$ 47	$ 9,864	$ -	$ 9,911	$ 8,978
Net Position	$ (1,298)	$ (169,797)	$ -	$ (171,095)	$ (130,779)

The accompanying notes are an integral part of these statements

U. S. Department of Energy
Combined Statements of Budgetary Resources

For Years Ended September 30, 2006 and 2005
($ in millions)

	FY 2006 (Unaudited)	FY 2005 (Unaudited)
BUDGETARY RESOURCES		
Unobligated balance, Brought Forward, October 1 (Note 23)	$ 4,244	$ 4,036
Recoveries of Prior Year Unpaid Obligations	47	34
Budget Authority:		
Appropriations (Note 23)	$ 25,374	$ 25,062
Borrowing Authority	270	315
Contract Authority	871	1,018
Spending Authority from Offsetting Collections:		
Earned:		
Collected	7,727	7,224
Change in Receivables from Federal Sources	16	131
Change in Unfilled Customer Orders:		
Advances Received	30	30
Without Advance from Federal Sources	(603)	212
Subtotal	$ 33,685	$ 33,992
Nonexpenditure Transfers, Net, Anticipated and Actual	(52)	169
Temporarily not Available Pursuant to Public Law	(266)	(266)
Permanently Not Available	(1,838)	(1,848)
Total Budgetary Resources (Note 23)	$ 35,820	$ 36,117
STATUS OF BUDGETARY RESOURCES		
Obligations Incurred:		
Direct	$ 24,701	$ 24,879
Exempt from Apportionment	3,047	3,253
Reimbursable	3,908	3,744
Total Obligations Incurred (Note 23)	$ 31,656	$ 31,876
Unobligated Balance:		
Apportioned	2,552	2,588
Exempt from Apportionment	32	24
Unobligated Balance Not Available (Note 23)	1,580	1,629
Total Status of Budgetary Resources	$ 35,820	$ 36,117
CHANGE IN OBLIGATED BALANCE		
Obligated Balance, Net:		
Unpaid Obligations, Brought Forward, October 1 (Note 23)	$ 17,229	$ 17,247
Less: Uncollected Customer Payments from Federal Sources, Brought Forward, October 1	(4,687)	(4,344)
Total Unpaid Obligated Balance, Net, October 1	$ 12,542	$ 12,903
Obligations Incurred (Note 23)	31,656	31,876
Less: Gross Outlays	(30,642)	(31,856)
Less: Recoveries of Prior Year Unpaid Obligations, Actual	(47)	(34)
Change in Uncollected Customer Payments from Federal Sources	587	(343)
	$ 14,096	$ 12,546
Obligated Balance, Net, End of Period:		
Unpaid Obligations {Note 23)	$ 18,196	$ 17,232
Less: Uncollected Customer Payments from Federal Sources	(4,100)	(4,687)
Total, Unpaid Obligated Balance, Net, End of Period	$ 14,096	$ 12,545
NET OUTLAYS		
Gross Outlays	$ 30,642	$ 31,856
Less: Offsetting collections	(7,757)	(7,253)
Less: Distributed Offsetting Receipts (Note 23)	(3,264)	(3,236)
Net Outlays (Note 23)	$ 19,621	$ 21,367

The accompanying notes are an integral part of these statements

U. S. Department of Energy
Consolidated Statements of Financing

For Years Ended September 30, 2006 and 2005
($ in millions)

	FY 2006 (Unaudited)	FY 2005 (Unaudited)
RESOURCES USED TO FINANCE ACTIVITIES:		
Budgetary Resources Obligated:		
Obligations Incurred	$ 31,656	$ 31,876
Less: Spending Authority from Offsetting Collections and Recoveries	(7,217)	(7,631)
Obligations, Net of Offsetting Collections and Recoveries	$ 24,439	$ 24,245
Less: Offsetting Receipts	(3,264)	(3,236)
Net Obligations	$ 21,175	$ 21,009
Other Resources:		
Donations	1	1
Imputed Financing from Costs Absorbed by Others (Note 28)	623	4,279
Transfers-In/(Out) Without Reimbursement (Note 27)	(626)	2,132
Nuclear Waste Fund Offsetting Receipts, Deferred (Note 22)	2,345	2,520
Other	54	(36)
Net Other Resources Used to Finance Activities	$ 2,397	$ 8,896
Total Resources Used to Finance Activities	$ 23,572	$ 29,905
RESOURCES USED TO FINANCE ITEMS NOT PART OF THE NET COST OF OPERATIONS:		
Change in Budgetary Resources Obligated for Goods, Services and Benefits Ordered But Not Yet Provided	$ (1,235)	$ 72
Resources that Finance the Acquisition of Assets	(3,103)	(5,750)
Resources that Fund Expenses Recognized in Prior Periods	(7,279)	(6,347)
Budgetary Offsetting Collections and Receipts that Do Not Affect the Net Cost of Operations	62	153
Other Resources and Adjustments	(485)	(375)
Total Resources Used to Finance Items Not Part of the Net Cost of Operations	$ (12,040)	$ (12,247)
Total Resources Used to Finance the Net Cost of Operations	$ 11,532	$ 17,658
NET COST OF ITEMS THAT DO NOT REQUIRE OR GENERATE RESOURCES IN CURRENT PERIOD:		
Components Requiring or Generating Resources in Future Periods:		
Increase in Unfunded Liability Estimates (Note 24)	$ 50,832	$ 21,196
Increase/(Decrease) in Exchange Revenue Receivable from the Public	(1)	2
Total Components Requiring or Generating Resources in Future Periods	$ 50,831	$ 21,198
Components Not Requiring or Generating Resources:		
Depreciation and Amortization (Note 26)	920	1,328
Revaluation of Assets and Liabilities	(190)	(178)
Other	787	881
Total Components Not Requiring or Generating Resources	$ 1,517	$ 2,031
Total Net Cost of Items that Do Not Require or Generate Resources in Current Period	$ 52,348	$ 23,229
NET COST OF OPERATIONS	$ 63,880	$ 40,887

The accompanying notes are an integral part of these statements

U. S. Department of Energy
Consolidated Statements of Custodial Activities

For Years Ended September 30, 2006 and 2005
($ in millions)

	FY 2006 (Unaudited)	FY 2005 (Unaudited)
SOURCES OF COLLECTIONS:		
Cash Collections: (Note 25)		
Interest	$ 17	$ 20
Federal Energy Regulatory Commission	44	53
Power Marketing Administration Custodial Revenue	545	657
Other Custodial Revenue	-	3
Total Cash Collections	$ 606	$ 733
Accrual Adjustment	13	(19)
Total Custodial Revenue	$ 619	$ 714
DISPOSITION OF REVENUE:		
Transferred to Others:		
Department of the Treasury	(200)	(624)
Army Corps of Engineers	3	(5)
Bureau of Reclamation	(333)	(79)
Others	(5)	(3)
Decrease in Amounts to be Transferred	(84)	(3)
Net Custodial Activity	$ -	$ -

The accompanying notes are an integral part of these statements

NOTES TO THE CONSOLIDATED AND COMBINED FINANCIAL STATEMENTS

1. Summary of Significant Accounting Policies

A. Basis of Presentation

These consolidated and combined financial statements have been prepared to report the financial position and results of operations of the U.S. Department of Energy (Department or DOE). The statements were prepared from the books and records of the Department in accordance with generally accepted accounting principles applicable to Federal entities.

B. Description of Reporting Entity

The Department is a cabinet level agency of the Executive Branch of the U.S. Government. The Department is not subject to Federal, state, or local income taxes. The Department's headquarters organizations are located in Washington, D.C., and Germantown, Maryland, and consist of an executive management structure that includes the Secretary; the Deputy Secretary; the Under Secretary of Energy; the Under Secretary for National Nuclear Security/Administrator for the National Nuclear Security Administration; the Under Secretary for Science; Secretarial staff organizations; and program organizations that provide technical direction and support for the Department's principal programmatic missions. The Department also includes the Federal Energy Regulatory Commission, which is an independent regulatory organization responsible for setting rates and charges for the transportation and sale of natural gas and for the transmission and sale of electricity and the licensing of hydroelectric power projects.

The Department has a complex field structure comprised of operations offices, field offices, power marketing administrations (Bonneville Power Administration, Southeastern Power Administration, Southwestern Power Administration, and Western Area Power Administration), laboratories, and other facilities. The majority of the Department's environmental cleanup, energy research and development, and testing and production activities are carried out by major contractors. The contractors operate, maintain, or support the Department's Government-owned facilities on a day-to-day basis and provide other special work under the direction of DOE field organizations. The Department indemnifies these contractors against financial responsibility from nuclear accidents under the provisions of the Price-Anderson Act.

These contractors have unique contractual relationships with the Department. In most cases, their charts of accounts and accounting systems are integrated with the Department's accounting system through a home office-branch office type of arrangement. Additionally, the Department is responsible for funding certain defined benefit pension plans, as well as postretirement benefits such as medical care and life insurance, for the employees of these contractors. As a result, the Department's financial statements reflect not only the costs incurred by these contractors, but also include certain contractor assets (e.g., employee advances and prepaid pension costs) and liabilities (e.g., accounts payable, accrued expenses including payroll and benefits, and pension and other actuarial liabilities) that would not be reflected in the financial statements of other Federal agencies that do not have these unique contractual relationships.

C. Basis of Accounting

Transactions are recorded on an accrual accounting basis and budgetary basis. Under the accrual method, revenues are recognized when earned and expenses are recognized when liabilities are incurred, without regard to receipt or payment of cash. Budgetary accounting facilitates compliance with legal constraints and controls over the use of Federal funds. All material intra-departmental balances and transactions have been eliminated in the *Consolidated Balance Sheets*, *Consolidated Statements of Net Cost*, *Consolidated Statements of Changes in Net Position*, *Consolidated Statements of Financing*, and *Consolidated Statements of Custodial Activities*. The *Combined Statements of Budgetary Resources* are prepared on a combined basis and do not include intra-departmental eliminations.

Throughout these financial statements, assets, liabilities, earned revenue, and costs have been classified according to the type of entity with whom the transactions were made. Intragovernmental assets and liabilities are those from or to other Federal entities. Intragovernmental earned revenue represents collections or accruals of revenue from other Federal entities, and intragovernmental costs are payments or accruals to other Federal entities.

D. Fund Balance with Treasury

Funds with the Department of the Treasury (Treasury) primarily represent appropriated and revolving funds that are available to pay current liabilities and finance authorized purchases. Disbursements and receipts are processed by Treasury, and the Department's records are reconciled with those of Treasury (see Note 3).

E. Investments, Net

All investments are reported at cost net of amortized premiums and discounts as it is the Department's intent to hold the investments to maturity. Premiums and discounts are amortized using the effective interest yield method (see Note 4).

F. Accounts Receivable, Net

The amounts due for non-intragovernmental (non-Federal) receivables are stated net of an allowance for uncollectible accounts. The estimate of the allowance is based on past experience in the collection of receivables and an analysis of the outstanding balances (see Note 5).

G. Inventory, Net

Stockpile materials are recorded at historical cost in accordance with Statement of Federal Financial Accounting Standards (SFFAS) No. 3, *Accounting for Inventory and Related Property*, except for certain nuclear materials identified as surplus or excess to the Department's needs. These nuclear materials are recorded at their net realizable value (see Note 7).

H. General Property, Plant, and Equipment, Net

Property, plant, and equipment that are purchased, constructed, or fabricated in-house, including major modifications or improvements, are capitalized at cost. The Department's property, plant, and equipment capitalization threshold is $50,000 except for the power marketing administrations (PMAs), which use thresholds ranging from $5,000 to $10,000. The capitalization threshold for internal use software is $750,000, except for the PMAs, which use thresholds ranging from $5,000 to $100,000 (see Note 8).

Costs of construction are capitalized as construction work in process. Upon completion or beneficial occupancy or use, the cost is transferred to the appropriate property account. Property, plant, and equipment related to environmental management facilities storing and processing the Department's environmental legacy wastes are not capitalized.

Depreciation expense is generally computed using the straight line method. The units of production method is used only in special cases where applicable, such as depreciating automotive equipment on a mileage basis and construction equipment on an hourly use basis. The ranges of service lives are generally as follows:

- Structures and facilities – 25 - 50 years
- Automated Data Processing Software – 3 - 7 years
- Equipment – 5 - 40 years
- Land and land rights – duration of period or 50 years, whichever is less

I. Liabilities

Liabilities represent amounts of monies or other resources likely to be paid by the Department as a result of a transaction or event that has already occurred. However, no liability can be paid by the Department absent an authorized appropriation. Liabilities for which an appropriation has not been enacted are, therefore, classified as not covered by budgetary resources (see Note 10), and there is no certainty that the appropriations will be enacted. Also, liabilities of the Department arising from other than contracts can be abrogated by the Government acting in its sovereign capacity.

J. Earmarked Funds

The Department implemented SFFAS No. 27, *Identifying and Reporting Earmarked Funds*, in FY 2006, which required separate identification of earmarked funds on the *Consolidated Balance Sheets*, *Consolidated Statements of Changes in Net Position*, and selected other footnotes in FY 2006.

Earmarked funds are financed by specifically identified revenues, often supplemented by other financing sources, which remain available over time. These specifically identified revenues and other financing sources are required by statute to be used for designated activities, benefits or purposes, and must be accounted for separately from the Government's general revenues (see Note 17).

In accordance with the implementation guidance, earmarked funds are not separately identified in FY 2005.

K. Accrued Annual, Sick, and Other Leave

Federal employees' annual leave is accrued as it is earned, and the accrual is reduced annually for actual leave taken. Each year, the accrued annual leave balance is adjusted to reflect the latest pay rates. To the extent that current or prior year appropriations are not available to fund annual leave earned but not taken, funding will be obtained from future financing sources. Sick leave and other types of non-vested leave are expensed as taken.

L. Retirement Plans

Federal Employees

There are two primary retirement systems for Federal employees. Employees hired prior to January 1, 1984, may participate in the Civil Service Retirement System (CSRS). On January 1, 1984, the Federal Employees Retirement System (FERS) went into effect pursuant to Public Law 99-335. Most employees hired after December 31, 1983, are automatically covered by FERS and Social Security. Employees hired prior to January 1, 1984, elected to either join FERS and Social Security or remain in CSRS. A primary feature of FERS is that it offers a savings plan to which the Department automatically contributes one percent of pay and matches any employee contribution up to an additional four percent of pay. For most employees hired since December 31, 1983, the Department also contributes the employer's matching share for Social Security. The Department does not report CSRS or FERS assets, accumulated plan benefits, or unfunded liabilities, if any, applicable to its employees. Reporting such amounts is the responsibility of the Office of Personnel Management and the Federal Employees Retirement System. The Department does report, as an imputed financing source (See Note 28) and a program expense, the difference between its contributions to Federal employee pension and other retirement benefits and the estimated actuarial costs as computed by the Office of Personnel Management. The PMAs make additional annual contributions to the U.S. Treasury to ensure that all post-retirement benefit programs provided to their employees are fully funded and such costs are both recovered through rates and properly expensed.

Contractor Employees

Most of the Department's major contractors maintain a defined benefit pension plan under which they promise to pay employees specific benefits, such as a percentage of the final average pay for each year of service. The Department's cost under the contracts includes reimbursement of employer contributions to the pension plans. Amounts are calculated for employers to contribute to their pension plan to ensure the plan assets are sufficient or provide for accrued benefits of contractor employees. The level of contributions is dependent on plan provisions and actuarial assumptions about the future, such as interest rates, employee turnover and mortality, age of retirement, and compensation increases. The Department's contractors also sponsor postretirement benefits other than pensions (PRB) consisting of predominantly postretirement health care benefits which are generally funded on a pay-as-you-go basis. Since the Department is ultimately responsible for the allowable costs of funding the pension and PRB plans, it reports assets and liabilities for these plans (see Note 15).

M. Net Cost of Operations

Program costs are summarized in the *Consolidated Statements of Net Cost* by the seven long-term general goals identified in the Department's September 30, 2003, Strategic Plan. Program costs reflect full costs including all direct and indirect costs consumed by these general goals. Full costs are reduced by exchange (earned) revenues to arrive at net operating cost (see Notes 18 and 19). The general goals are summarized on the next page.

- Nuclear Weapons Stewardship – Ensure that our nuclear weapons continue to serve their essential deterrence role by maintaining and enhancing the safety, security, and reliability of the U.S. nuclear weapons stockpile.
- Nuclear Nonproliferation – Provide technical leadership to limit or prevent the spread of materials, technology, and expertise relating to weapons of mass destruction; advance the technologies to detect the proliferation of weapons of mass destruction worldwide; and eliminate or secure inventories of surplus materials and infrastructure usable for nuclear weapons.
- Naval Reactors – Provide the Navy with safe, militarily effective nuclear propulsion plants and ensure their continued safe and reliable operation.
- Energy Security – Improve energy security by developing technologies that foster a diverse supply of reliable, affordable, and environmentally sound energy by providing for reliable delivery of energy, guarding against energy emergencies, exploring advanced technologies that make a fundamental improvement in our mix of energy options, and improving energy efficiency.
- World-Class Scientific Research Capacity – Provide world-class scientific research capacity needed to: ensure the success of Department missions in national and energy security; advance the frontiers of knowledge in physical sciences and areas of biological, medical, environmental, and computational sciences; or provide world-class research facilities for the Nation's science enterprise.
- Environmental Management – Accelerate cleanup of nuclear weapons manufacturing and testing sites, completing cleanup of 108 contaminated sites by 2035.
- Nuclear Waste – License and construct a permanent repository for nuclear waste at Yucca Mountain.

N. Revenues and Other Financing Sources

The Department receives the majority of the funding needed to perform its mission through Congressional appropriations. These appropriations may be used, within statutory limits, for operating and capital expenditures. In addition to appropriations, financing sources include exchange and non-exchange revenues, imputed financing sources, and custodial revenues.

Exchange and Non-Exchange Revenues: In accordance with Federal Government accounting standards, the Department classifies revenues as either exchange (earned) or non-exchange. Exchange revenues are those that derive from transactions in which both the Government and the other party receive value (see Note 18). Non-exchange revenues derive from the Government's sovereign right to demand payment, including fines and penalties. These revenues are not considered to reduce the cost of the Department's operations and are reported on the *Consolidated Statements of Changes in Net Position*.

Imputed Financing Sources: In certain instances program costs of the Department are paid out of the funds appropriated to other Federal agencies. For example, certain costs of retirement programs are paid by the Office of Personnel Management, and certain legal judgments against the Department are paid from the Judgment Fund maintained by Treasury. When costs that are directly attributable to the Department's operations are paid by other agencies, the Department recognizes these amounts on the *Consolidated Statements of Net Cost*. In addition, these amounts are recognized as imputed financing sources on the *Consolidated Statements of Changes in Net Position* and the *Consolidated Statements of Financing* (see Note 28).

Custodial Revenues: The Department collects certain revenues on behalf of others which are designated as custodial revenues. The Department incurs virtually no costs to generate these revenues, nor can it use these revenues to finance its operations. The revenues are returned to Treasury and others and are reported on the *Consolidated Statements of Custodial Activities* (see Note 25).

O. Use of Estimates

The Department has made certain estimates and assumptions relating to the reporting of assets and liabilities and the disclosure of contingent assets and liabilities to prepare these consolidated financial statements. Actual results could differ from these estimates.

P. Comparative Data

Certain FY 2005 amounts have been reclassified to conform to the FY 2006 presentation.

2. Non-Entity Assets

(in millions)

	FY 2006	FY 2005 (unaudited)
Intragovernmental		
Fund balance with Treasury		
Naval Petroleum Reserve Deposit Fund (Note 13)	$ 323	$ 323
Elk Hills School Lands Fund (Note 13)	-	82
Investments - Petroleum Pricing Violation Escrow Fund (Notes 4 and 13)	72	280
Subtotal	$ 395	$ 685
Investments - Petroleum Pricing Violation Escrow Fund (Notes 4 and 13)	210	230
Inventories - Department of Defense stockpile oil (Notes 7 and 13)	123	106
Other	18	9
Total non-entity assets	$ 746	$ 1,030
Total entity assets	125,306	120,707
Total assets	**$ 126,052**	**$ 121,737**

Assets in the possession of the Department that are not available for its use are considered non-entity assets.

Naval Petroleum Reserve Deposit Fund

The balance in this fund represents proceeds from the sale of the Naval Petroleum Reserve at Elk Hills that are being held until final disposition in accordance with the Decoupling Agreement. Approximately $288 million is being held for a contingency payment to Chevron, Inc., pending the outcome of equity finalization. The remaining $35 million is reserved for anticipated adjustments to Occidental's final payment and for possible reimbursement to the investment banker for an advance on its commission.

Petroleum Pricing Violation Escrow Fund

The Petroleum Pricing Violation Escrow Fund represents custodial receipts collected as a result of agreements or court orders with individuals or firms that violated petroleum pricing and allocation regulations during the 1970s. These receipts are invested in Treasury securities and certificates of deposit at minority-owned financial institutions pending determination by the Department as to how to distribute the fund balance. The investments are liquidated, as needed, to make payments from this fund.

3. Fund Balance with Treasury

(in millions)

September 30, 2006	Appropriated Funds	Revolving Funds	Special Funds	Other Funds	Total
Unobligated budgetary resources					
Available	$ 2,367	$ 95	$ 122	$ -	$ 2,584
Unavailable (Note 23)	39	1,441	100	-	1,580
Obligated balance not yet disbursed					
Unpaid obligations (Note 23)	15,115	2,452	628	1	18,196
Uncollected customer payments from Federal sources	(3,697)	(386)	(17)	-	(4,100)
Deposit fund liabilities	-	-	-	377	377
Other adjustments					
Appropriations temporarily not available pursuant to law, and contract authority	257	(871)	-	-	(614)
Unavailable receipt accounts	-	-	881	-	881
Budgetary resources invested in Treasury securities					
Nuclear Waste Fund	-	-	(183)	-	(183)
Uranium Enrichment D&D Fund	-	-	(110)	-	(110)
Pajarito Plateau Homesteaders Compensation Fund	-	-	(8)	-	(8)
U.S. Enrichment Corporation revolving fund	-	(1,414)	-	-	(1,414)
Total FY 2006 fund balance with Treasury	**$ 14,081**	**$ 1,317**	**$ 1,413**	**$ 378**	**$ 17,189**

September 30, 2005 (unaudited)					
Unobligated budgetary resources					
Available	$ 2,382	$ 95	$ 135	$ -	$ 2,612
Unavailable (Note 23)	240	1,388	1	-	1,629
Obligated balance not yet disbursed					
Unpaid obligations (Note 23)	14,762	1,954	511	5	17,232
Uncollected customer payments from Federal sources	(4,378)	(296)	(13)	-	(4,687)
Deposit fund liabilities	-	-	-	391	391
Other adjustments					
Appropriations temporarily not available pursuant to law, and contract authority	257	(1,019)	-	-	(762)
Unavailable receipt accounts	-	-	963	-	963
Budgetary resources invested in Treasury securities					
Nuclear Waste Fund	-	-	(284)	-	(284)
Uranium Enrichment D&D Fund	-	-	(68)	-	(68)
Pajarito Plateau Homesteaders Compensation Fund	-	-	(8)	-	(8)
U.S. Enrichment Corporation revolving fund	-	(1,384)	-	-	(1,384)
Total FY 2005 fund balance with Treasury	**$ 13,263**	**$ 738**	**$ 1,237**	**$ 396**	**$ 15,634**

4. Investments, Net

(in millions)

Pursuant to statutory authorizations, the Department invests monies in Treasury securities and commercial certificates of deposit that are secured by the Federal Deposit Insurance Corporation. The Department's investments primarily involve the Nuclear Waste Fund (NWF) and the Uranium Enrichment Decontamination and Decommissioning (D&D) Fund. Fees paid by owners and generators of spent nuclear fuel and high-level radioactive waste and fees collected from domestic utilities are deposited into the respective funds. Funds in excess of those needed to pay current program costs are invested in Treasury securities.

Upon privatization of the United Stated Enrichment Corporation (USEC) on July 28, 1998, OMB and Treasury designated the Department as successor to USEC for purposes of disposition of balances remaining in the USEC Fund. Funds in excess of those needed to liquidate USEC liabilities are invested in Treasury securities.

The Federal Government does not set aside assets to pay for expenditures associated with the funds for which the Department holds Treasury securities. These Treasury securities are an asset to the Department of Energy and a liability to Treasury. Because the Department of Energy and Treasury are both parts of the Government, these assets and liabilities offset each other from the standpoint of the Government as a whole. For this reason, they do not represent an asset or a liability in the U.S. Government-wide financial statements.

Treasury securities provide the Department with authority to draw upon the U.S. Treasury to make expenditures, subject to available appropriations and OMB apportionments. When the Department requires redemption of these securities, the Government finances those expenditures out of accumulated cash balances, by raising taxes or other receipts, by borrowing from the public or repaying less debt, or by curtailing other expenditures. This is the same way the Government finances all other expenditures.

	Face	Unamortized Premium (Discount)	Investments Net	Unrealized Market Gains (Losses)	Market Value
September 30, 2006					
Intragovernmental Non-Marketable					
Nuclear Waste Fund	$ 36,481	$ (18,529)	$ 17,952	$ 1,393	$ 19,345
D&D Fund	4,228	82	4,310	(68)	4,242
U.S. Enrichment Corporation	1,414	11	1,425	-	1,425
Petroleum Pricing Violation Escrow Fund	72	-	72	-	72
Pajarito Plateau Homesteaders Compensation Fund	8	-	8	-	8
Subtotal	$ 42,203	$ (18,436)	$ 23,767	$ 1,325	$ 25,092
Petroleum Pricing Violation Escrow Fund	210	-	210	-	210
Total FY 2006 investments	**$ 42,413**	**$ (18,436)**	**$ 23,977**	**$ 1,325**	**$ 25,302**
September 30, 2005 (unaudited)					
Intragovernmental Non-Marketable					
Nuclear Waste Fund	$ 33,549	$ (17,037)	$ 16,512	$ 2,008	$ 18,520
D&D Fund	3,891	122	4,013	(46)	3,967
U.S. Enrichment Corporation	1,387	(3)	1,384	1	1,385
Petroleum Pricing Violation Escrow Fund	281	(1)	280	-	280
Pajarito Plateau Homesteaders Compensation Fund	8	-	8	-	8
Subtotal	$ 39,116	$ (16,919)	$ 22,197	$ 1,963	$ 24,160
Petroleum Pricing Violation Escrow Fund	230	-	230	-	230
Total FY 2005 investments	**$ 39,346**	**$ (16,919)**	**$ 22,427**	**$ 1,963**	**$ 24,390**

5. Accounts Receivable, Net

(in millions)

	FY 2006			FY 2005 (unaudited)		
	Receivable	Allowance	Net	Receivable	Allowance	Net
Intragovernmental	$ 615	$ -	$ 615	$ 652	$ -	$ 652
Nuclear Waste Fund	3,153	-	3,153	3,024	-	3,024
Uranium Enrichment D&D Fund	181	-	181	375	-	375
Power marketing administrations	586	(42)	544	465	(40)	425
Credit programs	51	(26)	25	54	(26)	28
Other	156	(39)	117	179	(41)	138
Subtotal	$ 4,127	$ (107)	$ 4,020	$ 4,097	$ (107)	$ 3,990
Total accounts receivable	**$ 4,742**	**$ (107)**	**$ 4,635**	**$ 4,749**	**$ (107)**	**$ 4,642**

Intragovernmental accounts receivable primarily represent amounts due from other Federal agencies for reimbursable work performed pursuant to the Economy Act, Atomic Energy Act, and other statutory authority, as well as interest earned on investments held in Treasury securities.

Non-intragovernmental receivables primarily represent amounts due for NWF and D&D Fund fees. NWF receivables are supported by contracts and agreements with owners and generators of spent nuclear fuel and high-level radioactive waste that contribute resources to the fund. D&D Fund receivables from public utilities are supported by public law. Other receivables due from the public include reimbursable work billings and other amounts related to trade receivables, and other miscellaneous receivables.

6. Regulatory Assets

(in millions)

	FY 2006	FY 2005 (unaudited)
Intragovernmental		
Refinanced and additional appropriated capital	$ 5,476	$ 4,536
Non-operating regulatory assets	3,928	3,955
Investor owned utilities exchange benefits	1,296	964
Conservation and fish and wildlife projects	401	412
Other regulatory assets	336	322
Subtotal	$ 5,961	$ 5,653
Total regulatory assets	**$ 11,437**	**$ 10,189**

The Department's power marketing administrations (PMAs) record certain amounts as assets in accordance with Statement of Financial Accounting Standard (SFAS) No. 71, *Accounting for the Effects of Certain Types of Regulation*. The provisions of SFAS No. 71 require that regulated enterprises reflect rate actions of the regulator in their financial statements, when appropriate. These rate actions can provide reasonable assurance of the existence of an asset, reduce or eliminate the value of an asset, or impose a liability on a regulated enterprise.

In order to defer incurred costs under SFAS No. 71, a regulated entity must have the statutory authority to establish rates that recover all costs. Rates so established must be charged to and collected from customers. Due to increasing competitive pressures, Bonneville Power Administration (BPA) may be required to seek alternative solutions in the future to avoid raising rates to a level that is no longer competitive. If BPA's rates should become market-based, SFAS No. 71 would no longer be applicable, and all of the above costs deferred under that standard would be expensed.

Refinanced and Additional Appropriated Capital

The BPA Appropriations Refinancing Act of 1996, 16 U.S.C. 8381, required that historic interest rates set on the Federal Columbia River Power System (FCRPS) capital appropriations, which BPA is obligated to set rates to recover, be reset and assigned prevailing market rates and the unpaid balance as of September 30, 1996, be reduced by a matching amount. These appropriations include the unpaid balance of capital appropriations of the power generating assets of the U.S. Army Corps of Engineers (Corps) and the Bureau of Reclamation associated with the FCRPS as well as additional capital investment post-Refinancing Act. The Corps and the Bureau of Reclamation continue to own and operate these assets, with BPA having the responsibility to recover the costs of the assets from power

ratepayers. BPA established an intragovernmental regulatory asset representing the repayment amount of the transmission and power generating assets that will be recovered in BPA rates. This regulatory asset is being amortized on a straight-line method over the service lives of the assets. BPA recognized annual amortization costs of $120 million as of September 30, 2006 (unaudited), and $77 million as of September 30, 2005 (unaudited). The *Consolidated Balance Sheets* include a regulatory asset and an offsetting related debt (see Note 11).

Non-Operating Regulatory Assets

BPA has acquired all or part of the potential generating capability of four terminated nuclear power plants. The Government's contracts require BPA to pay all or part of the annual projects' budgets, including debt services of the terminated plants. These projects' current and future costs are recovered through BPA's rates. The *Consolidated Balance Sheets* include a regulatory asset and offsetting related debt (see Note 11).

Investor Owned Utilities (IOU) Exchange Benefits

The IOU Exchange Benefits consist of future payments to be made to BPA's IOUs to be passed on to the utilities' qualified small-farm and residential customers. The regulatory asset offsets the liability on the balance sheet (see Note 12) as these amounts will be collected in future rates. It is possible that the agreements for these future payments may be revised in connection with legal challenges that have been filed with the U.S. Court of Appeals for the Ninth Circuit which could result in a remand and potential changes to the IOU Exchange Benefit amounts to be provided to the IOU customers. BPA believes it is likely that the agreements will be sustained.

Conservation and Fish and Wildlife Assets

The conservation assets consist of capitalized power resource acquisitions resulting from investment conservation measures. The fish and wildlife assets consist of capitalized costs to fund the protection of fish and wildlife, and the mitigation of losses attributed to the development and operation of hydroelectric projects on the Columbia River and its tributaries pursuant to Section 4(h) of the Pacific Northwest Electric Power Planning and Conservation Act, 16 U.S.C. 839. BPA pays for the facilities and recovers the costs in rates but does not retain ownership of the facilities. Amortization of capitalized conservation and fish and wildlife costs are computed on a straight-line method based on estimated service lives, which are up to 20 years for conservation and 15 years for fish and wildlife.

Other Regulatory Assets

Other regulatory assets consist of other BPA deferred expenses where the costs are included in power and transmission rates charged to customers. These primarily include monetary and power benefits to certain customers which will be recovered in power rates; settlement payments due to customers or counterparties as a result of contractual settlement agreements or proposed settlements stemming from litigation where BPA intends to recover costs in power rates; capital premiums, which represent the deferred losses related to refinanced debt, and are amortized over the life of the new debt instruments; and the expected amount of future payments for current recipients of BPA workers' compensation benefits. Costs are amortized over the original life of the contract or the rate period.

7. Inventory, Net

Inventory includes stockpile materials consisting of crude oil held in the Strategic Petroleum Reserve and the Northeast Home Heating Oil Reserve, nuclear materials, highly enriched uranium, and other inventory consisting primarily of operating materials and supplies.

Strategic Petroleum Reserve

The Strategic Petroleum Reserve consists of crude oil stored in salt domes, terminals, and pipelines. As of September 30, 2006, and September 30, 2005 (unaudited), the Reserve contained crude oil with a historical cost of $19,095 million and $19,237 million, respectively. The Reserve provides a deterrent to the use of oil as a political instrument and provides an effective response mechanism should a disruption occur. Included in the Strategic Petroleum Reserve is crude oil held for future Department of Defense (DOD) use. The FY 1993 Defense Appropriations Act authorized the Department to acquire, transport, store, and prepare for ultimate drawdown of crude oil for DOD. The crude oil purchased with DOD funding is commingled with the Department's stock and is valued at its historical cost of $123 million at September 30, 2006, and $106 million as of September 30, 2005 (unaudited) (see Notes 2 and 13).

In August 2005, Hurricane Katrina hit the Gulf Coast near the Louisiana/Mississippi border. Although the Strategic Petroleum Reserve storage facilities were unaffected, its leased office facilities in the New Orleans area were evacuated and remained inactive until October 2005. Because of the disruption to crude oil supplies, the Department responded by entering into exchange agreements for the delivery of crude oil to affected companies. To further address the supply disruption, the President ordered a drawdown of the Reserve, resulting in the competitive sale of 11 million barrels of oil in September 2005 (unaudited). As of September 30, 2006, oil sale proceeds totaled $615 million (See Notes 18 and 27) (unaudited).

Northeast Home Heating Oil Reserve

The Northeast Home Heating Oil Reserve was established in FY 2000 pursuant to the Energy Policy and Conservation Act. As of September 30, 2006, and September 30, 2005 (unaudited), the Reserve contained petroleum distillate in the New England, New York, and New Jersey geographic areas valued at historical costs of $77 million.

Nuclear Materials

Nuclear materials include weapons and related components, including those in the custody of the DOD under Presidential Directive, and materials used for research and development purposes. Certain surplus plutonium carried at zero value (a provision for disposal is included in environmental liabilities) has significant arms control and nonproliferation value and is instrumental to the U.S in ensuring that Russia continues toward the disposition of its weapons grade plutonium.

The Office of Nuclear Energy has inventories amounting to a total of 17,796 metric tons of uranium hexafluoride. This total is segmented into three separate stockpiles. First, the Department in 1996 received from USEC a transfer of 5,521 metric tons of uranium associated with the natural uranium component of low enriched uranium (LEU) delivered under the U.S. and Russia Highly Enriched Uranium (HEU) Purchase Agreement in 1995 and 1996. About 1,279 metric tons remain in the Department's inventories as a result of: (1) 2,228 metric tons transferred consistent with section 3112 of the USEC Privatization Act between 1996 and 2001; (2) 1,105 metric tons transferred to USEC for sale in FY 2005 and FY 2006; (3) 906 metric tons

sold by the Department in FY 2006 (see Note 18); and (4) about 3 metric tons remain unrecoverable as cylinder heels from the technetium cleanup program.

The second stockpile of uranium, amounting to 11,000 metric tons, was purchased from Russia for $325 million consistent with P.L. 105-277. This material is the natural uranium component of LEU delivered under the U.S. and Russia HEU Agreement in 1997 and 1998. Final disposition of the material cannot occur until after March 2009 based upon an international agreement between the U.S. and Russia that requires the Department to maintain a 22,000 metric ton stockpile and restricts the entry of the uranium into the commercial market until after March 2009. The Department has an inventory of U.S. origin uranium of 5,517 metric tons, of which 5,462 metric tons is also restricted from sale into the commercial market until after March 2009. Sampling and analysis indicate that a portion of the Department's stockpile of uranium hexafluoride contains technetium exceeding nuclear fuel specifications. Based on current market data, the carrying value of this material is not impaired as of September 30, 2006.

The nuclear materials inventory includes numerous items for which future use and disposition decisions have not been made. Decisions for most of these items will be made through analysis of the economic benefits and costs, and the environmental impacts of the various use and disposition alternatives. The carrying value of these items is not significant to the nuclear materials stockpile inventory balance. The Department will recognize disposition liabilities and record the material at net realizable value when disposal as waste is identified as the most likely alternative and disposition costs can be reasonably estimated. Inventory values are reduced by costs associated with decay or damage.

Highly Enriched Uranium

The Nuclear Weapons Council declared in December 1994, leading to the Secretary of Energy's announcement in February 1996, that 174.3 metric tons (MT) of the Department's HEU were excess to national security needs. Most of this material (about 151 MT) has been blended for sale as LEU and used over time as commercial or research nuclear reactor fuel to recover its value. The remaining portion (about 23 MT) of the material is already in the form of irradiated fuel or other waste forms, which require no processing prior to disposal. In November 2005, the Secretary of Energy declared that an additional 200 MT of HEU will never be used for nuclear weapons. Out of the 200 MT, approximately 20 MT will be down blended to LEU for use in commercial or research reactors. Down-blending of this material will occur over the next 25 to 30 years.

8. General Property, Plant and Equipment, Net

(in millions)

	FY 2006			FY 2005 (unaudited)		
	Acquisition Costs	Accumulated Depreciation	Net Book Value	Acquisition Costs	Accumulated Depreciation	Net Book Value
Land and land rights	$ 1,564	$ (753)	$ 811	$ 1,506	$ (729)	$ 777
Structures and facilities	33,665	(22,312)	11,353	33,543	(21,937)	11,606
Internal use software	471	(203)	268	419	(149)	270
Equipment	15,796	(10,563)	5,233	15,203	(10,322)	4,881
Natural resources	65	(16)	49	65	(9)	56
Construction work in process	6,408	-	6,408	5,600	-	5,600
Total property, plant and equipment	**$ 57,969**	**$ (33,847)**	**$ 24,122**	**$ 56,336**	**$ (33,146)**	**$ 23,190**

9. Other Non-Intragovernmental Assets

(in millions)

	FY 2006	FY 2005 (unaudited)
Purchased generating capability	$ 2,435	$ 2,389
Prepaid pension plan costs (Note 15)	868	1,260
Oil due from others	83	224
Prepayments	21	321
Other	457	397
Total other non-intragovernmental assets	**$ 3,864**	**$ 4,591**

Purchased Generating Capability

Through contracts, BPA has acquired all or part of the generating capability of one nuclear power plant and two hydroelectric projects. The contracts require BPA to pay operating expenses and debt service for these facilities. The *Consolidated Balance Sheets* include an offsetting related debt for these amounts.

Oil Due from Others

The Department has a Royalty-In-Kind exchange arrangement with the Department of the Interior's Mineral Management Service (MMS) to receive crude oil from Gulf of Mexico Federal offshore leases. The oil from the MMS offshore leases was exchanged for other crude oil (exchange oil) to be delivered to the Strategic Petroleum Reserve. As a result of companies deferring the delivery of some of the exchange oil, the Department earned additional oil as a premium. All Royalty-In-Kind exchange oil has been received as of October 2005. Due to Hurricane Katrina and the rise of oil prices, the SPR was directed to stop filling the reserve. Accordingly, there was no activity in the Royalty-In-Kind exchange arrangement during fiscal year 2006.

Due to Hurricane Katrina, the SPR contracted with six oil companies to loan SPR oil in exchange for the return of contracted plus premium barrels related to the exchange. As of September 30, 2006, the majority of the oil due to the SPR has been returned.

In June 2006, the SPR delivered 750,000 barrels of oil from the reserve in exchange for 772,400 barrels to be returned back to the reserve by October 2006. As of September 30, 2006, the value of the oil due for this exchange was $21 million.

10. Liabilities Not Covered by Budgetary Resources

(in millions)

	FY 2006	FY 2005 (unaudited)
Intragovernmental		
Debt (Notes 11 and 17)	$ 10,780	$ 9,958
Other	17	15
Total intragovernmental	$ 10,797	$ 9,973
Debt (Notes 11 and 17)	6,605	6,574
Deferred revenues		
Nuclear Waste Fund (Note 12)	21,116	19,564
Environmental liabilities (Note 14)	228,301	187,784
Pension and other actuarial liabilities (Note 15)	12,059	11,727
Other liabilities		
Environment, safety and health compliance activities (Note 13)	861	1,164
Accrued annual leave for Federal employees	121	113
Other	187	350
Contingencies and commitments (Note 16)	6,836	5,058
Total liabilities not covered by budgetary resources	$ 286,883	$ 242,307
Total liabilities covered by budgetary resources	10,264	10,209
Total liabilities	**$ 297,147**	**$ 252,516**

11. Debt

(in millions)

	FY 2006			FY 2005 (unaudited)		
	Beginning Balance	Net Borrowings	Ending Balance	Beginning Balance	Net Borrowings	Ending Balance
Intragovernmental (Note 10)						
Borrowing from Treasury	$ 2,777	$ (295)	$ 2,482	$ 2,900	$ (123)	$ 2,777
Appropriated capital	2,972	230	3,202	3,111	(139)	2,972
Refinanced and additional appropriations	2,219	951	3,170	2,401	(182)	2,219
Capitalization adjustment	1,990	(64)	1,926	2,056	(66)	1,990
Subtotal	$ 9,958	$ 822	$ 10,780	$ 10,468	$ (510)	$ 9,958
Non-Federal projects (Note 10)	6,574	31	6,605	6,531	43	6,574
Total debt	**$ 16,532**	**$ 853**	**$ 17,385**	**$ 16,999**	**$ (467)**	**$ 16,532**

Borrowing from Treasury

To finance its capital programs, BPA is authorized by Congress to issue to Treasury up to $4,450 million of interest-bearing debt with terms and conditions comparable to debt issued by U.S. Government corporations. A portion ($1,250 million) is reserved for conservation and renewable resource loans and grants. As of September 30, 2006, and September 30, 2005 (unaudited), of the total $2,482 million and $2,777 million of outstanding debt respectively, $765 million and $780 million, respectively, were conservation and renewable resource loans and grants (including Corps, Bureau of Reclamation and U.S. Fish and Wildlife capital investments). The weighted average interest rates for Treasury borrowing as of September 30, 2006, and September 30, 2005 (unaudited), were 5.08 percent and 4.76 percent, respectively. The fair value of BPA's long-term debt, based on discounting future cash flows using rates offered by Treasury as of September 30, 2006, and September 30, 2005 (unaudited), for similar maturities, exceeds carrying value by approximately $132 million and $169 million respectively. BPA's policy is to refinance debt that is callable when associated benefits exceed costs of refinancing.

Appropriated Capital

Appropriated capital owed represents the balance of appropriations provided to the Department's power marketing administrations for construction and operation of power projects which will be repaid to Treasury's General Fund and the Department of the Interior's (Interior) Reclamation Fund. The amount owed also includes accumulated interest on the net unpaid Federal investment in the power projects. The Federal investment in these facilities is to be repaid within 50 years from the time the facilities are placed in service or are commercially operational. Replacements of Federal investments are generally to be repaid over their expected useful service lives. There is no requirement for repayment of a specific amount of Federal investment on an annual basis.

Each of the power marketing administrations, except for BPA, receives an annual appropriation to fund operation and maintenance expenses. These appropriated funds are repaid to the Treasury's General Fund and Interior from the revenues generated from the sale of power and transmission services. To the extent that funds are not available for payment, such unpaid annual net deficits become payable from the subsequent years' revenues prior to any repayment of Federal investment. The Department treats these appropriations as a borrowing from the Treasury's General Fund and Interior, and as such, the *Consolidated Statements of Changes in Net Position* do not reflect these funds as appropriated capital used.

Except for the appropriation refinancing asset described in Note 6 and in the next paragraph, the Department's financial statements do not reflect the Federal investment in power generating facilities owned by the Department of Defense, U.S Army Corps of Engineers; the Department of the Interior, Bureau of Reclamation; and the Department of State, International Boundary and Water Commission. The Department's power marketing administrations, except BPA, are responsible for collecting, and remitting to Treasury, revenues resulting from the sale of hydroelectric power generated by these facilities (see Note 25). BPA makes annual payments to the Treasury from its net proceeds.

Refinanced and Additional Appropriations

As discussed in Note 6, BPA refinanced its unpaid capital appropriations as of September 30, 1996, and is responsible for the repayment of additional appropriated capital investment post-Refinancing Act. The weighted average interest rate on outstanding appropriations was 6.7 percent as of September 30, 2006, and September 30, 2005 (unaudited). The remaining period of repayment on refinanced appropriations is 30 years. Repayment amounts were determined based on the date the respective facilities were placed in service using the weighted average service lives of the associated investments, not to exceed 50 years. BPA repays amounts owed to Treasury's General Fund and Interior's Reclamation Fund.

Capitalization Adjustment

The amount of appropriations refinanced as a result of the BPA Appropriations Refinancing Act of 1996 was $6.6 billion. After refinancing, the appropriations outstanding were $4.1 billion. The difference between the appropriated debt before and after the refinancing was recorded as a capitalization adjustment. This adjustment is being amortized over 40 years of which 30 years remain. The weighted average interest was 6.7 percent as of September 30, 2006, and September 30, 2005 (unaudited).

Non-Federal Projects

As discussed in Notes 6 and 9, the non-Federal projects debt represents BPA's liability to pay all or part of the annual budgets, including debt service, of the generating capability of one operating and four nonoperating nuclear power plants as well as two hydroelectric projects.

The following table summarizes future principal payments required for the debt described above (unaudited).

(in millions)

Fiscal Year	Borrowing from Treasury	Appropriated Capital	Refinanced Appropriations	Capitalization Adjustment	Non-Federal Projects
2007	$ 556	$ 10	$ 24	$ 65	$ 234
2008	480	21	11	65	290
2009	440	21	10	65	282
2010	145	13	26	65	288
2011	115	75	21	65	285
2012+	746	3,062	3,078	1,601	5,226
Total	**$ 2,482**	**$ 3,202**	**$ 3,170**	**$ 1,926**	**$ 6,605**

12. Deferred Revenues and Other Credits

(in millions)

	FY 2006	FY 2005 (unaudited)
Intragovernmental	$ 52	$ 125
Nuclear Waste Fund (Note 10)	$ 21,116	$ 19,564
Power marketing administrations	2,263	1,812
Reimbursable work advances	240	168
Other	42	48
Subtotal	$ 23,661	$ 21,592
Total deferred revenues and other credits	**$ 23,713**	**$ 21,717**

Nuclear Waste Fund (NWF)

NWF revenues are accrued based on fees assessed against owners and generators of high-level radioactive waste and spent nuclear fuel and interest accrued on investments in Treasury securities. These revenues are recognized as a financing source as costs are incurred for NWF activities. Annual adjustments are made to defer revenues that exceed the NWF expenses.

Power Marketing Administrations

The power marketing administrations' deferred revenues primarily represent amounts paid to BPA from participants under various alternating current intertie capacity agreements, various customer reimbursable projects and generator funds held as security for network upgrades and interconnection which will be returned as credits against future transmission service and load diversification fees paid to BPA by various customers. These one-time payments cover the remaining term of the customer's existing contractual agreement and are recognized as revenues as contract commitments are satisfied except for the generator funds which will be returned as credits against future transmission services. Also included in Deferred Revenues and Other Credits is BPA's offset to IOU Exchange Benefits (see Note 6).

13. Other Liabilities

(in millions)

	FY 2006	FY 2005 (unaudited)
Intragovernmental		
Oil held for Department of Defense (Notes 2 and 7)	$ 123	$ 106
Other	134	63
Total other intragovernmental liabilities	$ 257	$ 169
Environment, safety and health compliance activities (Notes 10 and 24)	$ 861	$ 1,164
Accrued payroll, benefits and withholding taxes	942	959
Petroleum Pricing Violation Escrow Fund (Note 2)	282	510
Naval Petroleum Reserve Deposit Fund (Note 2)	323	323
Capital leases	173	174
Elk Hills School Lands Fund (Note 2)	-	82
Other	250	452
Subtotal	$ 2,831	$ 3,664
Total other liabilities	**$ 3,088**	**$ 3,833**

Environment, Safety and Health Compliance Activities

The Department's environment, safety, and health liability represents those activities necessary to bring facilities and operations into compliance with existing environmental safety and health (ES&H) laws and regulations (e.g., Occupational Safety and Health Act; Clean Air Act; Safe Drinking Water Act). Types of activities included in the estimate relate to the following: upgrading site-wide fire and radiological programs; nuclear safety upgrades; industrial hygiene and industrial safety; safety related maintenance; emergency preparedness programs; life safety code improvements; and transportation of radioactive and hazardous materials. The estimate covers corrective actions expected to be performed in future years for programs outside the purview of the Department's Environmental Management (EM) Program. ES&H activities within the purview of the EM program are included in the environmental liability estimate. The September 30, 2006, change in the ES&H liability is due to: (1) additional corrective actions, activities, or programs that are required to improve the facilities' state of compliance and move them toward full compliance, or conformance with all applicable ES&H laws, regulations, agreements, and the Department's orders; (2) revised cost estimates for existing ES&H activities; and (3) costs of work performed during the year.

Accrued Payroll and Benefits

Accrued payroll and benefits represent amounts owed to the Department's Federal and contractor employees for accrued payroll, unfunded accrued annual leave for Federal employees, payroll withholdings owed to state and local governments, and Thrift Savings Plan withholdings and employer contributions.

Other Liabilities

The balance consists primarily of liabilities associated with custodial and non-custodial deposit funds, suspense accounts, receipts due to Treasury, and contract advances.

14. Environmental Cleanup and Disposal Liabilities

(in millions)

	FY 2006	FY 2005 (unaudited)
Environmental Management Program	$ 159,167	$123,419
Legacy environmental liabilities - other	18,222	17,465
Total legacy environmental liabilities	$ 177,389	$ 140,884
Active and surplus facilities	27,587	25,972
High-level waste and spent nuclear fuel disposition	15,472	15,059
Surplus plutonium and HEU disposition	9,873	7,795
Total environmental cleanup and disposal liabilities	$ 230,321	$ 189,710
Amount funded by current appropriations	(2,020)	(1,926)
Total unfunded environmental cleanup and disposal liabilities	**$ 228,301**	**$ 187,784**
Changes in environmental cleanup and disposal liabilities (unaudited)		
Total environmental cleanup and disposal liabilities, beginning balance	$ 189,710	$ 181,742
Changes to environmental cleanup and disposal liability estimates		
Legacy environmental liabilities	42,924	11,757
Active and surplus facilities	1,662	280
High-level waste and spent nuclear fuel disposition	802	380
Surplus plutonium and HEU disposition	2,325	4,102
Total changes in estimates (Notes 21 and 24)	$ 47,713	$ 16,519
Costs applied to reduction of legacy environmental liabilities (Note 20)	(6,207)	(6,637)
Capital expenditures related to remediation activities	(895)	(1,914)
Total environmental cleanup and disposal liabilities	**$ 230,321**	**$ 189,710**

During World War II and the Cold War, the United States developed a massive industrial complex to research, produce, and test nuclear weapons. The nuclear weapons complex included nuclear reactors, chemical processing buildings, metal machining plants, laboratories, and maintenance facilities that manufactured tens of thousands of nuclear warheads and conducted more than one thousand nuclear explosion tests.

At all sites where these activities took place, some environmental contamination occurred. This contamination was caused by the production, storage, and use of radioactive materials and hazardous chemicals, which resulted in contamination of soil, surface water, and groundwater. The environmental legacy of nuclear weapons production also includes thousands of contaminated buildings and large volumes of waste and special nuclear materials requiring treatment, stabilization, and disposal. Approximately one-half million cubic meters of radioactive high-level, mixed, and low-level wastes must be stabilized, safeguarded, and dispositioned, including a quantity of plutonium sufficient to fabricate thousands of nuclear weapons.

Assumptions and Uncertainties

Estimating the Department's environmental cleanup liability requires making assumptions about future activities and is inherently uncertain. The future course of the Department's environmental management program will depend on a number of fundamental technical and policy choices, many of which have not been made. The cost and environmental implications of alternative choices can be profound. For example, many contaminated sites and facilities could be restored to a condition suitable for any desired use; they could also be restored to a point where they pose no near-term health risks to surrounding communities but are essentially surrounded by fences and left in place. Achieving the former conditions would have a higher cost but may, or may not, warrant the costs and potential ecosystem disruption, or be legally required. The baseline estimates reflect applicable local decisions and expectations as to the extent of cleanup and site and facility reuse, which include consideration of Congressional mandates, regulatory direction, and stakeholder input. The environmental liability estimates include contingency estimates intended to account for the uncertainties associated with the technical cleanup scope of the program.

The environmental liability estimates are dependent on annual funding levels and achievement of work as scheduled. Recent increases in project cost estimates have created a significant gap between preliminary EM budgetary funding levels and the estimated costs of performing the work as recorded in the environmental liability estimates. If additional funding is not received, cleanup work scope will need to be extended and delayed resulting in higher costs. Because the response to the Department's requests for additional funding is unknown, the amount of any potential cost increases resulting from funding shortfalls cannot be estimated at this time.

The liabilities as of September 30, 2006, and September 30, 2005 (unaudited), are stated in FY 2006 dollars and FY 2005 dollars, respectively, as required by generally accepted accounting principles for Federal entities. Future inflation could cause actual costs to be substantially higher than the recorded liability.

Components of the Liability

Environmental Management Program (EM) Estimates

EM is responsible for managing the legacy of contamination from the nuclear weapons complex. As such, EM manages thousands of contaminated facilities formerly used in the nuclear weapons program, oversees the safe management of vast quantities of radioactive waste and nuclear materials, and is responsible for the cleanup of large volumes of contaminated soil and water. The FY 2006 EM life-cycle cost estimate reflects a strategic vision to complete this cleanup mission. This strategy provides for a site-by-site projection of the work required to complete all EM projects, while complying with regulatory agreements, statutes, and regulations. Each project baseline estimate includes detailed projections of the technical scope, schedule, and costs at each site for the cleanup of contaminated soil, groundwater, and facilities; treating, storing, and disposing of wastes; and managing nuclear materials. The baseline estimates also include costs for related activities such as landlord responsibilities, program management, and legally prescribed grants and cooperative agreements for participation and oversight by native American tribes, regulatory agencies, and other stakeholders.

Over the past several years a number of management reforms have been implemented within the EM program. These reforms include: (1) redefining and aligning acquisition strategies; (2) instituting robust project management practices and procedures in executing the cleanup program; and (3) implementing a strict configuration control system for key management parameters of the cleanup program. In FY 2006, progress towards improving efficiency and management of the program continued. Field offices have prepared technical baselines that describe in detail the activities, schedule, and resources required to complete the EM cleanup mission at the respective sites. In addition, EM has implemented an earned value management reporting system to ascertain whether cleanup progress remains on schedule and within budget. Achievement of cleanup goals is largely contingent upon receipt of funding, yet to be approved by Congress, during FY 2007 and succeeding years. In addition to the assumptions and uncertainties discussed above, the following key assumptions and uncertainties relate to the EM baseline estimates:

- The Department has identified approximately 10,400 potential release sites from which contaminants could migrate into the environment. Although virtually all of these sites have been at least partially characterized, final remedial action and regulatory decisions have not been made for many sites. Site-specific assumptions regarding the amount and type of contamination and the remediation technologies that will be utilized were used in estimating the environmental liability related to these sites.
- Cost estimates for management of the Department's high-level waste are predicated upon assumptions as to the timing and rate of acceptance of the waste by the first geological repository. Delays in opening the repository could cause EM project costs to increase.
- Estimates are based on remedies considered technically and environmentally reasonable and achievable by local project managers and appropriate regulatory authorities.
- Estimated cleanup costs at sites for which there is no current feasible remediation approach are excluded from the baseline estimates, although applicable stewardship and monitoring costs for these sites are included. The cost estimate would be higher if some remediation were assumed for these areas. However, because the Department has not identified effective remedial technologies for these sites, no basis for estimating costs is available. An example of a site for which cleanup costs are excluded is the nuclear explosion test area at the Nevada Test Site.

Changes to the EM baseline estimates during FY 2006 and FY 2005 (unaudited) resulted from inflation adjustments to reflect constant dollars for the current year; improved and updated estimates for the same scope of work; revisions in acquisition strategies, technical approach or scope; regulatory changes; cleanup activities performed; additional scope and transfers into the EM baseline estimates; and additions for facilities transferred from the active and surplus category discussed below. Updates to the EM estimates during FY 2006 include provisions for increases in the cost and duration of high-level waste programs and related increases in contingency estimates.

Legacy Environmental Liabilities – Other

These liabilities are comprised of the estimated cleanup and post-closure responsibilities, including surveillance and monitoring activities, soil and groundwater remediation, and disposition of excess material for sites after the EM program activities have been completed. The costs for these post-closure activities are estimated for a period of 75 years after balance sheet date, i.e. through 2081 in FY 2006 and through 2080 in FY 2005 (unaudited). Some postcleanup monitoring and other long-term stewardship activities are expected to continue beyond 2081, but the Department believes the costs of these activities cannot reasonably be estimated.

The Low-Level Radioactive Waste Policy Amendments Act of 1985 assigned responsibility to the Department for the disposal of certain low-level wastes generated by the Department and others that are not suitable for near-surface disposal. Although a final disposal path has not be determined, estimated costs for storage, monitoring and disposal have been included in the liability.

Active and Surplus Facilities

This liability includes anticipated remediation costs for active and surplus facilities managed by the Department's ongoing program operations and which will ultimately require stabilization, deactivation, and decommissioning. The estimate is largely based upon a cost-estimating model which extrapolates stabilization, deactivation, and decommissioning costs from facilities included in the EM baseline estimates to those active and surplus facilities with similar characteristics. Site-specific estimates are used when available. Cost estimates for active and surplus facilities are updated each year to reflect current year constant dollars; the transfer of cleanup and management responsibilities for these facilities by other programs to EM, as discussed above; changes in facility size or contamination assessments; and estimated cleanup costs for newly contaminated facilities. For facilities newly contaminated since FY 1997, cleanup costs allocated to future periods and not included in the liability amounted to $505 million at September 30, 2006, and $440 million at September 30, 2005 (unaudited).

High-Level Waste and Spent Nuclear Fuel Disposition

The Nuclear Waste Policy Act of 1982 established the Department's responsibility to provide for permanent disposal of the Nation's high-level radioactive waste and spent nuclear fuel. The Act requires all owners and generators of high-level nuclear waste and spent nuclear fuel, including the Department, to pay their respective shares of the full cost of the program. To that end, the Act establishes a fee on owners and generators

that the Department must collect and annually assess to determine its adequacy. The Department's liability reflects its share of the estimated future costs of the program based on its inventory of high-level waste and spent nuclear fuel. The Department's liability does not include the portion of the cost attributable to other owners and generators.

Changes to the high-level waste and spent nuclear fuel disposition liability during FY 2006 and FY 2005 (unaudited) resulted from inflation adjustments to reflect current year constant dollars, revisions in technical approach or scope, changes in the Department's allocable percentage share of future costs, and actual costs incurred by the Department that were allocated to the Department's share of the liability.

Surplus Plutonium and HEU Disposition

The surplus plutonium liability was increased in FY 2006 due to an update of its disposition cost estimate as a part of an external independent review process. The liability for highly enriched uranium was eliminated in FY 2006 because the remaining material has more value than its estimated disposition cost.

15. Pension and Other Actuarial Liabilities

(in millions)

	FY 2006	FY 2005 (unaudited)
Contractor pension plans	$ 2,234	$ 2,563
Contractor postretirement benefits other than pensions	9,707	9,041
Contractor disability and life insurance plans	21	24
Federal Employees' Compensation Act	97	99
Total pension and other actuarial liabilities	**$ 12,059**	**$ 11,727**

Most of the Department's contractors have defined benefit pension plans under which they promise to pay specified benefits to their employees, such as a percentage of the final average pay for each year of service. The Department's cost under the contracts includes reimbursement of annual contractor contributions to these pension plans. The Department's contractors also sponsor postretirement benefits other than pensions (PRB) consisting of predominantly postretirement health care benefits. The Department approves the contractors' pension and postretirement benefit plans and is ultimately responsible for the allowable costs of funding the plans. The Department reimburses its major contractors for employee disability insurance plans, and estimates are recorded as unfunded liabilities for these plans.

Contractor Pension Plans

The Department follows SFAS No. 87, *Employers' Accounting for Pensions*, for contractor employees for whom the Department has a continuing pension obligation. As of September 30, 2006, the measurement date, the Department has prepaid pension costs of $930 million before minimum liability adjustment and $861 million after minimum liability adjustment; and accrued pension costs of $1,324 million before minimum liability adjustment and $2,234 million after minimum liability adjustment. The Department has a continuing obligation for a variety of contractor sponsored pension plans (39 qualified and 6 nonqualified). In this regard, benefit formulas consist of final average pay (30 plans), career average pay (8 plans), dollar per month of service (6 plans), and one defined contribution plan with future contributions for retired employees. Sixteen of the plans cover nonunion employees only; 9 cover union employees only; and 20 cover both union and nonunion employees.

For qualified plans, the Department's current funding policy is for contributions made to a trust during a plan year for a separate defined benefit pension plan not to exceed the greater of (1) the minimum contribution required by Section 302 of the Employee Retirement Income Security Act (ERISA) or (2) the amount estimated to eliminate the unfunded current liability as projected to the end of the plan year. The term "unfunded current liability" refers to the unfunded current liability as defined in Section 302(d)(8) of ERISA. For nonqualified plans, the funding policy is pay-as-you-go.

Plan assets generally include cash and equivalents, stocks, corporate bonds, government bonds, real estate, venture capital, international investments, and insurance contracts. There are three plans that have securities of the employer or related parties included in the plan assets. The total amount invested in such securities is $3.6 million.

Assumptions and Methods - In order to provide consistency among the Department's various contractors, certain standardized actuarial assumptions were used. These standardized assumptions include the discount rates, mortality assumptions, and an expected long-term rate of return on plan assets, salary scale, and any other economic assumption consistent with an expected long-term inflation rate of 3.0 percent for the entire U.S. economy with adjustments to reflect regional or industry rates as appropriate. In most cases, ERISA valuation actuarial assumptions for demographic assumptions were used.

The following specific assumptions and methods were used to determine the net periodic pension cost. The weighted average discount rate was 5.25 percent for FY 2006 and 5.75 percent for FY 2005 (unaudited); the average long-term rate of return on assets was 7.84 percent in FY 2006 and 7.88 percent in FY 2005 (unaudited); and the average rate of compensation was 4.5 percent in FY 2006 and 4.4 percent in FY 2005 (unaudited). The average long-term rate of return on assets shown above is the average rate for all of the contractor plans. Each contractor develops its own average long-term rate of return on assets based on the specific investment profile of the specific plans it sponsors. Therefore, there is no single overall approach to setting the rate of return for all of the contractors' plans.

The weighted average discount rates used to determine the benefit obligations as of September 30, 2006, and September 30, 2005 (unaudited), were 5.75 percent and 5.25 percent, respectively.

Straight line amortization of unrecognized prior service cost over the average remaining years of service of the active plan participants and the minimum amortization of unrecognized gains and losses were used. The transition obligation was amortized over the greater of 15 years or the average remaining service.

Contractor Postretirement Benefits Other Than Pensions (PRB)

The Department follows SFAS No. 106, *Employers' Accounting for Postretirement Benefits Other Than Pensions*, for contractor employees for whom the Department has a continuing obligation. SFAS No. 106 requires that the cost of PRB be accrued during the years that the employees render service. As of September 30, 2006, and September 30, 2005 (unaudited), the measurement dates, the Department has an accrued PRB liability of $9,707 million and $9,041 million, respectively. Generally, the PRB plans are unfunded, and the Department's funding policy is to fund on a pay-as-you-go basis. There are six contractors, however, that are prefunding benefits in part as permitted by law. The Department's contractors sponsor a variety of postretirement benefits other than pensions. Benefits consist of medical (41 contractors), dental (19 contractors), life insurance (23 contractors), and Medicare Part B premium reimbursement (5 contractors). Forty of the contractors sponsor a point of service plan, a PPO, an HMO, or similar plan. Twenty-one of these also have a traditional indemnity or similar plan. Two additional contractors have only a traditional indemnity or similar plan.

Assumptions and Methods - In order to provide consistency among the Department's various contractors, certain standardized actuarial assumptions were used. These standardized assumptions include medical and dental trend rates, discount rates, and mortality assumptions.

The following specific assumptions and methods were used in determining the PRB estimates. The medical trend rates for a point of service plan, an HMO, a PPO, or similar plan, grade from 10.0 percent in 2006 down to 5.5 percent in 2014 and later. The medical trend rates for a traditional indemnity plan, or similar plan, grade from 11.0 percent in 2006 down to 5.5 percent in 2014 and later. The dental trend rates at all ages grade down from 7.0 percent in 2006 to 5.0 percent in 2014 and later.

The weighted average discount rates of 5.25 percent for FY 2006 and 5.75 percent for FY 2005 (unaudited) and the average long-term rate of return on assets of 7.0 percent in FY 2006 and 6.58 percent in FY 2005 (unaudited) were used to determine the net periodic postretirement benefit cost. The rate of compensation increase was the same rate as each contractor used to determine pension contributions. The average long-term rate of return on assets shown above is the average rate for all of the contractor plans. Each contractor develops its own average long-term rate of return on assets based on the specific investment profile of the specific plans it sponsors. Therefore, there is no one overall approach to setting the rate of return for all of the contractors' plans.

The weighted average discount rates used to determine the benefit obligation as of September 30, 2006, and September 30, 2005 (unaudited), were 5.75 percent and 5.25 percent, respectively.

Straight line amortization of unrecognized prior service cost over the average remaining years of service to full eligibility for benefits of the active plan participants and the minimum amortization of unrecognized gains and losses were used. The Department chose immediate recognition of the transition obligation existing at the beginning of FY 1994.

(in millions)	Pension Benefits FY 2006	Pension Benefits FY 2005 (unaudited)	Other Postretirement Benefits FY 2006	Other Postretirement Benefits FY 2005 (unaudited)
Reconciliation of funded status				
Accumulated benefit obligation	$ 24,923	$ 24,656		
Effect of future compensation increases	3,684	4,054		
Benefit obligation	$ 28,607	$ 28,710	$ 11,500	$ 11,591
Plan assets	24,108	22,990	164	157
Funded status	$ (4,499)	$ (5,720)	$ (11,336)	$ (11,434)
Unrecognized net (asset)/obligation at transition	(503)	(626)		
Unrecognized prior service cost	748	938	(408)	(290)
Unrecognized actuarial loss	3,860	5,646	2,044	2,689
Net amount recognized	$ (394)	$ 238	$ (9,700)	$ (9,035)
Minimum liability adjustment	(979)	(1,547)	-	-
Prepaid/(accrued) benefit cost after minimum liability	$ (1,373)	$ (1,309)	$ (9,700)	$ (9,035)
Total prepaid benefit cost after minimum liability	861	1,254	7	6
Total (accrued) benefit cost after minimum liability	$ (2,234)	$ (2,563)	$ (9,707)	$ (9,041)
Components of net periodic costs				
Service costs	$ 927	$ 803	$ 292	$ 255
Interest costs	1,559	1,447	618	580
Expected return on plan assets	(1,722)	(1,625)	(11)	(11)
Net amortization	391	235	102	39
Impact of curtailment or special termination benefits	58	26	(4)	17
Total net periodic costs	$ 1,213	$ 886	$ 997	$ 880
Contributions and benefit payments				
Employer contributions	$ 530	$ 271	$ 328	$ 306
Participant contributions	3	3	71	64
Benefit payments	1,181	1,069	403 *	383 *

* Includes $6 million paid from plan assets for 2006 and $13 million paid from plan assets for 2005 (unaudited).

(in millions)	Pension Benefits	Other Postretirement Benefits
Expected contributions for fiscal year ending September 30, 2007		
Employer contributions	$517	$355
Participant contributions	3	79

(in millions)	Pension Benefits	Other Postretirement Benefits
Estimated future benefit payments		
Fiscal Year 2007	$1,162	$388
Fiscal Year 2008	1,237	427
Fiscal Year 2009	1,321	467
Fiscal Year 2010	1,414	508
Fiscal Year 2011	1,517	551
Fiscal Years 2012 to 2016	9,267	3,346

The following chart shows the average target allocation for the 38 pension benefit plans and six other postretirement benefit plans with assets. The average actual fiscal year 2006 and 2005 allocations of assets are also shown.

Pension Benefits

Asset Category	Target Allocation	Percent of Plan Assets at September 30, 2006	Percent of Plan Assets at September 30, 2005 (unaudited)
Cash and equivalents	2.2%	2.6%	3.0%
Government bonds	12.5%	9.8%	11.0%
Corporate bonds	21.6%	16.7%	15.7%
Domestic equities	42.5%	40.4%	45.5%
International equities	10.3%	12.4%	8.7%
Real estate	1.3%	0.8%	0.5%
Insurance contracts (general accounts)	8.2%	13.1%	11.9%
Insurance contracts (separate accounts)	0.0%	2.6%	2.6%
Employer securities	0.2%	0.0%	0.0%
Other	1.2%	1.6%	1.1%
Total	100.0%	100.0%	100.0%

Other Postretirement Benefits

Asset Category	Target Allocation	Percent of Plan Assets at September 30, 2006	Percent of Plan Assets at September 30, 2005 (unaudited)
Cash and equivalents	0.0%	0.8%	0.9%
Government bonds	0.0%	7.4%	11.0%
Corporate bonds	4.3%	8.2%	4.5%
Domestic equities	6.6%	9.2%	16.2%
International equities	6.4%	5.4%	0.0%
Real estate	2.7%	2.3%	0.7%
Insurance contracts (general accounts)	60.0%	50.0%	50.0%
Insurance contracts (separate accounts)	0.0%	0.0%	0.0%
Employer securities	0.0%	0.0%	0.0%
Other	20.0%	16.7%	16.7%
Total	100.0%	100.0%	100.0%

Each contractor develops its own investment policies and strategies for the plans it sponsors. Therefore, there is no one overall investment policy for the contractors' plans. Generally, their objectives provide for benefit security for plan participants through the maximization of total returns while limiting risk and providing liquidity coverage of benefit payments.

The Department is aware of the Pension Protection Act of 2006 and its revision of pension funding rules which will generally require accelerated funding of benefit obligations for contractor defined benefit pension plans.

In September 2006, the Financial Accounting Standards Board issued SFAS No. 158, *Employers' Accounting for Defined Benefit Pension and Other Postretirement Plans*. The Department plans to implement this new accounting standard in FY 2007. The Department has not determined the impact of the new accounting standard on its consolidated financial statements; however, the new standard may have a significant impact on the amounts recognized as pension and PRB assets and liabilities on the consolidated balance sheet.

16. Contingencies and Commitments

(in millions)

	FY 2006	FY 2005 (unaudited)
Spent nuclear fuel litigation	$ 6,717	$ 5,000
Other	119	58
Total contingencies and commitments (Note 10)	**$ 6,836**	**$ 5,058**

The Department is a party in various administrative proceedings, legal actions, and tort claims which may ultimately result in settlements or decisions adverse to the Federal Government. The Department has accrued contingent liabilities where losses are determined to be probable and the amounts can be estimated. Other significant contingencies exist where a loss is reasonably possible or where the loss is probable and an estimate cannot be determined. In some cases, a portion of any loss that may occur may be paid from Treasury's Judgment Fund (Judgment Fund). The Judgment Fund is a permanent, indefinite appropriation available to pay judgments against the Government for which the Department, unless required by law, is not required to reimburse from its appropriated funds. The following are significant contingencies:

- *Spent Nuclear Fuel Litigation* – In accordance with the Nuclear Waste Policy Act of 1982 (NWPA), DOE entered into contracts with more than 45 utilities in which, in return for payment of fees into the Nuclear Waste Fund, the Department agreed to begin disposal of spent nuclear fuel (SNF) by January 31, 1998. Because DOE has no facility available to receive SNF under the NWPA, DOE has been unable to begin disposal of the utilities' SNF as required by the contracts. Significant litigation claiming damages for partial breach of contract has ensued as a result of this delay.

  To date, six suits have been settled involving utilities that collectively produce 18.6 percent of the nuclear-generated electricity in the United States. Under the terms of the settlements, the Judgment Fund, 31 U.S.C. 1304, paid $154 million to the settling utilities for delay damages they have incurred through 2005 and will make annual payments to them for future costs as they are incurred. In addition, one case has been tried and a judgment entered (and subsequently affirmed on appeal) under which the utility was awarded no damages based on the court's finding that the utility had incurred no compensable costs as a result of the Government's delay as of the time of trial.

  Since the July 21 interim legal report, judgments have been entered in three cases. In one case, a final judgment was entered against the Government awarding the plaintiff, Tennessee Valley Authority, $34.9 million for partial breach of contract damages, and the Government has decided not to appeal. In the two other cases, trial courts entered judgments against the Government, awarding three plaintiffs in one case damages totaling approximately $147 million for claims through 2001 and 2002, and in the other case, tried before a different Court of Federal Claims judge, the two plaintiffs were awarded damages of $42.8 million for claims through December 31, 2004. The Government has not yet determined whether it will appeal these latter two judgments.

  Fifty-six cases remain pending in the Court of Federal Claims. Liability is probable in these cases, and in many of these cases orders have already been entered establishing the Government's liability and the only outstanding issue to be litigated is ascertaining the amount of damages to be awarded. The industry is reported to estimate that damages for all utilities with which the Department has contracts ultimately will be at least $50 billion. The Department believes that the industry's estimate is highly inflated, and that the disposition of the thirteen cases that have been resolved to date suggests that the Government's ultimate liability is likely to be significantly less than that estimate.

  In FY 2005, the Department reported several developments that made it difficult to reasonably predict the amount of the Government's likely liability. In part, these developments involved rulings that judges made *sua sponte* in several of the pending cases: in one case the parties were ordered to address whether the Government should be allowed to raise the defense that the delay in beginning to dispose of utility SNF was unavoidable and therefore, it is not liable for any damages (the court has since ruled that the Government may raise this defense, and has now set a schedule for briefing the question whether the unavoidable delays clause of the contract is in fact applicable); in four cases the court ruled that it lacked jurisdiction to even entertain the plaintiff utilities' breach of contract claims (these cases were reassigned and judges in three cases vacated the prior judge's order and in the fourth case, in which the new judge denied the plaintiff's motion to vacate the order, the plaintiff filed an interlocutory appeal to the Federal Circuit which reversed the trial court and held that the Court of Federal Claims has jurisdiction to hear plaintiff's breach of contract claims); and in one case the parties were ordered to show cause why the Standard Contract between the Government and the utilities should not be declared void and restitution of the payments that utilities have made thereunder (approximately $13.8 billion *in toto*), but no damages, be awarded (the plaintiff in that case declined to amend its complaint to seek restitution and the court decided not to impose the restitution remedy, thereby mooting the issue in the litigation). While resolution of two of the issues did not result in a significant change in the Government's liability, that these and other issues continue to be raised by the various judges handling these cases creates continuing uncertainty regarding the Government's ultimate liability.

  The Department did not meet its goal of submitting a license application for the Yucca Mountain repository to the Nuclear Regulatory Commission by the end of calendar year 2004. The Department has since acknowledged that it will be unable to meet its goal of commencing disposal operations at a repository by 2010, and has projected a new opening date of 2017. Given this revised opening date, the Department has recorded a liability of approximately $6.7 billion for estimated damages in this litigation.

Through FY 2006, the Treasury has paid out $188 million from the Judgment Fund to resolve cases in this litigation. Under current law, any damages or settlements in this litigation will be paid out of the Judgment Fund, 31 U.S.C. 1304, which the Department will not be required to reimburse.

- *Alleged Exposures to Radioactive and/or Toxic Substances* – A number of class action and/or multiple plaintiff tort suits have been filed against the Department's current and former contractors in which the plaintiffs seek damages for alleged exposures to radioactive and/or toxic substances as a result of the historic operations of the Department's nuclear facilities. The most significant of these cases arise out of operations of the facilities at Rocky Flats, Colorado; Hanford, Washington; Paducah, Kentucky; Portsmouth (Piketon), Ohio; Mound, Ohio; Yucca Mountain, Nevada; and Brookhaven, New York. Collectively, damages sought in these cases total approximately $110 billion.

  These cases are being vigorously defended, and two cases have gone to trial. In the Rocky Flats litigation, the jury returned a substantial verdict in favor of the plaintiffs; this verdict will be appealed when a judgment is entered on the verdict. In the Hanford litigation, ten of twelve plaintiffs' claims were resolved in favor of the defendants, and relatively small judgments were entered in favor of two plaintiffs. It is expected that proceedings on the remaining Hanford plaintiffs' claims will be suspended while appeals are prosecuted from the judgments on these "bellwether" claims. Additionally, some cases have been dismissed by trial court based on legal rulings and appealed to the courts of appeal, and the final resolution of these issues has not been determined.

  Based on the resolution of prior similar litigation, and the favorable results obtained to date in most of the pending cases, the Department believes that the likelihood of liability in many of these cases is remote, and that in those cases where liability is reasonably possible, any liability that might ultimately be imposed would be significantly less than what the plaintiffs seek.

- *Uranium Enrichment Services Pricing* – This litigation concerns whether electric utilities that purchased uranium enrichment services from the Department are entitled to retroactive price reductions based on the alleged inclusion of inappropriate costs in the prices the Government charged for enrichment services. Six cases were filed involving the claims of 35 utilities. In aggregate, the cases sought approximately $808 million. Three cases were settled in 2005 for a payment of $54.5 million from the Judgment Fund. In April 2006, a fourth case was settled for a payment of $27.5 million. The Government is engaged in settlement negotiations with the plaintiffs in the two remaining cases involving eleven utilities and probable liabilities have been accrued.

- *Natural Resources Damages* – The Confederated Tribes of the Yakama Nation filed suit in September 2002 against DOE and the Department of Defense alleging natural resources damages (NRD) in the 1100 area of the Hanford site. The Yakama have since amended their complaint to add the 100 and 300 areas to the suit, alleging additional natural resource damages. In addition, the States of Washington and Oregon, as well as the Confederated Tribes of the Umatilla, have joined the suit. The case is in pre-trial phase. DOE has moved to dismiss some of the plaintiffs' claims, and the parties have discussed potential negotiated resolution of portions of this case.

- *Sale and Exchange Agreement* – Southern California Edison Company (SCE) filed a complaint alleging that BPA breached the Sale and Exchange Agreement between the parties. The claim arises from BPA converting the Agreement from sale mode to exchange mode for the 2000 delivery period, pursuant to a section of the existing contract, which permits such conversion if BPA has firm surplus power insufficiency, based on the Pacific Northwest Coordination Agreement planning process. SCE does not allege that BPA did not have such an insufficiency at the time of conversion. Instead, SCE argues that BPA violated the implied covenant of good faith and fair dealing and should be equitably estopped from converting the contract to an exchange. SCE requests damages in the amount of $186 million.

  The parties stayed discovery pending mediation. The parties did not settle the case in the mediation. Thereafter, the parties agreed to stay further discovery in order to explore settlement options. A tentative settlement agreement has been reached. The settlement identifies three conditions precedent to final resolution: (a) SCE must obtain approval of the settlement from the California Public Utilities Commission (CPUC); (b) BPA must complete a public review and comment process and subsequently reaffirm the settlement; and (c) BPA must receive a final resolution of its refund liability, if any, in the California refund proceedings. SCE filed the proposed settlement with the CPUC on July 5, 2006, but the CPUC has taken no action to date. BPA has completed its public review process, and reaffirmed the proposed settlement on Aug. 2, 2006. When and if the remaining conditions are met, the settlement agreement further provides that BPA will pay SCE $28.5 million, plus interest accruing from the date the settlement was signed until the date of payment. Upon payment, SCE and BPA would file a joint motion with the court to dismiss the two claims. Since BPA management believes the ultimate settlement of these two claims will be upheld in accordance with the settlement, a liability of $28.5 million is included in the *Consolidated Balance Sheet* at September 30, 2006.

- *Slice True-Up Adjustment Charge* – Petitions for review have been filed with the United States Court of Appeals for the Ninth Circuit challenging BPA's determination of the true-up adjustment charges to Slice Customers for FY 2002 and 2003. Oral arguments in the consolidated cases challenging BPA's 2002 charges were conducted on November 16, 2005. BPA and the parties have negotiated a proposed settlement agreement of all the petitions, and the proposal was circulated among the many parties for final review and approval. The Department of Justice approved the proposed settlement, and attorneys for the Slice Customers and Northwest Requirements Utilities (NRU) informed BPA that the NRU and Slice Customer Boards had approved execution of the proposed settlement. All parties are expected to have signed the settlement sometime in mid-November 2006. The parties will then file motions with the court seeking an additional stay of the litigation and, in the event no challenges are filed to the settlement, dismissal of litigation. Upon filing the motion with the court, BPA will be responsible for providing credits of approximately $26.5 million to the Slice Customers' bills. No provision for this additional cost is included in the consolidated financial statements.

- *Transuranic Waste* – The State of Idaho is challenging the interpretation of a Settlement Agreement reached in 1995 concerning the shipment of transuranic waste from the Idaho National Laboratory. The Government asserts that the agreement requires only stored waste to be shipped offsite by 2018, but the State asserts that this requirement also applies to buried transuranic waste. In March of 2003, the Idaho District Court

found in favor of the State. In November of 2004, the 9th Circuit Court of Appeals reversed and remanded the case back to the Idaho District Court for fact finding. On May 25, 2006, after a trial, the District Court issued its judgment that the buried transuranic waste falls under the 1995 agreement. The Government filed a notice of appeal on July 24, 2006. The cost of excavating all buried transuranic waste would be significant. If the courts ultimately find that the Department is required by the 1995 Settlement Agreement to excavate all buried transuranic waste for shipment offsite and the Department fails to do so, under the terms of the settlement agreement, the Department would not be able to continue to send Departmental spent nuclear fuel to the Idaho National Laboratory. The potential cost impact of this litigation to Departmental programs cannot be estimated at this time.

- *Offsite Waste Litigation* – The State of Washington and interest groups have filed complaints in District Court seeking to prevent shipment of radioactive waste by the Department to the Hanford site. The complaints allege violations of the National Environmental Policy Act (NEPA) and the State of Washington Hazardous Waste Management Act (HWMA). In early 2005 (unaudited), the District Court ruled against the United States on the HWMA portion of the case. The Government has appealed the adverse ruling on the HWMA portion of the case, and the parties settled the NEPA portion of the case on January 6, 2006. In that settlement, the Department agreed to prepare a new environmental impact statement for its solid waste program at the Hanford site and suspend most off-site shipments of transuranic wastes to Hanford. The impact of this litigation on the costs of the Department's cleanup program is uncertain, and no provision for additional costs is included in the consolidated financial statements.

- *Natural Resources Damages* – As a result of releases of hazardous substances at the Paducah and Portsmouth Sites, the States of Ohio and Kentucky have potential claims against the DOE under CERCLA for damages to natural resources (e.g. ground water) caused by such releases. DOE has had preliminary discussions with Ohio about a possible settlement of its claims for natural resources damages at the Portsmouth site. Kentucky has indicated that it desires a "tolling" agreement with respect to its potential claims for natural resource damages at the Paducah site. A tolling agreement would suspend the statue of limitation for the filing of the state's claims for a mutually agreeable period of time. DOE will continue its discussions with the states about their potential claims for natural resource damages. While it is possible that the Department will be liable for at least some natural resources damages at these sites, it is unable to prepare an estimate of such damages and has not included a provision for damages in the consolidated financial statements.

- *Waste Disposal* – The United States filed for a preliminary injunction prior to Washington State Initiative 297, the Cleanup Priority Act, becoming effective in December 2004. The District Court granted an injunction that prevented implementation of the initiative in all respects, except it enjoined DOE from importing off site waste to Hanford. The State sought certification of five questions of interpretation to the Washington State Supreme Court. The State Court issued its opinion in July 2005, and the case returned to the United States District Court. The United States District Court issued its decision in favor of the United States and held the Act unconstitutional on June 12, 2006. The Judge reached his decision on several grounds. The State of Washington filed its appeal with the United States Court of Appeals for the 9th Circuit Court on July 12, 2006. The appellants' opening appeal brief is due December 11, 2006, with the appellees' briefs due January 11, 2007. The interveners who joined the State as defendants in the Federal District Court action also have joined the appeal. Under the current schedule, the Government will file its brief with the 9th Circuit Court of Appeals by January 11, 2007.

- *Nuclear Wastes* – The West Valley Coalition on Nuclear Wastes filed suit in Federal Court against DOE regarding concerns associated with DOE compliance with NEPA, as well as concerns as to how DOE's Waste Incidental to Reprocessing policy would be applied at West Valley. The suit was filed in August 2005 following the June 2005 publication of the Waste Management Record of Decision. DOE's General Counsel (GC), in conjunction with the U.S. Department of Justice, is involved in the appropriate and necessary response. An administrative record has been prepared and supplied to the court.

- *Purchase/Sales Commitments and Irrigation Assistance* – The PMAs have entered into various agreements for power and transmission purchases and sales that vary in length but generally do not exceed 20 years. Current rates recover the additional costs of the obligations. The sales commitments are arrangements to sell expected generating capabilities at future dates and the purchase commitments are to purchase power at future dates when the PMAs forecast a shortage of generating capability and prices are favorable. These contracts maximize revenues on estimated surplus volumes.

  The Northwest Power Act directs BPA to protect, mitigate and enhance fish and wildlife resources to the extent they are affected by Federal hydroelectric projects on the Columbia River and its tributaries. BPA makes expenditures and incurs other costs for fish and wildlife consistent with the Northwest Power Act and the Pacific Northwest Power and Conservation Council's Columbia River Basin Fish and Wildlife Program. In addition, in the wake of certain listings of fish species under the Endangered Species Act (ESA) as threatened or endangered, BPA is financially responsible for expenditures and other costs arising from conformance with the ESA and certain biological opinions prepared by the National Oceanic and Atmospheric Administration and the Fish and Wildlife Service in furtherance of the ESA.

  As directed by legislation, BPA is required to make cash distributions to Treasury for original construction costs of certain Pacific Northwest irrigation projects that have been determined to be beyond the irrigators' ability to pay. These irrigation distributions do not specifically relate to power generation and are required only if doing so does not result in an increase to power rates. Accordingly, these distributions are not considered to be regular operating costs of the power program and are treated as distributions from accumulated net revenues or expenses when paid.

  The following table summarizes future purchase power/sales commitments and irrigation assistance.

(in millions)

Fiscal Year	Purchase Power	Sales Commitments	Irrigation Assistance
2007	$ 173	$ 2,647	$ -
2008	118	2,657	3
2009	115	2,689	7
2010	78	2,764	-
2011	77	2,804	-
2012+	65	9,811	672
Total	**$ 626**	**$ 23,372**	**$ 682**

17. Earmarked Funds

(in millions)

	Nuclear Waste Fund	D&D Fund	USEC	PMAs	Other	Total
Balance Sheet as of September 30, 2006						
Assets						
Fund Balance with Treasury	$ 51	$ 27	$ -	$ 1,583	$ 1,023	$ 2,684
Investments	17,952	4,310	1,425	-	7	23,694
Accounts Receivable	3,214	239	19	544	1	4,017
Inventory	-	-	-	84	2	86
General Property Plant and Equipment	12	-	-	5,952	20	5,984
Regulatory Assets	-	-	-	11,437	-	11,437
Other Assets	1	-	-	2,850	-	2,851
Total Assets	$21,230	$ 4,576	$ 1,444	$ 22,450	$ 1,053	$ 50,753
Liabilities and Net Position						
Accounts Payable	$ 43	$ 36	$ -	$ 171	$ 4	$ 254
Debt	-	-	-	17,385	-	17,385
Deferred Revenues and Other Credits	21,122	-	-	2,273	4	23,399
Environmental Cleanup and Disposal Liabilities	-	10,552	-	-	-	10,552
Pensions and Other Actuarial Liabilities	10	-	-	53	-	63
Other Liabilities	20	13	-	331	5	369
Contingencies and Commitments	-	-	-	29	-	29
Unexpended Appropriations	41	-	-	-	6	47
Cumulative Results of Operations	(6)	(6,025)	1,444	2,208	1,034	(1,345)
Total Liabilities and Net Position	$21,230	$ 4,576	$ 1,444	$ 22,450	$ 1,053	$ 50,753
Statement of Net Costs for the Year Ended September 30, 2006 (unaudited)						
Program Costs	$ 163	$ 1,946	$ -	$ 4,013	$ 40	$ 6,162
Less Earned Revenues	(220)	(166)	-	(4,582)	(756)	(5,724)
Net Program Costs	$ (57)	$ 1,780	$ -	$ (569)	$ (716)	$ 438
Costs Not Assigned	3	3,926	(6)	-	-	3,923
Net Costs of Operations	$ (54)	$ 5,706	$ (6)	$ (569)	$ (716)	$ 4,361
Statement of Changes in Net Position for the Year Ended September 30, 2006 (unaudited)						
Beginning Balance - Cumulative Results of Operations	$ (63)	$ (766)	$ 1,378	$ 1,805	$ 910	$ 3,264
Appropriations Used	8	-	-	-	6	14
Non Exchange Revenue	-	-	60	-	-	60
Donations and Forfeitures of Cash	-	-	-	1	-	1
Transfers - In/(Out) Without Reimbursement	(49)	-	-	(167)	(611)	(827)
Imputed Financing	2	-	-	-	-	2
Other	42	447	-	-	13	502
Net Cost of Operations	54	(5,706)	6	569	716	(4,361)
Ending Balance - Cumulative Results of Operations	$ (6)	$(6,025)	$ 1,444	$ 2,208	$ 1,034	$ (1,345)
Beginning Balance - Unexpended Appropriations	$ -	$ -	$ -	$ -	$ 10	$ 10
Appropriations Received	50	-	-	-	2	52
Other Adjustments	(1)	-	-	-	-	(1)
Appropriations Used	(8)	-	-	-	(6)	(14)
Ending Balance - Unexpended Appropriations	$ 41	$ -	$ -	$ -	$ 6	$ 47

Nuclear Waste Fund

The Nuclear Waste Policy Act (NWPA) requires the civilian owners and generators of nuclear waste to pay their share of the full cost of the Civilian Radioactive Waste Management Program. The NWPA also established a fee for electricity generated and sold by civilian nuclear power reactors which the Department must collect and annually assess to determine its adequacy. A special fund within the Department of the Treasury was created to account for the collection fees. Fees are invested in Treasury securities and any interest earned is available to pay costs incurred by the NWF. The NWPA requires annual financial statements to be prepared as well as reporting of financial performance measures such as the maintenance of liquid reserves and investment strategies.

Decontamination and Decommission Fund

The Energy Policy Act of 1992 established the Decontamination and Decommission Fund (D&D Fund) to pay for the costs of decontaminating and decommissioning of gaseous diffusion facilities through collection of revenues derived from domestic utility assessments and government appropriations. The Energy Policy Act also requires that balances in the D&D Fund be invested in Treasury securities and any interest earned would be available to pay the costs of environmental remediation. The Energy Policy Act requires annual financial statements to be prepared as well as periodic reporting of financial performance measures relating to fee receipt and investment income.

United States Enrichment Corporation

Upon privatization of the United States Enrichment Corporation (USEC) on July 28, 1998, OMB and Treasury designated the Department as successor to USEC for purposes of disposition of balances remaining in the USEC Fund. Funds in excess of those needed to liquidate USEC liabilities are invested in Treasury securities.

Power Marketing Administrations

The power marketing administrations are funded primarily from four sources. These include contract and borrowing authority, direct receipts generated from the sale of power, annual appropriations from the Department of the Interior's Reclamation Fund, and appropriations from Treasury's General Fund. In most instances, the annual appropriations from the Reclamation Fund and the General Fund are repaid to Interior and Treasury, respectively, from the receipts generated from power sales.

Other

Other earmarked funds include primarily receipts generated from the sale of oil from the Strategic Petroleum Reserve and receipts in the Department's unavailable receipt account for revenues from enrichment of uranium.

18. Earned Revenues

(in millions)

	FY 2006 (unaudited)		FY 2005 (unaudited)	
Naval Reactors				
Public	$ (11)		$ (10)	
Intragovernmental	-		(8)	
Total Naval Reactors		$ (11)		$ (18)
Energy				
Public	$ (4,956)		$ (4,048)	
Intragovernmental	(69)		(134)	
Total Energy		(5,025)		(4,182)
Environmental Management				
Public	$ (134)		$ 1	
Intragovernmental	(166)		(152)	
Total Environmental Management		(300)		(151)
Nuclear Waste				
Public	$ (838)		$ (762)	
Intragovernmental	(977)		(924)	
Less Deferred Revenue Adjustment	1,595		1,365	
Total Nuclear Waste		(220)		(321)
Reimbursable Programs				
Public	$ (533)		$ (532)	
Intragovernmental	(2,852)		(2,719)	
Total Reimbursable Programs		(3,385)		(3,251)
Other Programs				
Federal Energy Regulatory Commission				
Public (Note 19)	$ (234)		$ (222)	
Other				
Public (Note 19)	28		(13)	
Total Other Programs		(206)		(235)
Total earned revenues		**$ (9,147)**		**$ (8,158)**

Energy

These revenues primarily result from the Department's power marketing activities. The Department's four power marketing administrations market electricity generated primarily by Federal hydropower projects. Preference for the sale of power is given to public bodies and cooperatives. Revenues from selling power and transmission services are used to repay Treasury annual appropriations, interest on the capital investment repayment, borrowings from Treasury, operation and maintenance costs as well as other payment obligations. Revenues collected by the Southeastern, Southwestern, and Western Area Power Administrations on behalf of other agencies are reported as custodial activity (see Note 25).

Due to the disruption of crude oil supplies resulting from Hurricane Katrina in August 2005, the President ordered a drawdown of the Strategic Petroleum Reserve in September 2005. As of September 30, 2006 (unaudited), oil sale proceeds from this drawdown totaled $615 million (see Notes 7 and 27).

Also included in the Energy revenues were receipts stemming from the 1988 Great Plains Gasification Plant asset purchase agreement. These receipts totaled $79 million and $62 million in FY 2006 (unaudited) and FY 2005 (unaudited), respectively. These receipts were deposited into Treasury's miscellaneous receipts account (see Note 27). Under the terms of the asset purchase agreement, the Department will continue to receive revenue sharing payments, if applicable, through FY 2010.

Environmental Management

These revenues primarily result from assessed fees to domestic utilities to pay for the costs for decontamination and decommissioning the Department's gaseous diffusion facilities used for uranium enrichment services. Revenue from assessments against domestic utilities is recognized when such assessments are authorized by legislation. Revenue recognized includes known adjustments for transfers between utilities and other reconciliation adjustments. Increases in current and

future assessments due to changes in the Consumer Price Index are recognized in each fiscal year as such changes occur. Accumulated funds in excess of those needed to pay current program costs are invested in Treasury securities. Interest earned on these investments totaled $165 million and $145 million for September 30, 2006, (unaudited) and September 30, 2005 (unaudited), respectively.

In FY 2006, the Department sold 906 metric tons of Russian origin uranium for $125 million (unaudited). The Russian origin uranium was originally purchased by the United States Executive Agent under the Russian HEU Agreement in 1995 and 1996. Subsequently, pursuant to the USEC Privatization Act, the uranium was transferred to the Department with the authorization for the Department to sell said uranium. All of the revenue will be used to fund the cleaning of technetium-99 contaminated uranium (see Note 7).

Nuclear Waste

The Nuclear Waste Policy Act of 1982 requires the Department to assess fees against owners and generators of high-level radioactive waste and spent nuclear fuel to fund the costs associated with management and disposal activities under the Act. Fees of $753 million and $733 million were assessed as of September 30, 2006 (unaudited), and September 30, 2005 (unaudited), respectively. Interest earned on fees owed and on accumulated funds in excess of those needed to pay current program costs totaled $1,062 million and $953 million as of September 30, 2006 (unaudited), and September 30, 2005 (unaudited), respectively. Adjustments are made annually to defer the recognition of revenues until earned (i.e., when costs are incurred) for the Civilian Radioactive Waste Management program.

Reimbursable Programs

The Department performs work for other Federal agencies and private companies on a reimbursable work basis and on a cooperative work basis. The Department also has entered into cooperative research and development agreements to increase the transfer of Federally funded technologies to the private sector for the benefit of the U.S. economy.

The Department's policy is to establish prices for materials and services provided to public entities at the Department's full cost. In some cases, the full cost information reported by the Department in accordance with SFFAS No. 4, *Managerial Cost Accounting Concepts and Standards for the Federal Government*, exceeds revenues. This results from implementation of provisions contained in the Economy Act of 1932, as amended; the Atomic Energy Act of 1954, as amended; the National Defense Authorization Act for Fiscal Year 1999, which provide the Department with the authority to charge customers an amount less than the full cost of the product or service. Costs attributable to generating intragovernmental reimbursable program revenues were $2,773 million and $2,882 million as of September 30, 2006 (unaudited), and September 30, 2005 (unaudited), respectively.

Federal Energy Regulatory Commission

The Federal Energy Regulatory Commission (FERC) is an independent regulatory organization within the Department that regulates essential aspects of electric, natural gas and oil pipeline industries, and non-Federal hydropower industries. It ensures that the rates, terms, and conditions of service for segments of the electric, and natural gas and oil pipeline industries are just and reasonable; it authorizes the construction of natural gas pipeline facilities; and it ensures that hydropower licensing administration and safety actions are consistent with the public interest. FERC assesses most of its administrative program costs as an annual charge to each regulated entity.

19. Supporting Schedule of Net Cost for Other Programs

(in millions)

	FY 2006 (unaudited)		FY 2005 (unaudited)	
Federal Energy Regulatory Commission				
Program costs - public	$ 234		$ 221	
Less earned revenues (Note 18)	(234)		(222)	
		$ -		$ (1)
Inspector General		46		45
Environment, safety and health		124		147
Other defense activities		210		203
Other programs - public				
Program costs	$ 46		$ 51	
Less earned revenues (Note 18)	28		(13)	
		74		38
Total net cost for other programs		**$ 454**		**$ 432**

20. Costs Applied to Reduction of Legacy Environmental Liabilities *(unaudited)*

Costs applied to reduction of legacy environmental liabilities are current year operating expenditures for the remediation of contaminated facilities and wastes generated from past operations. These amounts are excluded from current year program expenses since the expense was accrued in prior years when the Department recorded the environmental liabilities.

21. Costs Not Assigned

(in millions)

	FY 2006 (unaudited)	FY 2005 (unaudited)
Change in unfunded environmental liability estimates (Note 14)	$ 47,713	$ 16,519
Change in spent nuclear fuel contingency (Note 16)	1,825	3,080
Changes in contractor pension and PRB estimates (Notes 9 & 15)	368	1,594
Change in unfunded safety and health liabilities (Note 13)	(303)	(16)
Change in occupational illness program -		
Subtitle B	402	502
Subtitle E	(10)	3,631
Uranium enrichment services pricing litigation (Note 16)	28	55
Other	(299)	134
Total costs not assigned	**$ 49,724**	**$ 25,499**

Compensation Program for Occupational Illnesses

The Energy Employees Occupational Illness Compensation Program Act (EEOICPA) authorized compensation for certain illnesses suffered by employees for the Department, its predecessor agencies, and contractors who performed work for the nuclear weapons program. Subtitle B covers illnesses associated with exposure to radiation, beryllium, or silica. In general, each eligible employee and survivors of deceased employees will receive compensation for the disability or death of that employee in the amount of $150,000 plus the costs of medical care.

The National Defense Authorization Act of 2005 amended the EEOICPA to include Subtitle E, Contractor Employee Compensation. This amendment replaces Subtitle D of the EEOICPA, which provided assistance for the Department in obtaining state workers' compensation benefits. The new program grants workers' compensation benefits to covered employees and their families for illness and death arising from exposure to toxic substances at a DOE facility. The amendment also makes it possible for uranium workers, as defined under Section 5 of the Radiation Exposure Compensation Act, to receive compensation under Subtitle E for illnesses due to toxic substance exposure at a uranium mine or mill covered under that Act.

As of September 30, 2005, the law makes payments under these programs the responsibility of the DOL. Therefore, the liability is recorded by the DOL and changes in the total liability are recognized by the Department as imputed costs and imputed financing source.

22. Nuclear Waste Fund Offsetting Receipts, Deferred

(unaudited)

The Department defers the recognition of revenues related to the fees paid by owners and generators of spent nuclear fuel, and the interest earned on the invested balance of these funds, to the extent that the receipts exceed current year costs for developing and managing a permanent repository for spent nuclear fuel generated by civilian reactors. In addition, market value adjustments for Treasury securities of the Nuclear Waste Fund are not recognized as revenues in the current period unless redeemed by the Department. The gross amount of receipts, interest collected, and the market value adjustments for zero coupon bond investments are reported as offsetting receipts on the *Consolidated Statements of Financing*. Therefore, a reconciling amount is reported for the portion of the offsetting receipts for which revenues are not recognized in the current period.

23. Statement of Budgetary Resources

(in millions)

The *Statement of Budgetary Resources* is presented on a combined, rather than a consolidated, basis in accordance with OMB guidance.

Adjustments to Beginning Balances of Budgetary Resources:

Beginning Unobligated Balance	FY 2006 (Unaudited)	FY 2005 (Unaudited)
Prior year unobligated balance, net - end of period		
Available, apportioned	$ 2,588	$ 2,538
Exempt from apportionment	24	12
Not available	1,629	1,486
Total - prior year unobligated balance	$ 4,241	$ 4,036
Other adjustments for Isotopes	3	-
Current year unobligated balance, start of period	**$ 4,244**	**$ 4,036**

Beginning Unpaid Balance	FY 2006 (unaudited)	FY 2005 (Unaudited)
Prior year unpaid balance, net - end of period	$ 17,232	$ 17,247
Other adjustments for Isotopes	(3)	-
Current year unpaid balance, start of period	**$ 17,229**	**$ 17,247**

Unobligated Balances Not Available:

	FY 2006 (Unaudited)	FY 2005 (Unaudited)
United States Enrichment Corporation Fund	$ 1,414	$ 1,383
Uranium sales and remediation	100	-
Reimbursable work/collections in excess of amount anticipated	27	224
Prior year deobligations in excess of apportioned amount	19	11
Expired appropriations and other amounts not apportioned	20	11
Total unobligated balances not available (Note 3)	**$ 1,580**	**$ 1,629**

Unobligated balances not available represent budgetary resources that have not been apportioned to the Department.

Details of Unpaid Obligations:

	FY 2006 (Unaudited)	FY 2005 (Unaudited)
Undelivered Orders	$ 11,339	$ 10,577
Accounts Payable	6,857	6,655
Total unpaid obligations (Note 3)	**$ 18,196**	**$ 17,232**

Reconciliation to Appropriations Received on the Statements of Changes in Net Position:

	FY 2006 (Unaudited)	FY 2005 (Unaudited)
Appropriations received on the Combined Statements of Budgetary Resources	$ 25,374	$ 25,062
Less:		
Special and trust fund appropriated receipts	(1,119)	(1,136)
Appropriated capital owed	(99)	(43)
Appropriations made available from previous year	(257)	(101)
Appropriations received on the Statement of Changes in Net Position	**$ 23,899**	**$ 23,782**

Reconciliation to the Budget:

	FY 2005 (Unaudited)			
	Budgetary Resources	Obligations Incurred	Distributed Offsetting Receipts	Net Outlays
Combined Statement of Budgetary Resources as published	$ 36,117	$ 31,876	$ (3,236)	$ 21,367
OMB adjustments made to exclude:				
United States Enrichment Corporation	(1,383)	-	-	33
Western Area Power adjustment to Interior Reclamation Fund	-	-	(39)	(39)
Expired accounts	(10)	-	-	-
Other	4	3	(11)	(14)
Budget of the United States Government	**$ 34,728**	**$ 31,879**	**$ (3,286)**	**$ 21,347**

The FY 2005 (unaudited) *Combined Statement of Budgetary Resources* is reconciled to the President's Budget that was published in February 2006. The President's Budget containing actual FY 2006 (unaudited) balances is expected to be published and available on the OMB web site, www.whitehouse.gov/omb, in February 2007.

24. Increases/(Decreases) in Unfunded Liability Estimates

(in millions)

	FY 2006 (unaudited)	FY 2005 (unaudited)
Change in unfunded environmental liability estimates (Note 14)	$ 47,713	$ 16,519
Spent nuclear fuel contingency (Note 16)	1,825	3,080
Change in contractor net pension and PRB estimates (Notes 9 and 15)	1,587	1,620
Change in unfunded safety and health liabilities (Note 13)	(303)	(17)
Change in other unfunded liabilities	10	(6)
Total increases in unfunded liability estimates	**$ 50,832**	**$ 21,196**

25. Custodial Activities

(in millions)

	FY 2006 (unaudited)	FY 2005 (unaudited)
Cash collections		
Power marketing administrations	$ 545	$ 657
Petroleum Pricing Violation Escrow Fund	17	23
Federal Energy Regulatory Commission	44	53
Total cash collections for custodial activities	**$ 606**	**$ 733**

Power Marketing Administrations

The Southeastern, Southwestern, and Western Area Power Administrations are responsible for collecting and remitting to the Department of the Treasury and the Department of the Interior revenues attributable to the hydroelectric power projects owned and operated by the Department of Defense, U.S. Army Corps of Engineers; the Department of the Interior, Bureau of Reclamation; and the Department of State, International Boundary and Water Commission. These revenues are reported as custodial activities of the Department.

Petroleum Pricing Violation Escrow Fund

Custodial revenues for the Petroleum Pricing Violation Escrow Fund result primarily from interest earned from investment of the fund balance which is invested in U.S. Treasury Bills and certificates of deposit with minority owned financial institutions, pending determination of the disposition of the funds. Funds are disbursed to individuals and groups who are able to provide proof of financial injury related to the violations of Petroleum Pricing Regulations during the 1970s and early 1980s. The Department also distributes funds to the U.S. Treasury and to the States, Possessions, and Territories of the United States.

26. Depreciation and Amortization

(in millions)

	FY 2006 (unaudited)	FY 2005 (unaudited)
Depreciation of property, plant and equipment	$ 1,376	$ 1,692
Amortization		
Premiums and discounts on Treasury investments	(649)	(513)
Other	193	149
Total depreciation and amortization	**$ 920**	**$ 1,328**

27. Transfers In/Out

(in millions)

	FY 2006 (unaudited)	FY 2005 (unaudited)
Transfer of Compensation Program for Occupational Illnesses to Department of Labor (Note 21)	$ -	$ 810
Transfer of Royalty-In-Kind oil from the Department of the Interior (Note 9)	-	1,181
Transfer of SPRO sales receipts to Treasury (Notes 7 and 18)	(615)	-
Transfer of Great Plains Gasification Plant revenue sharing receipts to Treasury (Note 18)	(79)	(62)
All other transfers, net	68	203
Total transfers in/out without reimbursement	**$ (626)**	**$ 2,132**

28. Imputed Financing

(in millions)

	FY 2006 (unaudited)	FY 2005 (unaudited)
Change in occupational illnesses liability (Note 21)	$ 392	$ 4,133
OPM imputed costs	88	91
Payments made from Treasury's Judgment Fund (Note 16)	143	55
Total imputed financing from costs absorbed by others	**$ 623**	**$ 4,279**

CONSOLIDATING SCHEDULES

U. S. Department of Energy
Consolidating Schedules - Balance Sheets
As of September 30, 2006 and 2005
($ in millions)

	FY 2006			
	Federal Energy Regulatory Commission	Power Marketing Administrations	All Other DOE Programs	Eliminations
ASSETS:				
Intragovernmental Assets:				
Fund Balance with Treasury	$ 62	$ 1,583	$ 15,544	$ -
Investments, Net	-	-	23,767	-
Accounts Receivable, Net	3	26	743	(157)
Regulatory Assets	-	5,476	-	-
Other Assets	-	1	19	(19)
Total Intragovernmental Assets	$ 65	$ 7,086	$ 40,073	$ (176)
Investments, Net	-	-	210	-
Accounts Receivable, Net	23	518	3,479	-
Inventory, Net:				
Strategic Petroleum and Northeast Home Heating Oil Reserve	-	-	19,172	-
Nuclear Materials	-	-	21,199	-
Other Inventory	-	84	372	-
General Property, Plant, and Equipment, Net	10	5,952	18,160	-
Regulatory Assets	-	5,961	-	-
Other Non-Intragovernmental Assets	-	2,849	1,015	-
Total Assets	$ 98	$ 22,450	$ 103,680	$ (176)
LIABILITIES:				
Intragovernmental Liabilities:				
Accounts Payable	$ 3	$ 6	$ 230	$ (157)
Debt	-	10,780	-	-
Deferred Revenues and Other Credits	-	10	61	(19)
Other Liabilities	22	53	182	-
Total Intragovernmental Liabilities	$ 25	$ 10,849	$ 473	$ (176)
Accounts Payable	11	165	3,487	-
Debt Held by the Public	-	6,605	-	-
Deferred Revenues and Other Credits	-	2,263	21,398	-
Environmental Cleanup and Disposal Liabilities	-	-	230,321	-
Pension and Other Actuarial Liabilities	-	53	12,006	-
Other Non-Intragovernmental Liabilities	49	278	2,504	-
Contingencies and Commitments	-	29	6,807	-
Total Liabilities	$ 85	$ 20,242	$ 276,996	$ (176)
NET POSITION:				
Unexpended Appropriations				
Unexpended Appropriations- Earmarked Funds	$ -	$ -	$ 47	$ -
Unexpended Appropriations- Other Funds	9	-	9,855	-
Cumulative Results of Operations				
Cumulative Results of Operations - Earmarked Funds	-	2,208	(3,553)	-
Cumulative Results of Operations - Other Funds	4	-	(179,665)	-
Total Net Position	$ 13	$ 2,208	$ (173,316)	$ -
Total Liabilities and Net Position	$ 98	$ 22,450	$ 103,680	$ (176)

See independent auditors' report.

	FY 2005 (unaudited)				
Consolidated	Federal Energy Regulatory Commission	Power Marketing Administrations	All Other DOE Programs	Eliminations	Consolidated
$ 17,189	$ 113	$ 922	$ 14,599	$ -	$ 15,634
23,767	-	-	22,197	-	22,197
615	-	18	1,621	(987)	652
5,476	-	4,536	-	-	4,536
1	-	1	90	(70)	21
$ 47,048	$ 113	$ 5,477	$ 38,507	$ (1,057)	$ 43,040
210	-	-	230	-	230
4,020	20	425	3,545	-	3,990
19,172	-	-	19,314	-	19,314
21,199	-	-	21,285	-	21,285
456	-	88	356	-	444
24,122	9	6,067	17,114	-	23,190
5,961	-	5,653	-	-	5,653
3,864	-	2,978	1,613	-	4,591
$ 126,052	$ 142	$ 20,688	$ 101,964	$ (1,057)	$ 121,737
$ 82	$ 2	$ 13	$ 311	$ (270)	$ 56
10,780	-	9,958	-	-	9,958
52	-	57	855	(787)	125
257	(7)	62	114	-	169
$ 11,171	$ (5)	$ 10,090	$ 1,280	$ (1,057)	$ 10,308
3,663	7	149	3,727	-	3,883
6,605	-	6,574	-	-	6,574
23,661	-	1,812	19,780	-	21,592
230,321	-	-	189,710	-	189,710
12,059	-	55	11,672	-	11,727
2,831	120	197	3,347	-	3,664
6,836	-	6	5,052	-	5,058
$ 297,147	$ 122	$ 18,883	$ 234,568	$ (1,057)	$ 252,516
	$ 14	$ -	$ 8,964	$ -	$ 8,978
$ 47					
9,864					
	6	1,805	(141,568)	-	(139,757)
(1,345)					
(179,661)					
$ (171,095)	$ 20	$ 1,805	$ (132,604)	$ -	$ (130,779)
$ 126,052	$ 142	$ 20,688	$ 101,964	$ (1,057)	$ 121,737

See independent auditors' report.

U. S. Department of Energy
Consolidating Schedules of Net Cost
For Years Ended September 30, 2006 and 2005
($ in millions)

	FY 2006 (unaudited)			
	Federal Energy Regulatory Commission	Power Marketing Administrations	All Other DOE Programs	Eliminations
STRATEGIC GOALS:				
Defense:				
Nuclear Weapons Stewardship:				
Total Program Costs	$ -	$ -	$ 6,841	$ -
Nuclear Nonproliferation:				
Total Program Costs	$ -	$ -	$ 1,210	$ -
Naval Reactors:				
Program Costs	-	-	782	-
Less: Earned Revenues	-	-	(11)	-
Net Cost of Naval Reactors	$ -	$ -	$ 771	$ -
Net Cost of Defense	$ -	$ -	$ 8,822	$ -
Energy:				
Program Costs	-	3,854	3,059	(81)
Less: Earned Revenues	-	(4,381)	(712)	68
Net Cost of Energy	$ -	$ (527)	$ 2,347	$ (13)
Science:				
Total Program Costs	$ -	$ -	$ 3,720	$ -
Environment:				
Environmental Management:				
Program Costs	-	-	6,047	(446)
Less: Earned Revenues	-	-	(300)	-
Net Cost of Environmental Management	$ -	$ -	$ 5,747	$ (446)
Nuclear Waste:				
Program Costs	-	-	475	-
Less: Earned Revenues	-	-	(220)	
Net Cost of Nuclear Waste	$ -	$ -	$ 255	$ -
Net Cost of Environment	$ -	$ -	$ 6,002	$ (446)
Net Cost of Strategic Goals	$ -	$ (527)	$ 20,891	$ (459)
OTHER PROGRAMS:				
Reimbursable Programs:				
Program Costs	-	159	3,230	-
Less: Earned Revenues	-	(201)	(3,184)	-
Net Cost of Reimbursable Programs	$ -	$ (42)	$ 46	$ -
Other Programs:				
Program Costs	234	-	527	(101)
Less: Earned Revenues	(234)	-	(73)	101
Net Cost of Other Programs	$ -	$ -	$ 454	$ -
Costs Applied to Reduction of Legacy Environmental Liabilities	$ -	$ -	$ (6,207)	$ -
Costs Not Assigned	-	-	49,724	-
Net Cost of Operations	$ -	$ (569)	$ 64,908	$ (459)

See independent auditors' report.

	FY 2005 (unaudited)				
Consolidated	Federal Energy Regulatory Commission	Power Marketing Administrations	All Other DOE Programs	Eliminations	Consolidated
$ 6,841	$ -	$ -	$ 6,779	$ -	$ 6,779
$ 1,210	$ -	$ -	$ 1,191	$ -	$ 1,191
782	-	-	810	-	810
(11)	-	-	(18)	-	(18)
$ 771	$ -	$ -	$ 792	$ -	$ 792
$ 8,822	$ -	$ -	$ 8,762	$ -	$ 8,762
6,832	-	3,620	3,050	(53)	6,617
(5,025)	-	(4,063)	(158)	39	(4,182)
$ 1,807	$ -	$ (443)	$ 2,892	$ (14)	$ 2,435
$ 3,720	$ -	$ -	$ 3,565	$ -	$ 3,565
5,601	-	-	7,178	(459)	6,719
(300)	-	-	(151)	-	(151)
$ 5,301	$ -	$ -	$ 7,027	$ (459)	$ 6,568
475	-	-	521	-	521
(220)	-	-	(321)	-	(321)
$ 255	$ -	$ -	$ 200	$ -	$ 200
$ 5,556	$ -	$ -	$ 7,227	$ (459)	$ 6,768
$ 19,905	$ -	$ (443)	$ 22,446	$ (473)	$ 21,530
3,389	-	173	3,141	-	3,314
(3,385)	-	(151)	(3,100)	-	(3,251)
$ 4	$ -	$ 22	$ 41	$ -	$ 63
660	221	-	546	(100)	667
(206)	(222)	-	(113)	100	(235)
$ 454	$ (1)	$ -	$ 433	$ -	$ 432
$ (6,207)	$ -	$ -	$ (6,637)	$ -	$ (6,637)
49,724	-	-	25,499	-	25,499
$ 63,880	$ (1)	$ (421)	$ 41,782	$ (473)	$ 40,887

See independent auditors' report.

U. S. Department of Energy
Consolidating Schedules of Changes in Net Position
For Years Ended September 30, 2006 and 2005
($ in millions)

	FY 2006 (unaudited)			
	Federal Energy Regulatory Commission	Power Marketing Administrations	All Other DOE Programs	Eliminations
CUMULATIVE RESULTS OF OPERATIONS:				
Beginning Balances	$ 6	$ 1,805	$ (141,568)	$ -
Budgetary Financing Sources:				
Appropriations Used	$ 4	$ -	$ 22,716	$ -
Nonexchange Revenue	-	-	62	-
Donations and Forfeitures of Cash	-	-	13	-
Transfers - In/(Out) Without Reimbursement	-	(167)	(49)	-
Other Financing Sources (Non-Exchange):				
Donations and Forfeitures of Cash	-	1	-	-
Transfers - In/(Out) Without Reimbursement (Note 27)	(16)	-	(610)	-
Imputed Financing from Costs Absorbed by Others	10	-	613	-
Other	-	-	513	(459)
Total Financing Sources	$ (2)	$ (166)	$ 23,258	$ (459)
Net Costs of Operations	-	569	(64,908)	459
Net Change	$ (2)	$ 403	$ (41,650)	$ -
Total Cumulative Results of Operations	$ 4	$ 2,208	$ (183,218)	$ -
UNEXPENDED APPROPRIATIONS:				
Beginning Balances	$ 14	$ -	$ 8,964	$ -
Budgetary Financing Sources:				
Appropriations Received	$ -	$ -	$ 23,899	$ -
Appropriations Transferred - In/(Out)	-	-	17	-
Other Adjustments	(1)	-	(262)	-
Appropriations Used	(4)	-	(22,716)	-
Total Budgetary Financing Sources	$ (5)	$ -	$ 938	$ -
Total Unexpended Appropriations	$ 9	$ -	$ 9,902	$ -
Net Position	$ 13	$ 2,208	$ (173,316)	$ -

See independent auditors' report.

	FY 2005 (unaudited)				
Consolidated	Federal Energy Regulatory Commission	Power Marketing Administrations	All Other DOE Programs	Eliminations	Consolidated
$ (139,757)	$ 3	$ 1,106	$ (130,296)	$ -	$ (129,187)
$ 22,720	$ 4	$ 4	$ 23,703	$ -	$ 23,711
62	-	-	35	-	35
13	-	-	13	-	13
(216)	-	(141)	(13)	-	(154)
1	-	1	-	-	1
(626)	(15)	47	2,100	-	2,132
623	11	-	4,268	-	4,279
54	2	367	404	(473)	300
$ 22,631	$ 2	$ 278	$ 30,510	$ (473)	$ 30,317
(63,880)	1	421	(41,782)	473	(40,887)
$ (41,249)	$ 3	$ 699	$ (11,272)	$ -	$ (10,570)
$ (181,006)	$ 6	$ 1,805	$ (141,568)	$ -	$ (139,757)
$ 8,978	$ 18	$ 4	$ 8,762	$ -	$ 8,784
$ 23,899	$ -	$ -	$ 23,782	$ -	$ 23,782
17	-	-	312	-	312
(263)	-	-	(189)	-	(189)
(22,720)	(4)	(4)	(23,703)	-	(23,711)
$ 933	$ (4)	$ (4)	$ 202	$ -	$ 194
$ 9,911	$ 14	$ -	$ 8,964	$ -	$ 8,978
$ (171,095)	$ 20	$ 1,805	$ (132,604)	$ -	$ (130,779)

See independent auditors' report.

U. S. Department of Energy
Combining Schedules of Budgetary Resources
For Years Ended September 30, 2006 and 2005
($ in millions)

	FY 2006 (unaudited)			
	Federal Energy Regulatory Commission	Power Marketing Administrations	All Other DOE Programs	Consolidated
BUDGETARY RESOURCES				
Unobligated balance, Brought Forward, October 1	$ 9	$ 165	$ 4,070	$ 4,244
Recoveries of Prior Year Unpaid Obligations	-	-	47	47
Budget Authority:				
Appropriations	$ 3	$ 345	$ 25,026	$ 25,374
Borrowing Authority	-	270	-	270
Contract Authority	-	871	-	871
Spending Authority from Offsetting Collections:				
Earned:				
Collected	220	4,032	3,475	7,727
Change in Receivables from Federal sources	-	88	(72)	16
Change in Unfilled Customer Orders:				
Advances Received	-	(37)	67	30
Without Advance from Federal Sources	-	4	(607)	(603)
Subtotal	$ 223	$ 5,573	$ 27,889	$ 33,685
Nonexpenditure Transfers, Net, Anticipated and Actual	-	(69)	17	(52)
Temporarily not Available Pursuant to Public Law	-	(2)	(264)	(266)
Permanently Not Available	-	(1,583)	(255)	(1,838)
Total Budgetary Resources	$ 232	$ 4,084	$ 31,504	$ 35,820
STATUS OF BUDGETARY RESOURCES				
Obligations Incurred:				
Direct	$ 227	$ 378	$ 24,096	$ 24,701
Exempt from Apportionment	-	2,905	142	3,047
Reimbursable	-	629	3,279	3,908
Total Obligations Incurred	$ 227	$ 3,912	$ 27,517	$ 31,656
Unobligated Balance:				
Apportioned	5	151	2,396	2,552
Exempt from Apportionment	-	-	32	32
Unobligated Balance Not Available	-	21	1,559	1,580
Total Status of Budgetary Resources	$ 232	$ 4,084	$ 31,504	$ 35,820
CHANGE IN OBLIGATED BALANCE				
Obligated Balance, Net:				
Unpaid Obligations, Brought Forward, October 1 (Note 23)	$ 20	$ 2,079	$ 15,130	$ 17,229
Less: Uncollected Customer Payments from Federal Sources, Brought Forward, October 1	-	(312)	(4,375)	$ (4,687)
Total Unpaid Obligated Balance, Net, October 1	$ 20	$ 1,767	$ 10,755	$ 12,542
Obligations Incurred	227	3,912	27,517	31,656
Less: Gross Outlays	(224)	(3,321)	(27,097)	(30,642)
Less: Recoveries of Prior Year Unpaid Obligations, Actual	-	-	(47)	(47)
Change in Uncollected Customer Payments from Federal Sources	-	(92)	679	587
	$ 23	$ 2,266	$ 11,807	$ 14,096
Obligated Balance, Net, End of Period:				
Unpaid Obligations	$ 23	$ 2,669	$ 15,504	18,196
Less: Uncollected Customer Payments from Federal Sources	-	(403)	(3,697)	(4,100)
Total, Unpaid Obligated Balance, Net, End of Period	$ 23	$ 2,266	$ 11,807	$ 14,096
NET OUTLAYS				
Gross Outlays	$ 224	$ 3,321	$ 27,097	$ 30,642
Less: Offsetting collections	(220)	(3,995)	(3,542)	(7,757)
Less: Distributed Offsetting Receipts	(54)	(486)	(2,724)	(3,264)
Net Outlays	$ (50)	$ (1,160)	$ 20,831	$ 19,621

See independent auditors' report.

FY 2005 (unaudited)			
Federal Energy Regulatory Commission	Power Marketing Administrations	All Other DOE Programs	Consolidated
$ 6	$ 161	$ 3,869	$ 4,036
-	-	34	34
			-
3	213	24,846	25,062
-	315	-	315
-	1,018	-	1,018
210	3,786	3,228	7,224
-	50	81	131
-	17	13	30
-	(2)	214	212
$ 213	$ 5,397	$ 28,382	$ 33,992
-	(73)	242	169
-	(1)	(265)	(266)
-	(1,639)	(209)	(1,848)
$ 219	$ 3,845	$ 32,053	$ 36,117
$ 210	$ 226	$ 24,443	$ 24,879
-	2,923	330	3,253
-	531	3,213	3,744
$ 210	$ 3,680	$ 27,986	$ 31,876
9	164	2,415	2,588
-	-	24	24
-	1	1,628	1,629
$ 219	$ 3,845	$ 32,053	$ 36,117
$ 26	$ 2,346	$ 14,875	$ 17,247
-	$ (264)	(4,080)	$ (4,344)
$ 26	$ 2,082	$ 10,795	$ 12,903
210	3,680	27,986	31,876
(215)	(3,948)	(27,693)	(31,856)
-	-	(34)	(34)
-	(48)	(295)	(343)
$ 21	$ 1,766	$ 10,759	$ 12,546
$ 20	$ 2,079	$ 15,133	$ 17,232
-	(312)	(4,375)	(4,687)
$ 20	$ 1,767	$ 10,758	$ 12,545
$ 215	$ 3,948	27,693	$ 31,856
(210)	(3,803)	(3,240)	(7,253)
(18)	(739)	(2,479)	(3,236)
$ (13)	$ (594)	$ 21,974	$ 21,367

See independent auditors' report.

U. S. Department of Energy
Consolidating Schedules of Financing
For Years Ended September 30, 2006 and 2005
($ in millions)

	FY 2006 (unaudited)			
	Federal Energy Regulatory Commission	Power Marketing Administrations	All Other DOE Programs	Eliminations
RESOURCES USED TO FINANCE ACTIVITIES:				
Budgetary Resources Obligated:				
Obligations Incurred	$ 227	$ 3,912	$ 27,517	$ -
Less: Spending Authority from Offsetting Collections and Recoveries	(220)	(4,087)	(2,910)	-
Obligations, Net of Offsetting Collections and Recoveries	$ 7	$ (175)	$ 24,607	$ -
Less: Offsetting Receipts	(54)	(486)	(2,724)	-
Net Obligations	$ (47)	$ (661)	$ 21,883	$ -
Other Resources:				
Donations	-	1	-	-
Imputed Financing from Costs Absorbed by Others	10	-	613	-
Transfers-In/(Out) Without Reimbursement	(16)	-	(610)	-
Nuclear Waste Fund Offsetting Receipts, Deferred	-	-	2,345	-
Other	-	-	67	(13)
Net Other Resources Used to Finance Activities	$ (6)	$ 1	$ 2,415	$ (13)
Total Resources Used to Finance Activities	$ (53)	$ (660)	$ 24,298	$ (13)
RESOURCES USED TO FINANCE ITEMS NOT PART OF THE NET COST OF OPERATIONS:				
Change in Budgetary Resources Obligated for Goods, Services and Benefits Ordered But Not Yet Provided	$ 1	$ (132)	$ (1,104)	$ -
Resources that Finance the Acquisition of Assets	(3)	(203)	(2,897)	-
Resources that Fund Expenses Recognized in Prior Periods	-	(18)	(7,261)	-
Budgetary Offsetting Collections and Receipts that Do Not Affect the Net Cost of Operations	43	23	442	(446)
Other Resources and Adjustments	13	(372)	(126)	-
Total Resources Used to Finance Items Not Part of the Net Cost of Operations	$ 54	$ (702)	$ (10,946)	$ (446)
Total Resources Used to Finance the Net Cost of Operations	$ 1	$ (1,362)	$ 13,352	$ (459)
NET COST OF ITEMS THAT DO NOT REQUIRE OR GENERATE RESOURCES IN CURRENT PERIOD:				
Components Requiring or Generating Resources in Future Periods:				
Increase in Unfunded Liability Estimates	$ 1	247	$ 50,584	$ -
Increase/(Decrease) in Exchange Revenue Receivable from the Public	(4)	3	-	-
Total Components Requiring or Generating Resources in Future Periods	$ (3)	$ 250	$ 50,584	$ -
Components Not Requiring or Generating Resources:				
Depreciation and Amortization	3	481	436	-
Revaluation of Assets and Liabilities	-	2	(192)	-
Other	(1)	60	728	-
Total Components Not Requiring or Generating Resources	$ 2	$ 543	$ 972	$ -
Period	$ (1)	$ 793	$ 51,556	$ -
NET COST OF OPERATIONS	$ -	$ (569)	$ 64,908	$ (459)

See independent auditors' report.

	FY 2005 (unaudited)				
Consolidated	Federal Energy Regulatory Commission	Power Marketing Administrations	All Other DOE Programs	Eliminations	Consolidated
$ 31,656	$ 210	$ 3,680	$ 27,986	$ -	$ 31,876
(7,217)	(210)	(3,851)	(3,570)	-	(7,631)
$ 24,439	$ -	$ (171)	$ 24,416	$ -	$ 24,245
(3,264)	(18)	(739)	(2,479)	-	(3,236)
$ 21,175	$ (18)	$ (910)	$ 21,937	$ -	$ 21,009
1	-	1	-	-	1
623	11	-	4,268	-	4,279
(626)	(15)	47	2,100	-	2,132
2,345	-	-	2,520	-	2,520
54	-	(156)	134	(14)	(36)
$ 2,397	$ (4)	$ (108)	$ 9,022	$ (14)	$ 8,896
$ 23,572	$ (22)	$ (1,018)	$ 30,959	$ (14)	$ 29,905
$ (1,235)	$ 7	$ 55	$ 10	$ -	$ 72
(3,103)	(4)	(320)	(5,426)	-	(5,750)
(7,279)	-	81	(6,428)	-	(6,347)
62	18	246	371	(482)	153
(485)	(2)	(160)	(236)	23	(375)
$ (12,040)	$ 19	$ (98)	$ (11,709)	$ (459)	$ (12,247)
$ 11,532	$ (3)	$ (1,116)	$ 19,250	$ (473)	$ 17,658
$ 50,832	$ -	$ 235	$ 20,961	$ -	$ 21,196
(1)	1	1	-	-	2
$ 50,831	$ 1	$ 236	$ 20,961	$ -	$ 21,198
920	3	539	786	-	1,328
(190)	-	4	(182)	-	(178)
787	(2)	(84)	967	-	881
$ 1,517	$ 1	$ 459	$ 1,571	$ -	$ 2,031
$ 52,348	$ 2	$ 695	$ 22,532	$ -	$ 23,229
$ 63,880	$ (1)	$ (421)	$ 41,782	$ (473)	$ 40,887

See independent auditors' report.

U. S. Department of Energy
Consolidating Schedules of Custodial Activities
For Years Ended September 30, 2006 and 2005
($ in millions)

	FY 2006 (unaudited)			
	Federal Energy Regulatory Commission	Power Marketing Administrations	All Other DOE Programs	Eliminations
SOURCES OF COLLECTIONS:				
Cash Collections:				
Interest	$ -	$ -	$ 17	$ -
Federal Energy Regulatory Commission	44	-	-	-
Power Marketing Administration Custodial Revenue	-	545	-	-
Other Custodial Revenue	-	-	-	-
Total Cash Collections	$ 44	$ 545	$ 17	$ -
Accrual Adjustment	2	11	-	-
Total Custodial Revenue	$ 46	$ 556	$ 17	$ -
DISPOSITION OF REVENUE:				
Transferred to Others:				
Department of the Treasury	(41)	(159)	-	-
Army Corps of Engineers	-	3	-	-
Bureau of Reclamation	-	(333)	-	-
Others	(3)	(2)	-	-
Decrease in Amounts to be Transferred	(2)	(65)	(17)	-
Net Custodial Activity	$ -	$ -	$ -	$ -

See independent auditors' report.

	FY 2005 (unaudited)				
Consolidated	Federal Energy Regulatory Commission	Power Marketing Administrations	All Other DOE Programs	Eliminations	Consolidated
$ 17	$ -	$ -	$ 20	$ -	$ 20
44	53	-	-	-	53
545	-	657	-	-	657
-	-	-	3	-	3
$ 606	$ 53	$ 657	$ 23	$ -	$ 733
13	(8)	(1)	(10)	-	(19)
$ 619	45	656	13	-	714
(200)	(31)	(584)	(9)	-	(624)
3	(5)	-	-	-	(5)
(333)	(5)	(74)	-	-	(79)
(5)	(3)	-	-	-	(3)
(84)	(1)	2	(4)	-	(3)
$ -	$ -	$ -	$ -	$ -	$ -

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REQUIRED SUPPLEMENTARY STEWARDSHIP INFORMATION

(RSSI)

Supplementary Stewardship Reporting on Research and Development Costs for Fiscal Years ending September 30, 2002–2006 ($ in millions)

	FY 2006			FY 2005		
	Direct Cost	Depreciation & Other Managerial Cost	Total Cost	Direct Cost	Depreciation & Other Managerial Cost	Total Cost
BASIC						
Nuclear Nonproliferation	$6.8	$.8	$7.6	$3.2	$0.3	$3.5
Energy Security						
Energy Efficiency	1.3	.1	1.4	19.9	5.1	25.0
Fossil Energy	4.3	.8	5.1	6.0	1.7	7.7
Nuclear Energy	1.7	.6	2.3	-	-	-
Power Marketing Administration**	-	-	-	-	-	-
World-Class Scientific Research	1,853.1	428.0	2,281.1	2,808.7	735.5	3,544.2
Environmental Management	-	-	-	-	-	-
TOTAL BASIC	**$1,867.2**	**$430.3**	**$2,297.5**	**$2,837.8**	**$742.6**	**$3,580.4**
APPLIED*						
Nuclear Weapons Stewardship	$1,551.9	$153.4	$1,705.3	$1,898.6	$192.9	$2,091.5
Nuclear Nonproliferation	113.8	13.8	127.6	73.2	5.5	78.7
Energy Security						
Energy Efficiency	221.6	15.8	237.4	251.4	34.7	286.1
Fossil Energy	130.2	28.1	158.3	157.4	50.3	207.7
Nuclear Energy	84.3	33.1	117.4	52.5	35.8	88.3
Electric Transmission and Distribution	66.8	3.8	70.6	55.6	4.1	59.7
Power Marketing Administration**	10.4	0	10.4	9.7	-	9.7
World-Class Scientific Research	-	-	-	-	-	-
Environmental Management	.9	0	.9	15.6	1.2	16.8
Nuclear Waste	259.3	3.1	262.4	144.0	1.9	145.9
TOTAL APPLIED	**$2,439.2**	**$251.1**	**$2,690.3**	**$2,658.0**	**$326.4**	**$2,984.4**
DEVELOPMENT*						
Nuclear Weapons Stewardship	$.3	$-	$.3	$467.2	$106.8	$574.0
Nuclear Nonproliferation	84.7	5.1	89.8	53.6	2.8	56.4
Naval Reactors	681.5	42.9	724.4	724.7	40.3	765.0
Energy Security						
Energy Efficiency	255.0	15.2	270.2	335.0	37.2	372.2
Fossil Energy	144.0	31.2	175.2	172.2	52.9	225.1
Nuclear Energy	1.3	.3	1.6	1.2	0.8	2.0
Electric Transmission and Distribution	26.0	1.6	27.6	13.5	3.2	16.7
Power Marketing Administration**	1.1	-	1.1	2.1	0.0	2.1
Environmental Management	2.1	.1	2.2	36.4	3.6	40.0
TOTAL DEVELOPMENT	**$1,196.0**	**$96.4**	**$1,292.4**	**$1,805.9**	**$247.6**	**$2,053.5**
TOTAL RESEARCH AND DEVELOPMENT	**$5,502.4**	**$777.8**	**$6,280.2**	**$7,301.7**	**$1,316.6**	**$8,618.3**

* Starting in FY 2006 Other Defense Activities will no longer be included due to classification issues.
** Full R&D investments for the Power Marketing Administration's are included under direct costs of the Energy Security Goal.

Research & Development (unaudited)

The Department is the single largest Federal Government supporter of basic research in the physical sciences in the United States, providing more than 40 percent of total Federal funding. The Department oversees, and is the principal Federal funding agency of, the Nation's research programs in high energy physics, nuclear physics and fusion energy sciences. Our diverse research portfolio supports tens of thousands of principal investigators, post-doctoral students and graduate students tackling some of the most challenging scientific questions of our era.

In accordance with Statement of Federal Financial Accounting Standard (SFFAS) Number (No.) 8 - *Supplementary Stewardship Reporting, Chapter 7 - Research and Development*, the Department reports the following expenses for research and development programs that are intended to increase or maintain national economic (R&D) productive capacity or yield other future benefits. Investments in R&D refer to those expenses incurred to support the search for new or refined knowledge and ideas and for the application or use of such knowledge and ideas for the development of new or improved products or processes with the expectation of maintaining or increasing national economic productive capacity or yielding other future benefits.

FY 2004			FY 2003			FY 2002		
Direct Cost	Depreciation & Other Managerial Cost	Total Cost	Direct Cost	Depreciation & Other Managerial Cost	Total Cost	Direct Cost	Depreciation & Other Managerial Cost	Total Cost
$13.2	$1.0	$14.2	$10.1	$1.5	$11.6	$8.4	$1.3	$9.7
30.3	4.6	34.9	24.0	3.5	27.5	30.2	5.4	35.6
7.1	0.8	7.9	10.0	1.2	11.2	5.9	1.5	7.4
-	-	-	-	-	-	-	-	-
3.4	-	3.4	3.3	-	3.3	3.2	-	3.2
2,581.3	583.4	3,164.7	2,448.0	594.0	3,042.0	2,598.0	506.0	3,104.0
-	-	-	-	-	-	-	-	-
$2,635.3	**$589.8**	**$3,225.1**	**$2,495.4**	**$600.2**	**$3,095.6**	**$2,645.7**	**$514.2**	**$3,159.9**
$1,888.0	$405.0	$2,293.0	$1,660.5	$454.5	$2,115.0	$1,700.0	$379.6	$2,079.6
60.4	4.4	64.8	95.2	13.8	109.0	72.2	11.0	83.2
202.4	20.1	222.5	169.7	21.9	191.6	180.4	11.8	192.2
176.5	19.5	196.0	186.7	21.7	208.4	131.6	10.3	141.9
74.3	6.5	80.8	12.3	1.2	13.5	20.9	5.0	25.9
18.7	2.1	20.8	-	-	-	-	-	-
11.8	-	11.8	11.4	-	11.4	11.1	-	11.1
3.1	0.5	3.6	2.9	0.5	3.4	37.9	4.3	42.2
28.1	4.1	32.2	23.4	4.4	27.8	89.9	20.8	110.7
65.3	1.8	67.1	75.8	1.0	76.8	62.5	2.6	65.1
$2,528.6	**$464.0**	**$2,992.6**	**$2,237.9**	**$519.0**	**$2,756.9**	**$2,306.5**	**$445.4**	**$2,751.9**
$543.4	$121.0	$664.4	$734.3	$221.5	$955.8	$726.6	$175.7	$902.3
49.4	3.1	52.5	66.1	9.9	76.0	83.8	13.3	97.1
667.1	17.7	684.8	621.8	16.3	638.1	653.0	16.6	669.6
422.1	41.8	463.9	352.4	42.8	395.2	403.5	30.3	433.8
192.9	20.8	213.7	202.1	23.0	225.1	167.6	17.4	185.0
20.6	1.6	22.2	16.0	2.4	18.4	-	-	-
38.0	3.2	41.2	-	-	-	-	-	-
8.8	-	8.8	8.7	-	8.7	8.7	-	8.7
65.5	9.6	75.1	54.7	10.3	65.0	134.8	31.2	166.0
$2,007.8	**$218.8**	**$2,226.6**	**$2,056.1**	**$326.2**	**$2,382.3**	**$2,178.0**	**$284.5**	**$2,462.5**
$7,171.7	**$1,272.6**	**$8,444.3**	**$6,789.4**	**$1,445.4**	**$8,234.8**	**$7,130.2**	**$1,244.1**	**$8,374.3**

Research and Development Activities and Significant Accomplishments by General Goal

General Goal 1: Nuclear Weapons Stewardship

– Applied & Development

Nuclear Weapons Stewardship Activities relate to (1) provide the scientific understanding and engineering development capabilities necessary to support near-term and long-term requirements of the nuclear stockpile; (2) provide scientific understanding of the nuclear package of the weapons systems in order to sustain our ability to certify the nuclear weapons stockpile, support stockpile refurbishment and life extension and to provide capabilities and components necessary to support maintenance and refurbishment in the absence of nuclear testing; and (3) ensure the weapons complex and its facilities and infrastructure are in place to manufacture and certify the 21st century nuclear weapons stockpile.

The applied research and development program of the Science Campaign helps to support the nuclear weapons stewardship goal by ensuring that our nuclear weapons will continue to serve their essential deterrence role. One key goal of the NNSA is to develop improved capabilities to assess the safety, reliability and performance of the nuclear package portion of weapons without further underground testing. The Dual-Axis Radiographic Hydrotest Facility (DARHT), located at Los Alamos National Laboratory, is designed to take a rapid sequence of x-ray images of a simulated nuclear weapon implosion. For FY 2006, the Department achieved 70 percent cumulative progress towards conducting the first 2-axis hydrodynamics test at DARHT. The tests are on track to be completed during CY 2008.

General Goal 2: Nuclear Nonproliferation

– Basic, Applied & Development

Activities conducted provide the science and technology required for treaty monitoring and material control, as well as early detection and characterization of the proliferation of weapons of mass destruction and special nuclear materials and improving the technologies leading to major improvements in responding to chemical and biological attacks.

Under the Department's goal to have all worldwide fissile nuclear materials under controls acceptable to the United States by 2025, the nonproliferation verification research and development program will develop new technologies to improve our ability to detect and monitor nuclear explosions. During 2006, NNSA progressed a cumulative 10 percent toward demonstrating the next generation of technologies and methods to detect Uranium-235 enrichment activities, plutonium reprocessing and special nuclear material movement.

General Goal 3: Naval Reactors

– Development

Activities include development, demonstration, improvement, and safe operation of nuclear propulsion plants and reactor cores for application to submarines and surface ships.

The Transformational Technology Core reactor plant design is designed to meet increasing demands on the submarine fleet, delivering a significant energy increase to future VIRGINIA-class ships with minimum impact to the overall ship design. For FY 2006, the Department committed to achieve 34 percent on the reactor plant design and core delivery. The target was met and the program is on track for completion in FY 2015.

General Goal 4: Energy Security

– Basic, Applied & Development

The Department will improve energy security by developing technologies that foster a diverse supply of reliable, affordable and environmentally sound energy by providing for reliable delivery of energy, guarding against energy emergencies and exploring advanced technologies that make a fundamental improvement in our mix of energy options. Discussed below are contributions from the DOE offices that contribute to the Energy Security general goal.

Energy Efficiency and Renewable Energy – Activities relate to (1) solar technologies; (2) geothermal technologies; (3) wind and hydropower technologies; (4) hydrogen and fuel cell technologies for transportation, stationary, and portable application; (5) energy conservation for the building sector, including residential building, commercial building, and retrofit technologies; (6) biomass technologies; (7) energy efficiency and renewable energy efforts in the Federal sector; (8) energy conservation and energy supply efforts in the industry sector; (9) energy conservation for the transportation sector, including automotive alternative fuels and electric vehicles; and, (10) energy conservation and renewable energy for intergovernmental activities including the State Energy Program and Weatherization Program.

The Solar Program focuses on improving performance of solar energy systems and reducing development, production, and installation costs to competitive levels, thereby accelerating large-scale usage across the Nation and making a significant contribution to a clean, reliable and flexible U.S. Energy supply. The Solar Program's R&D partner, the National Renewable Energy Laboratory (NREL) achieved a world record 19.5 percent efficient thin-film photovoltaic cell in June. Thin-film technology, such as NREL's copper indium gallium diselenide cell, offers significant cost savings potential over conventional solar technologies because it requires less raw material and enables higher manufacturing throughputs. Rapid progress being made in thin-film technologies is the basis for several new U.S. manufacturing facilities coming on-line this year.

The Wind Program enables wind to compete with conventional fuel throughout the Nation, creating a clean renewable energy option through technology research and development, collaborative efforts, technical support and outreach. The Wind Program's partnership with Clipper Windpower, Inc, resulted in their agreements with wind energy developers to supply up to 900 wind turbines over the next five years. This

collaboration is on the first U.S. wind turbine designed specifically for operation in lower wind speed (Class 4) wind resource areas. The prototype incorporates many innovations such as a distributed drivetrain, advanced blades with truncated root section airfoils, and advanced controls. The Liberty Wind Turbine will be manufactured in Cedar Rapids, IA, in a manufacturing plant that was opened in the fall of 2005. Cost effective wind turbine operation in the low wind regimes significantly increases the resource areas available for wind energy development in areas much closer to major population centers.

Fossil Energy – Activities relate to (1) improving acceptable technology for advancing power conversion systems for generating electricity and hydrogen from coal; and (2) supporting of advanced technologies for the recovery of oil and natural gas through technologies and development in drilling and offshore oil production, and characterization research.

The Department is committed to developing advanced fossil power systems capable of achieving 45-50 percent efficiency at a capital cost of $1,000 per kW or less for a coal-based plant (dollar amount based on FY 2002 dollars). To support this goal, the gasification technologies program is working towards the commercialization of economical and efficient sulfur removal and/or multicontaminant clean-up. For FY 2006, the Department met its goal to conduct initial pilot scale slipstream field testing of technology capable of 90 percent mercury removal, and began construction and testing of advanced gas separation technologies. Field testing is a critical step toward developing high performance mercury removal technology that help enable coal fired power plants to economically reduce emissions.

In FY 2006, the Gasification Technologies program moved gas separation, including ceramic membrane, hydrogen separation, CO_2 hydrate formation and ceramic membrane air separation, closer to commercialization. This work included progress in developing technologies for both oxygen and hydrogen separation. In the area of creating pure oxygen from air, full size Ion Transport Member Oxygen modules have successfully produced 95 percent pure oxygen in the subscale engineering prototype facility. This process provides information for further scale-up to a pre-commercial development facility of appropriate capacity. In the area of separating hydrogen, construction of 1.3 lb/day process development unit is underway; the process development unit will test hydrogen separation membrane performance on simulated syngas, which will eventual lead to capital cost reductions of $60-$80 per kW from the baseline of $1200/kW for Integrated coal Gasification Combined Cycle systems and efficiency improvements of more than one efficiency points.

Also in FY 2006, Fossil Energy performed pilot-scale testing and laboratory testing of different CO_2 capture technologies. For example, the University of Texas completed a pilot plant testing campaign to evaluate a technology that is capable of at least 90 percent CO_2 capture. Laboratory scale evaluation of membranes developed by Los Alamos National Laboratory and Praxair were also completed. National Energy Technology Laboratory researchers completed the evaluation of solid sorbents for application to both post combustion and pre-combustion CO_2 capture. The tests results for the novel tertiary showed potential for significant improvement in cost and performance. All seven Phase II Regional Partnerships were awarded and field testing of CO_2 sequestration was initiated at the Zama Oil Field in Zama, Alberta as part of the activities under the Plains CO_2 Reduction Partnership. This testing will lead to significant improvement in cost and performance, and initiate field sequestration activities within the Regional Partnerships leading to future sequestration tests.

Nuclear Energy – Accomplishments in FY 2006 include extensive R&D into new nuclear generation technologies fostering a diversity of domestic energy supply through public-private partnerships as well as international relationships. The advancement of materials and fuels testing for the next generation of nuclear power plants as well as the attention paid to overhead cost and efficiency measures enabled NE to meet all of its FY 2006 milestones.

In FY 2006, the Department met requirements within the Department's Hydrogen Posture plan. Sandia National Laboratory completed the report documenting the closed Brayton cycle experiments for steady state, transient and off-normal condition, and submitted the report to Headquarters on June 30, 2006. Successful achievement of this work moves the program closer to meeting the requirements of the EPACT of 2005.

Within the Advanced Fuel Cycle Initiative (AFCI), the Department gained a better understanding into the necessary qualifications of a second geologic repository through testing light water reaction transmutation fuel and post irradiation. R&D within AFCI increased the program's understanding of the nuclear fuel cycle—a knowledge that will contribute significantly to the Department's decision on whether to build a second geologic repository for high-level nuclear waste, which is due to the President and to Congress no later than 2010. These achievements also add to the Global Nuclear Energy Partnership (GNEP), the goal of which is to enable expansion of nuclear energy worldwide, in an economical and carbon-free manner, by demonstrating and deploying new advanced technologies using a nuclear fuel cycle that enhances proliferation resistance.

Lastly, in FY 2006, the Department focused on activities supporting NRC certification of two advanced nuclear reactor designs and continued work with industry on combined construction and operating licenses for new nuclear power plants. Achievement of this target moves the program closer toward enabling an industry decision to deploy new nuclear power plants by 2010.

Electricity Delivery and Energy Reliability – R&D activities address high temperature superconductivity, transmission reliability, electric distribution transformation and innovative energy storage. These activities contribute to the modernization and expansion of the Nation's electricity delivery system to ensure a more reliable and robust electricity supply.

The Department and its partners are implementing the "Eastern Interconnection Phasor Project" in order to prevent another massive blackout like the one experienced during August 2003. This project consists of developing and deploying a robust, widely-available, real-time monitoring and visualization system in the eastern portion of the North American power grid. This next generation system features GPS technology, secure data communications, custom visualization, and advanced controls. The data from the "phasor" measurement instruments are being fed into data archiving and analysis locations to make the project's information readily available to the utilities. The visualization and control systems will allow operators to detect disturbances and take action before problems cascade into widespread outages. During FY 2006, the Department led efforts for the installation and operation of 30 additional measurement units and two additional archiving and analysis locations for a cumulative total of 80 measuring units and eight archiving and analysis locations.

General Goal 5: World-Class Scientific Research Capacity

– Basic

Research in the areas of (1) advanced scientific computing relevant to the complex problems of the Department and providing world class supercomputer and networking facilities for scientists; (2) basic energy sciences including nuclear sciences, materials sciences, chemical sciences, engineering geosciences, energy biosciences, advanced energy projects and advanced mathematical sciences; (3) biological and environmental research needed to identify, understand, and anticipate the long term health and environmental consequences of energy production, development, and use; (4) fusion energy sciences including broad-based, fundamental research efforts aimed at producing knowledge on fusion; (5) high energy physics activities directed at understanding the nature of matter and energy; (6) nuclear physics activities directed at understanding the fundamental forces and particles of nature as manifested in nuclear matter; and, (7) small business innovative research/technology transfer support for energy related technologies that will significantly benefit US businesses, a technology transfer initiative.

Construction and commissioning of the Spallation Neutron Source (SNS), an accelerator-based neutron source that will provide the most intense pulsed neutron beams in the world for scientific research and industrial development, was completed, and the facility began operations in late FY 2006. The SNS will become the world's leading research facility for study of the structure and dynamics of materials using neutrons. It will operate as a user facility that will enable researchers from the United States and abroad to study the science of materials that forms the basis for new technologies in telecommunications, manufacturing, transportation, information technology, biotechnology and health.

General Goal 6: Environmental Management

– Applied & Development

Technology development activities (1) to support site closure through technical support and quick responses for highly focused science and technology projects; and (2) develop and provide the scientific and technical rationale to support development of alternative approaches and step improvements for high risk/high cost baseline estimates.

Monitored Natural Attenuation (MNA) is a promising method for treating contaminated groundwater at several legacy waste sites. In the case of chlorinated solvents, MNA often relies on native bacteria living in the subsurface to degrade hazardous contaminants to nontoxic compounds. Office of Science researchers have developed new characterization and modeling tools that can be used to determine if these natural processes are working fast enough to keep groundwater contaminants from flowing into nearby rivers and lakes. These tools were recently used at the Savannah River Site to detect and quantify rates of trichloroethene degradation by underground bacteria. Tests were performed in several wells along groundwater flow paths that extended from a contaminant site to a wetlands complex. The groundwater tracers allow scientists to study the behavior of the targeted contaminants since the tracers exhibit the same behavior as the contaminants and can be uniquely and sensitively analyzed in groundwater even in very contaminated environments. These tests, together with numerical flow and transport models demonstrated that desirable bacteria are present and active and that they are making an important contribution to the reduction of contaminant concentrations. These results can be used to reduce the cost of long-term monitoring and remediation and lead to more secure and effective site cleanup.

General Goal 7: Nuclear Waste

– Applied

Activities are conducted on the long-term storage of high level nuclear waste at a permanent underground repository. Scientific work explores opportunities for better performance in the underground repository and improved cost savings. The work concentrates on four areas: Source Term; Materials Performance; Natural Barriers; and Advanced Technologies.

Of the studies conducted in Source Term, one project has been focusing on the interaction of spent nuclear fuel with the stainless steel component of its waste packaging. Stainless steel is made mostly of iron, and the project has determined that iron performs well in helping to absorb the radioactive material and prevent it from leaking out of the waste packaging. This finding adds more support to the use of stainless steel in waste packaging for spent fuel.

One materials performance project has been concerned with the interaction of natural materials in the repository, such as dust and rocks, with Alloy 22, the special corrosion resistant metal that makes up the outside of the waste packages. Repository rocks could contact and form crevices on the outside of the waste package. This is a particular concern because corrosion in crevices is known to be aggressive. Studies are showing that stopping the corrosion is possible, and the likelihood and severity of crevice corrosion depends on the material that formed the crevice. Crevice corrosion tests performed at Case Western Reserve University found that crevices formed by ceramic (rock-like) material resulted in no corrosion, but crevices formed by other materials readily

corroded under identical conditions. This finding can be an important factor in predicting the evolution of corrosion damage on Alloy 22 and the outside of the waste packages over long periods of time.

In the area of Natural Barriers, water flow through the repository ceiling has been studied. Water flow is important to study because water is the primary means by which nuclear waste could be broken down into radioactive particles and then transported into the surrounding environment. A new 3-D model has been created, and it proves to provide a better understanding of water flow. Preliminary results show that any water that enters the tunnels where the waste is stored will likely travel down the tunnel walls and not drip onto the waste packages. These findings bode well for the environmental conditions within the drift tunnels and the resulting performance of the waste packages.

One study in the Advanced Technology area is focusing on an alternative material to Alloy 22, the special metal that makes up the outside of the waste packages. The cost of Alloy 22 is increasing rapidly and its use could be cost prohibitive when production of waste packages commences. The study has found lots of promise in Structurally Amorphous Metal. This substance can be atomized to produce a sprayable powder, and preliminary results show that the powder can be sprayed up to a thickness of 10mm. Ongoing work is investigating its performance in corrosion and adherence to its substrate, and results have been very positive to date. The potential use of Structurally Amorphous Metal represents a significant cost savings. Its cost is less than a third of the current cost of Alloy 22.

Another Advanced Technology project is investigating an alternative technique for welding waste packages. The repository's baseline plan calls for the use of arc welding, a technique that requires 6 to 8 hours to weld one waste package. The project has narrowed its selection to one best alternative called Reduced Pressure Electron Beam welding. Reduced Pressure Electron Beam welding requires only 6 minutes to weld one waste package, which represents a large savings in both cost and time.

REQUIRED SUPPLEMENTARY INFORMATION (RSI)

(unaudited)

This section of the report provides required supplementary information for the Department on deferred maintenance, budgetary resources by major budget account and intra-governmental balances.

Deferred Maintenance

Deferred maintenance information is a requirement under SFFAS No.6, *Accounting for Property, Plant and Equipment* and SFFAS No.14, *Amendments to Deferred Maintenance* which requires deferred maintenance to be disclosed as of the end of each fiscal year. Deferred maintenance is defined in SFFAS No.6 as "maintenance that was not performed when it should have been or was scheduled to be and which, therefore, is put off or delayed for a future period." Estimates were developed for:

Buildings and Other Structures and Facilities	**$3,650 million**
Capital Equipment	**$ 81 million**
TOTAL	**$3,731 million**

Buildings and Other Structures and Facilities

The condition assessment survey (periodic inspections) method was used in measuring a deferred maintenance estimate for buildings and other structures and facilities except for some structures and facilities where a physical barrier was present (e.g., underground pipe systems). In those cases, where a deficiency is identified during normal operations and correction of the deficiency is past due, a deferred maintenance estimate would be applicable. Also, where appropriate, results from previous condition assessments have been adjusted to estimate current plant conditions. Deferred maintenance for excess property was reported only in situations where maintenance is needed for worker and public health and safety concerns.

The Department determines deferred maintenance and acceptable operating condition through various methods, including periodic condition assessments, physical inspections, review of work orders, manufacturer and engineering specification.

As of September 30, 2006, an amount of $3,650 million of deferred maintenance was estimated to be required to return the facilities to acceptable operating condition. The percentage of active buildings above acceptable operating condition is estimated at 82 percent.

Capital Equipment

Pursuant to the cost/benefit considerations provided in SFFAS No. 6, the Department has determined that the requirements for deferred maintenance reporting on personal property (capital equipment) is not applicable to property items with an acquisition cost of less than $100,000, except in situations where maintenance is needed to address worker and public health and safety concerns.

Various methods were used for measuring deferred maintenance and determining acceptable operating condition for the Department's capital equipment including periodic condition assessments, physical inspections, review of work orders, manufacturer and engineering specification, and other methods, as appropriate.

An amount of $81 million of deferred maintenance was estimated to be needed as of September 30, 2006, to return capital equipment assets to acceptable operating condition.

Budgetary Resources by Major Account as of September 30, 2006 ($in millions)

(Unaudited)

	Fossil Energy R&D 89X0213	Science 89X0222	Energy Supply & Conservation 89-0224	Strategic Petroleum Reserve 89X0233	Weapons Activities 89-0240
BUDGETARY RESOURCES					
Unobligated Balance, Brought Forward, Oct 1	$ 601	$ 28	$ 29	$ 17	$ 1,094
Recoveries of Prior Year Unpaid Obligations	6	1	3	4	1
Budget Authority	598	3,633	2,529	620	8,280
Nonexpenditure Transfers, Net	(11)	36	15	(43)	(14)
Authority Not Available	(6)	(36)	(18)	-	(64)
Total Budgetary Resources	$ 1,188	$ 3,662	$ 2,558	$ 598	$ 9,297
STATUS OF BUDGETARY RESOURCES					
Obligations Incurred	$ 587	$ 3,642	$ 2,497	$ 1	$ 8,885
Unobligated Balances Available	599	20	60	590	412
Unobligated Balances Not Available	2	-	1	7	-
Total Status of Budgetary Resources	$ 1,188	$ 3,662	$ 2,558	$ 598	$ 9,297
CHANGE IN OBLIGATED BALANCE					
Obligated Balance, Brought Forward, Oct 1	$ 482	$ 2,193	$ 696	$ 40	$ 1,509
Obligations Incurred	587	3,642	2,497	1	8,885
Less: Gross Outlays	(503)	(3,602)	(2,074)	(11)	(8,711)
Obligated Balance Transferred, Net	-	-	191	-	-
Less: Recoveries of PY Obligations, Actual	(6)	(1)	(3)	(4)	(1)
Change in Uncollected Customer Payments, Federal	-	-	139	-	540
Obligated Balance, Net, End of Period	$ 560	$ 2,232	$ 1,446	$ 26	$ 2,222
NET OUTLAYS	$ 503	$ 3,602	$ 1,237	$ 7	$ 6,324

	Other Defense Activities 89-0243	Defense Environmental Cleanup 89-0251	Defense Nuclear Nonproliferation 89-0309	Naval Reactors 89X0314	Bonneville Power Administration 89X4045
BUDGETARY RESOURCES					
Unobligated Balance, Brought Forward, Oct 1	$ 56	$ 21	$ 576	$ 3	$ -
Recoveries of Prior Year Unpaid Obligations	9	1	-	-	-
Budget Authority	643	6,198	1,645	790	4,556
Nonexpenditure Transfers, Net	-	24	(8)	-	(69)
Authority Not Available	(7)	(62)	(16)	(8)	(1,583)
Total Budgetary Resources	$ 701	$ 6,182	$ 2,197	$ 785	$ 2,904
STATUS OF BUDGETARY RESOURCES					
Obligations Incurred	$ 648	$ 6,149	$ 1,735	$ 780	$ 2,904
Unobligated Balances Available	45	27	456	5	-
Unobligated Balances Not Available	8	6	6	-	-
Total Status of Budgetary Resources	$ 701	$ 6,182	$ 2,197	$ 785	$ 2,904
CHANGE IN OBLIGATED BALANCE					
Obligated Balance, Brought Forward, Oct 1	$ 343	$ 2,142	$ 1,087	$ 296	$ 1,579
Obligations Incurred	648	6,149	1,735	780	2,904
Less: Gross Outlays	(672)	(6,262)	(1,420)	(835)	(2,410)
Obligated Balance Transferred, Net	-	237	-	-	-
Less: Recoveries of PY Obligations, Actual	(9)	(1)	-	-	-
Change in Uncollected Customer Payments, Federal	-	-	-	-	(88)
Obligated Balance, Net, End of Period	$ 310	$ 2,265	$ 1,402	$ 241	$ 1,985
NET OUTLAYS	$ 671	$ 6,257	$ 1,406	$ 835	$ (973)

	Western Area Power Administration 89X5068	Uranium Enrichment Decontamination & Decommissioning 89X5231	United States Enrichment Corporation Fund 95X4054	All Other Appropriations	Combined Statement of Budgetary Resources
BUDGETARY RESOURCES					
Unobligated Balance, Brought Forward, Oct 1	$ 94	$ -	$ 1,383	$ 342	$ 4,244
Recoveries of Prior Year Unpaid Obligations	-	-	-	22	47
Budget Authority	663	562	31	2,937	33,685
Nonexpenditure Transfers, Net	-	-	-	18	(52)
Authority Not Available	(2)	(6)	-	(296)	(2,104)
Total Budgetary Resources	$ 755	$ 556	$ 1,414	$ 3,023	$ 35,820
STATUS OF BUDGETARY RESOURCES					
Obligations Incurred	$ 672	$ 556	$ -	$ 2,600	$ 31,656
Unobligated Balances Available	83	-	-	287	2,584
Unobligated Balances Not Available	-	-	1,414	136	1,580
Total Status of Budgetary Resources	$ 755	$ 556	$ 1,414	$ 3,023	$ 35,820
CHANGE IN OBLIGATED BALANCE					
Obligated Balance, Brought Forward, Oct 1	$ 133	$ 83	$ -	$ 1,959	$ 12,542
Obligations Incurred	672	556	-	2,600	31,656
Less: Gross Outlays	(600)	(503)	-	(3,039)	(30,642)
Obligated Balance Transferred, Net	-	-	-	(428)	-
Less: Recoveries of PY Obligations, Actual	-	-	-	(22)	(47)
Change in Uncollected Customer Payments, Federal	(3)	-	-	(1)	587
Obligated Balance, Net, End of Period	$ 202	$ 136	$ -	$ 1,069	$ 14,096
NET OUTLAYS	$ 174	$ 503	$ (31)	$ (894)	$ 19,621

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

AUDITORS' REPORT

— Memorandum from the Inspector General —

Department of Energy
Washington, DC 20585

November 13, 2006

MEMORANDUM FOR THE SECRETARY

FROM: Gregory H. Friedman
Inspector General

SUBJECT: INFORMATION: Report on the Department of Energy's Fiscal Year 2006 Consolidated Balance Sheet

In response to requirements established by the Government Management Reform Act of 1994, the Office of Inspector General engaged the independent public accounting firm of KPMG LLP to audit the Department of Energy's Fiscal Year (FY) 2006 consolidated balance sheet. The contractor was engaged to audit only the balance sheet because a material weakness in financial control and reporting resulted in a disclaimer of opinion on the FY 2005 Audit of the Department's Consolidated Financial Statements.

KPMG LLP concluded that, except for the effects of not properly accounting for and reporting undelivered orders, the FY 2006 consolidated balance sheet presented fairly in all material respects the financial position of the Department. The weaknesses affecting undelivered orders were associated with the controls over the recording of obligations and the de-obligation of funds.

During FY 2006, the Department's Office of Chief Financial Officer made substantial progress in correcting a number of financial controls and reporting weaknesses that lead to the disclaimer of an audit opinion on the FY 2005 financial statements. Despite these efforts, the Department's accounting and reporting controls over obligations in FY 2006 were insufficient to prevent, detect or correct errors in a timely manner. In particular, significant differences associated with the conversion of data from the legacy accounting systems to the Standard Accounting and Reporting System (STARS) had not been resolved. Required reviews of certain obligations and undelivered order balances also had either not been performed or were not completely effective, resulting in balances that did not agree with supporting documents, obligations that remained unexpended for extended periods, and obligations with negative balances.

The audit, in addition, disclosed Departmental weaknesses in network and information systems and deficiencies in the performance measure reporting process. These weaknesses increased the risk that the Department's financial system and reported performance information may not be reliable. With respect to information systems, despite corrective actions by the Department in response to prior audit findings, network and other security weaknesses persist. Even though progress had been made, control weaknesses involving the review and approval of user access privileges, password security and the monitoring of networks for questionable activity continued to exist. Controls over performance measure reporting were also not entirely effective, providing certain information that was not consistent with actual performance and/or was not adequately supported.

With regard to the specific findings associated with undelivered orders, information systems and performance measures, the Department generally concurred and initiated or agreed to initiate corrective actions.

The preparation and audit of financial statements, it should be noted, involve many parties. The Department is responsible for preparing its consolidated financial statements and the Office of Inspector General is responsible for the audit. As previously stated, we contracted with the public accounting firm of KPMG LLP to conduct this audit. KPMG is responsible for reporting on the Department's consolidated balance sheet, applicable internal controls and compliance with laws, regulations, contracts and grant agreements. The Office of Inspector General monitored the contractor's progress, and reviewed the audit report and related documentation to ensure compliance with generally accepted Government Auditing Standards. The Office of Inspector General, however, did not prepare an independent report on the Department's consolidated balance sheet.

I would like to thank each of the Department elements for their courtesy and cooperation during the review.

Attachment

cc: Deputy Secretary (w/o attachment)
Under Secretary for Energy (w/o attachment)
Under Secretary for Science (w/o attachment)
Administrator, National Nuclear Security Administration (w/o attachment)
Chief of Staff (w/o attachment)
Chief Financial Officer

Audit Report: OAS-FS-07-02

KPMG LLP
2001 M Street, NW
Washington, DC 20036

INDEPENDENT AUDITORS' REPORT

The Inspector General, United States Department of Energy and
The Secretary, United States Department of Energy:

We have audited the accompanying consolidated balance sheet of the United States Department of Energy (Department) as of September 30, 2006. The objective of our audit was to express an opinion on the fair presentation of the consolidated balance sheet as of September 30, 2006. We were not engaged to audit the accompanying consolidated statements of net cost, changes in net position, financing, and custodial activities, and the combined statement of budgetary resources, for the year ended September 30, 2006 (hereinafter referred to as the "other fiscal year 2006 consolidated financial statements"). In connection with our 2006 audit, we also considered the Department's internal control over financial reporting, Required Supplementary Stewardship Information, and performance measures, and tested the Department's compliance with certain provisions of applicable laws, regulations, contracts, and grant agreements that could have a direct and material effect on the consolidated balance sheet as of September 30, 2006.

As discussed in this report, two of the Department's power marketing administrations, whose Department-related financial data are included in the accompanying consolidated balance sheet as of September 30, 2006, were audited by other auditors whose reports have been furnished to us and were considered in forming our overall opinion on the Department's consolidated balance sheet as of September 30, 2006.

We were also engaged to audit the accompanying consolidated balance sheet of the Department as of September 30, 2005, and the related consolidated statements of net cost, changes in net position, financing, and custodial activities, and the related combined statement of budgetary resources (hereinafter referred to as "fiscal year 2005 consolidated financial statements"), for the year then ended.

Summary

Based upon our audit and the reports of other auditors, we concluded that, except for the effects of not properly accounting for and reporting undelivered orders, the Department's consolidated balance sheet as of September 30, 2006, is presented fairly, in all material respects, in conformity with U.S. generally accepted accounting principles. We did not audit the Department's other fiscal year 2006 consolidated financial statements. Regarding the fiscal year 2005 consolidated financial statements, the scope of our work was not sufficient to enable us to express an opinion on the Department's consolidated financial statements as of and for the year ended September 30, 2005.

Our report emphasizes that: (1) the cost estimates supporting the Department's environmental remediation liabilities are based upon assumptions regarding funding and other future actions and decisions, many of which are beyond the Department's control; (2) the Department is involved as a defendant in several matters of litigation relating to its inability to accept waste by January 31, 1998, the date specified in the Nuclear Waste Policy Act of 1982, as amended; and (3) the Department changed its method of reporting earmarked funds in fiscal year 2006.

Our consideration in fiscal year 2006 of internal control over financial reporting, Required Supplementary Stewardship Information, and performance measures resulted in the following conditions being identified as reportable conditions:

Reportable condition considered to be a material weakness:

- Accounting for obligations and undelivered orders

Other reportable conditions:

- Unclassified network and information systems security
- Performance measurement reporting

The results of our 2006 tests of compliance with certain provisions of laws, regulations, contracts, and grant agreements, exclusive of those referred to in the *Federal Financial Management Improvement Act of 1996* (FFMIA), disclosed no instances of noncompliance or other matters that are required to be reported herein under *Government Auditing Standards* and Office of Management and Budget (OMB) Bulletin No. 06-03, *Audit Requirements for Federal Financial Statements*.

The results of our tests of FFMIA disclosed no instances in which the Department's financial management systems did not substantially comply with the Federal financial management systems and United States Standard General Ledger requirements. However, the results of our tests of FFMIA disclosed that the Department did not substantially comply with the Federal accounting standards requirement, as a result of the Department's inability to properly account for obligations and undelivered orders. This matter is related to the material weakness in internal controls, identified above.

The following sections discuss:

- Our opinion on the Department's consolidated balance sheet as of September 30, 2006;
- The reasons why we were unable to express an opinion on the Department's other fiscal year 2006 consolidated financial statements or on the Department's fiscal year 2005 consolidated financial statements;
- Our consideration of the Department's internal control over financial reporting, Required Supplementary Stewardship Information, and performance measures;
- Our tests of the Department's compliance with certain provisions of applicable laws, regulations, contracts, and grant agreements;

- Management's responsibilities; and
- Our responsibilities.

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheet of the United States Department of Energy as of September 30, 2006.

We did not audit the fiscal year 2006 financial statements of Bonneville Power Administration or Western Area Power Administration, whose Department-related financial data as of and for the year ended September 30, 2006, are included in the accompanying fiscal year 2006 consolidated financial statements. When combined and compared to the Department's consolidated balance sheet, the financial data for these entities represents 18 percent of total assets as of September 30, 2006. Those financial statements were audited by other auditors whose reports have been furnished to us, and our opinion on the consolidated balance sheet as of September 30, 2006, insofar as it relates to the amounts included for Bonneville Power Administration and Western Area Power Administration, is based solely upon the reports of the other auditors.

As discussed below, the Department implemented a new financial accounting system in April 2005, resulting in a number of issues that hindered its ability to assure the accuracy and completeness of fiscal year 2005 consolidated financial statement balances. While the Department addressed many of these issues in fiscal year 2006, it did not complete corrective actions to address the conditions related to the accounting for obligations and undelivered orders, which consequently affected the accuracy and completeness of reported undelivered orders as of September 30, 2006. Undelivered orders, which amount to $11.3 billion as of September 30, 2006, are a component of the unexpended appropriations account balance, and are disclosed in Note 23. Undelivered orders are also included in the unpaid obligations balance, amounting to $18 billion, shown in Note 3, Fund Balance with Treasury. It was impracticable to extend our procedures sufficiently to determine the extent to which undelivered orders in the Department's consolidated balance sheet as of September 30, 2006, may have been affected by these conditions.

In our opinion, based upon our audit and the reports of other auditors, except for the effects of not properly accounting for and reporting undelivered orders as discussed in the preceding paragraph, the consolidated balance sheet presents fairly, in all material respects, the financial position of the United States Department of Energy as of September 30, 2006, in conformity with U.S. generally accepted accounting principles.

Because of the scope limitations resulting from the fiscal year 2005 accounting system implementation which resulted in a disclaimer of opinion on the 2005 consolidated financial statements, as further described below, the Department did not engage us to audit the accompanying other fiscal year 2006 consolidated financial statements. Therefore, we did not audit the accompanying consolidated statements of net cost, changes in net position, financing, and custodial activities, and the combined statement of

budgetary resources, for the year ended September 30, 2006, and accordingly, we do not express an opinion on them.

We were engaged to audit the Department's accompanying consolidated balance sheet as of September 30, 2005, and the related consolidated statements of net cost, changes in net position, financing, and custodial activities, and the related combined statement of budgetary resources, for the year then ended.

The Department implemented a new financial accounting system in April 2005, shortly after the October 2004 reorganization and consolidation of its finance and accounting services organization. The Department also adopted a new chart of accounts in conjunction with the new accounting system. As a result of these events, during fiscal year 2005, the Department encountered a significant number of conversion, posting, reconciliation, and reporting issues that hindered its ability to assure the accuracy and completeness of consolidated financial statement balances and to provide data necessary for audit testing. We noted specific issues in fiscal year 2005, related to the accounting for obligations, monitoring budget execution and control, reconciling payment information with the U.S. Department of the Treasury, accounting for accruals, reconciling integrated contractor trial balances with the Department's records, reconciling accounting system modules to the general ledger, resolving various posting errors, and identifying and reporting intragovernmental transactions. We noted that many reports needed for management, internal control, and audit purposes were not available following system deployment. Finally, during fiscal year 2005, the Department restructured and consolidated its accounting operations, realigning its accounting functions across the Department and causing a negative impact on the financial accounting staffing levels and skills mix throughout the Department. During fiscal year 2005, the Department did not complete corrective actions to address these conditions. Therefore, it was unable to provide accurate financial data and could not always provide supporting documents required for our fiscal year 2005 audit. It was impracticable to extend our procedures sufficiently to determine the extent to which the Department's consolidated financial statements as of and for the year ended September 30, 2005, may have been affected by these conditions.

Because of the matters discussed in the preceding paragraph, the scope of our work was not sufficient to enable us to express, and we do not express, an opinion on the accompanying fiscal year 2005 consolidated financial statements of the United States Department of Energy as of and for the year ended September 30, 2005.

As discussed in Note 14 to the consolidated financial statements, the cost estimates supporting the Department's environmental remediation liabilities of $230 billion and $190 billion (unaudited) as of September 30, 2006 and 2005, respectively, are based upon assumptions regarding funding and other future actions and decisions, many of which are beyond the Department's control.

As discussed in Note 16 to the consolidated financial statements, the Department is involved as a defendant in several matters of litigation relating to its inability to accept waste by January 31, 1998, the date specified in the *Nuclear Waste Policy Act of 1982*, as

amended. The Department has recorded liabilities for likely damages of $6.7 billion and $5 billion (unaudited) as of September 30, 2006 and 2005, respectively.

As discussed in Note 1 to the consolidated financial statements, the Department changed its method of reporting earmarked funds in fiscal year 2006 to adopt the provisions of the Federal Accounting Standards Advisory Board's Statement of Federal Financial Accounting Standards No. 27, *Identifying and Reporting Earmarked Funds*.

The information in the Management's Discussion and Analysis, Required Supplementary Stewardship Information, and Required Supplementary Information sections of the Department's *Fiscal Year 2006 Performance and Accountability Report* is not a required part of the consolidated financial statements, but is supplementary information required by U.S. generally accepted accounting principles and OMB Circular No. A-136, *Financial Reporting Requirements*. We have applied certain limited procedures, which consisted principally of inquiries of management regarding the methods of measurement and presentation of this information. However, we did not audit this information and, accordingly, we express no opinion on it.

Our 2006 audit was conducted for the purpose of forming an opinion on the consolidated balance sheet as of September 30, 2006, taken as a whole. The information in the Consolidating Schedules section of the Department's *Fiscal Year 2006 Performance and Accountability Report* is presented for purposes of additional analysis of the consolidated financial statements rather than to present the financial position, net costs, changes in net position, budgetary resources, reconciliation of net costs to budgetary obligations, and custodial activities of the Department's components individually. The consolidating balance sheet as of September 30, 2006, has been subjected to the auditing procedures applied in the audit of the consolidated balance sheet as of September 30, 2006, and, in our opinion, based upon our audit and the reports of other auditors, except for the effects of not properly accounting for and reporting undelivered orders as described in this report, is fairly stated, in all material respects, in relation to the consolidated balance sheet as of September 30, 2006, taken as a whole. The other fiscal year 2006 information and the fiscal year 2005 information in the Consolidating Schedules section are based on the other fiscal year 2006 consolidated financial statements and the fiscal year 2005 consolidated financial statements, respectively, on which we express no opinion. Accordingly, we express no opinion on the other fiscal year 2006 and the fiscal year 2005 information in the Consolidating Schedules.

The information in the Performance Results section, the Other Accompanying Information section, the Glossary of Acronyms, and the information presented on pages i through iii of the Department's *Fiscal Year 2006 Performance and Accountability Report* is presented for purposes of additional analysis and is not a required part of the consolidated financial statements. This information has not been subjected to auditing procedures, except for the testing of controls over selected performance measures, described in the Responsibilities section of this report, and, accordingly, we express no opinion on it.

KPMG

Internal Control over Financial Reporting

Our consideration of internal control over financial reporting would not necessarily disclose all matters in the internal control over financial reporting that might be reportable conditions. Under standards issued by the American Institute of Certified Public Accountants, reportable conditions are matters coming to our attention relating to significant deficiencies in the design or operation of the internal control over financial reporting that, in our judgment, could adversely affect the Department's ability to record, process, summarize, and report financial data consistent with the assertions by management in the consolidated financial statements.

Material weaknesses are reportable conditions in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements caused by error or fraud, in amounts that would be material in relation to the consolidated financial statements being audited, may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. Because of inherent limitations in internal control, misstatements due to error or fraud may nevertheless occur and not be detected.

In our 2006 audit, we noted certain matters involving internal control over financial reporting and its operation that we consider to be reportable conditions. We believe that the following reportable condition, described in more detail in Exhibit I, is a material weakness.

> ***Accounting for obligations and undelivered orders*** – We found significant deficiencies in the Department's internal controls over the timely recording of the obligation and de-obligation of funds. The identified deficiencies precluded the Department from ensuring the accuracy, validity, and completeness of obligations and undelivered orders. The Department should enhance established controls to ensure that obligations are recorded in a timely manner, correct all remaining conversion errors, resolve and correct negative undelivered order balances, and ensure that obligated funds are promptly de-obligated when those funds are no longer needed.

The following reportable condition, which is not considered to be a material weakness, is described in more detail in Exhibit II.

> ***Unclassified network and information systems security*** – We noted network vulnerabilities and weaknesses in access and other security controls in the Department's unclassified computer information systems. The identified weaknesses and vulnerabilities increased the risk that malicious destruction or alteration of data or unauthorized processing could occur. The Department should fully implement policies and procedures to improve its network and information systems security.

The current status of the prior year reportable conditions is presented in Exhibit III.

As discussed in the Report on the Consolidated Financial Statements section, the scope of our work was limited to expressing an opinion on the Department's consolidated balance sheet as of September 30, 2006. Had we been able to perform all of the procedures necessary to express an opinion on the other fiscal year 2006 consolidated financial statements, other matters involving internal control over financial reporting may have been identified and reported.

We noted certain additional matters involving internal control over financial reporting and internal control over financial management systems that we will report to management in separate letters.

Internal Controls over Required Supplementary Stewardship Information and Performance Measures

Under OMB Bulletin No. 06-03, the definition of material weaknesses is extended to other controls as follows. Material weaknesses are reportable conditions in which the design or operation of one or more of the internal control components does not reduce to a relatively low level the risk that misstatements caused by error or fraud, in amounts that would be material in relation to the Required Supplementary Stewardship Information or to a performance measure or aggregation of related performance measures, may occur and not be detected within a timely period by employees in the normal course of performing their assigned functions. Because of inherent limitations in internal control, misstatements due to error or fraud may nevertheless occur and not be detected.

Our consideration of the internal control over the Required Supplementary Stewardship Information and the design and operation of internal control over the existence and completeness assertions related to key performance measures would not necessarily disclose all matters involving the internal control and its operation related to Required Supplementary Stewardship Information, or the design and operation of the internal control over the existence and completeness assertions related to key performance measures, that might be reportable conditions.

In our 2006 audit, we noted no matters involving the internal control and its operation related to Required Supplementary Stewardship Information that we considered to be material weaknesses as defined above.

Further, in our 2006 audit, we noted the following reportable condition, described in more detail in Exhibit II, involving the design and operation of internal control over the existence and completeness assertions related to key performance measures that, in our judgment, could adversely affect the Department's ability to collect, process, record, summarize and report performance measures in accordance with management's criteria.

> ***Performance Measurement Reporting*** – The Department's performance reporting process does not ensure that reported performance information reflects actual performance and is adequately supported by documentation. This deficiency limits the accuracy and reliability of reported performance information. The Department should provide additional training and guidance to strengthen

internal controls to ensure the accuracy of reported performance data and the maintenance of related supporting documentation, and to provide for a supervisory review of reported performance results.

This reportable condition is not believed to be a material weakness as defined above.

Compliance and Other Matters

Our 2006 tests of compliance, as described in the Responsibilities section of this report, exclusive of those referred to in FFMIA, disclosed no instances of noncompliance or other matters that are required to be reported herein under *Government Auditing Standards* and OMB Bulletin No. 06-03.

The results of our tests of FFMIA disclosed no instances in which the Department's financial management systems did not substantially comply with the Federal financial management systems and United States Standard General Ledger requirements, discussed in the Responsibilities section of this report. However, the results of our tests of FFMIA disclosed instances in which the Department did not substantially comply with the Federal accounting standards requirement, as a result of the Department's inability to properly account for obligations and undelivered orders. This matter is related to the material weakness in internal controls described in the Internal Control over Financial Reporting section of this report, and our related recommendations are presented in Exhibit I.

As discussed in the Report on the Consolidated Financial Statements section, the scope of our audit was limited to expressing an opinion on the Department's consolidated balance sheet as of September 30, 2006. Had we been able to perform all of the procedures necessary to express an opinion on the other fiscal year 2006 consolidated financial statements, other matters involving compliance with laws, regulations, contracts, and grant agreements may have been identified and reported.

Responsibilities

Management's Responsibilities. The United States Code, Title 31, Sections 3515 and 9106, requires agencies to report annually to Congress on their financial status and any other information needed to fairly present their financial position and results of operations. To meet these reporting requirements, the Department prepares and submits financial statements in accordance with OMB Circular No. A-136.

Management is responsible for the consolidated financial statements, including:

- Preparing the consolidated financial statements in conformity with U.S. generally accepted accounting principles;
- Preparing Management's Discussion and Analysis (including the performance measures), Required Supplementary Information, and Required Supplementary Stewardship Information;

- Establishing and maintaining effective internal controls; and
- Complying with laws, regulations, contracts, and grant agreements applicable to the Department, including FFMIA.

In fulfilling this responsibility, management is required to make estimates and judgments to assess the expected benefits and related costs of internal control policies.

Auditors' Responsibilities. Our responsibility is to express an opinion on the Department's consolidated balance sheet as of September 30, 2006, based on our audit and the reports of other auditors. Except as discussed in the third paragraph of the Report on the Consolidated Financial Statements section above, we conducted our audit in accordance with auditing standards generally accepted in the United States of America; the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States; and OMB Bulletin No. 06-03. Those standards and OMB Bulletin No. 06-03 require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated balance sheet is free of material misstatement. An audit includes consideration of internal control over financial reporting as a basis for designing audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Department's internal control over financial reporting. Accordingly, we express no such opinion.

As discussed in the Report on the Consolidated Financial Statements section, we were not engaged to audit the Department's other fiscal year 2006 consolidated financial statements and we express no opinion on them, and the scope of our work was not sufficient to enable us to express, and we do not express, an opinion on the Department's fiscal year 2005 consolidated financial statements.

An audit also includes:

- Examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements;
- Assessing the accounting principles used and significant estimates made by management; and
- Evaluating the overall consolidated financial statement presentation.

We believe that our audit and the reports of other auditors provide a reasonable basis for our opinion on the consolidated balance sheet as of September 30, 2006.

In planning and performing our 2006 audit, we considered the Department's internal control over financial reporting by obtaining an understanding of the Department's internal control, determining whether internal controls had been placed in operation, assessing control risk, and performing tests of controls in order to determine our auditing procedures for the purpose of expressing our opinion on the consolidated balance sheet. We limited our internal control testing to those controls necessary to achieve the objectives described in *Government Auditing Standards* and OMB Bulletin No. 06-03.

We did not test all internal controls relevant to operating objectives as broadly defined by the *Federal Managers' Financial Integrity Act of 1982*. The objective of our audit was not to provide an opinion on the Department's internal control over financial reporting. Consequently, we do not provide an opinion thereon.

As required by OMB Bulletin No. 06-03, in our 2006 audit, we considered the Department's internal control over the Required Supplementary Stewardship Information by obtaining an understanding of the Department's internal control, determining whether these internal controls had been placed in operation, assessing control risk, and performing tests of controls. We limited our testing to those controls necessary to test and report on the internal control over Required Supplementary Stewardship Information in accordance with OMB Bulletin No. 06-03. However, our procedures were not designed to provide an opinion on internal control over the Required Supplementary Stewardship Information and, accordingly, we do not provide an opinion thereon.

As further required by OMB Bulletin No. 06-03, in our 2006 audit, with respect to internal control related to performance measures determined by management to be key and reported in the Management's Discussion and Analysis and Performance Results sections, we obtained an understanding of the design of internal controls relating to the existence and completeness assertions and determined whether these internal controls had been placed in operation. We limited our testing to those controls necessary to test and report on the internal control over key performance measures in accordance with OMB Bulletin No. 06-03. However, our procedures were not designed to provide an opinion on internal control over reported performance measures and, accordingly, we do not provide an opinion thereon.

As part of obtaining reasonable assurance about whether the Department's consolidated balance sheet as of September 30, 2006, is free of material misstatement, we performed tests of the Department's compliance with certain provisions of laws, regulations, contracts, and grant agreements, noncompliance with which could have a direct and material effect on the determination of the consolidated balance sheet amounts, and certain provisions of other laws and regulations specified in OMB Bulletin No. 06-03, including certain provisions referred to in FFMIA. We limited our tests of compliance to the provisions described in the preceding sentence, and we did not test compliance with all laws, regulations, contracts, and grant agreements applicable to the Department. Providing an opinion on compliance with laws, regulations, contracts, and grant agreements was not an objective of our audit and, accordingly, we do not express such an opinion.

Under OMB Bulletin No. 06-03 and FFMIA, we are required to report whether the Department's financial management systems substantially comply with (1) Federal financial management systems requirements, (2) applicable Federal accounting standards, and (3) the United States Government Standard General Ledger at the transaction level. To meet this requirement, we performed tests of compliance with FFMIA Section 803(a) requirements.

Restricted Use

This report is intended solely for the information and use of the Department's management, the Department's Office of Inspector General, OMB, the U.S. Government Accountability Office, and the U.S. Congress and is not intended to be and should not be used by anyone other than these specified parties.

KPMG LLP

November 8, 2006

Independent Auditors' Report
Exhibit I – Material Weakness

Accounting for Obligations and Undelivered Orders

We identified a material weakness in the Department's internal controls over the timely recording of the obligation and de-obligation of funds that precluded the Department from assuring the accuracy and completeness of the undelivered orders balance in its consolidated balance sheet as of September 30, 2006. Undelivered orders, which are reported at $11.3 billion as of September 30, 2006, are a component of the unexpended appropriations account balance, disclosed in Note 23, and are included in the unpaid obligations balance, amounting to $18 billion, shown in Note 3, Fund Balance with Treasury. Despite substantial progress by the Chief Financial Officer's staff in correcting a material weakness resulting from the implementation of the Standard Accounting and Reporting System (STARS) during fiscal year 2005, the Department was unable to correct the internal control deficiencies described below. As a consequence, we qualified our opinion on the Department's consolidated balance sheet as of September 30, 2006.

The Department has not completed all of the corrective actions needed to reconcile the obligations data converted from the Department's legacy accounting systems to STARS. These data conversion differences have impacted the accuracy of undelivered orders balances at all field offices at which they were tested in our 2006 audit. In addition, many of the field offices did not perform the periodic reviews required by Departmental guidance of stale obligations or negative undelivered order balances during fiscal year 2006. As a result, these field offices certified that their Financial Management Service (FMS) 2108 reports at June 30 and September 30, 2006, were accurate, without fully completing the procedures necessary to substantiate these certifications. The effects of these control deficiencies on the Department's undelivered orders balance included undelivered orders balances that did not agree with supporting documents, stale obligations that had not been de-obligated, and a large number of undelivered orders with negative balances. Furthermore, errors in recording obligations, such as duplicating obligating entries or recording obligations in a subsequent accounting period, also caused misstatements of the undelivered orders balance. The Department was unable to implement corrective actions to review and correct all of its undelivered orders balances as of September 30, 2006.

Recommendation:

We recommend that the Department enhance established controls to ensure that obligations are recorded in a timely manner. The Department should also complete its planned corrective actions to correct all remaining conversion errors and resolve and correct negative undelivered order balances. In addition, we recommend that the Department enforce adherence to established controls that ensure obligated funds are promptly de-obligated when those funds are no longer needed.

Management's Response:

The Department concurs with the recommendations regarding obligations and undelivered orders. To address this problem, a task force has been assembled from across the complex to review the circumstances surrounding the undelivered orders issue. The task force has been chartered and has already begun its work to determine root causes of the various elements of the problem. Once root cause analysis is complete, the task force will develop a corrective action plan that will enhance existing internal controls, implement new controls as necessary, provide for correction of undelivered order balances, and put new guidelines in place to address stale obligation balances.

The task force is being headed by the Field Chief Financial Officer from the Idaho Operations Office and has members from the DOE headquarters, field sites, and the Office of Corporate Information Systems. The task force will be substantially complete with its work by early December, at which time the Department will begin implementation of the corrective action plan.

It is the Department's intention to have these corrective actions materially completed in sufficient time for the Office of the Inspector General and the independent auditors to reexamine the undelivered orders balances prior to the start of fiscal year 2007 audit work.

Independent Auditors' Report
Exhibit II – Reportable Conditions

Unclassified Network and Information Systems Security

The Department maintains a series of interconnected unclassified networks and information systems. Federal and Departmental directives require the establishment and maintenance of security over unclassified information systems, including financial management systems. Past audits identified significant weaknesses in selected systems and devices attached to the computer networks at some Department sites. The Department has implemented corrective actions to improve network security at the sites whose controls we, and the Department's Office of Health, Safety and Security (HSS), reviewed in prior years. However, we and the HSS continued to identify network security weaknesses at sites reviewed in fiscal year 2006, and the frequency and severity of those weaknesses remained consistent with our prior year findings. The Department recognizes these weaknesses and has classified cyber security as a significant issue in its *Federal Managers' Financial Integrity Act* assurance statement for fiscal year 2006. Significant improvements are still needed in the areas of password management, configuration management, and restriction of network services.

Our fiscal year 2006 audit also disclosed weaknesses in access at several sites, similar to our prior year findings. Specifically, we noted weaknesses in the review and approval of user access privileges, password security, and monitoring of networks for questionable activity. We also noted weaknesses in the cyber security programs at certain locations in which Federal cyber security requirements and Departmental policies and controls were not properly implemented. Further, the Department's Office of Inspector General also reported deficiencies in the Department's network and information system risk management, configuration management, and access controls in its evaluation report on *The Department's Unclassified Cyber Security Program*, dated September 2006. Matters discussed in that report included an examination of non-financial systems.

The Department has acknowledged the need to improve its information systems security and other information technology controls. In fiscal year 2006, the Department's Chief Information Officer (CIO) launched a revitalization plan designed to improve the management of its information security program and issued enhanced cyber security guidance to strengthen controls and reduce network vulnerabilities. The Cyber Security Revitalization Plan is a collaborative effort between the Office of the CIO, the Under Secretaries and other senior management to identify and resolve cyber security problems, provide site assistance, and follow-up on corrective actions. Once fully implemented, these initiatives and new policies and procedures should strengthen the Department's overall cyber security program.

The identified weaknesses in network vulnerabilities and access controls increase the risk that malicious destruction or alteration of data or unauthorized processing could occur. Because of our concerns, we performed supplemental procedures and identified compensating controls that mitigate the potential effect of these security weaknesses on the integrity of the Department's financial systems.

Recommendation:

While progress has been achieved, continued focus is needed to resolve the vulnerability and access control weaknesses described above. Therefore, we recommend that the program officials, in conjunction with the CIO, fully implement policies and procedures to ensure that the Federal information security standards are met and that networks and information systems are adequately protected against unauthorized access. Detailed recommendations to address the issues discussed above have been separately reported to the program offices and the OCIO.

Management's Response:

Management concurs with the recommendation, and shares the auditor's concerns that cyber security controls are integral to the integrity of financial and accounting systems. The Office of the Chief Information Officer (OCIO) will continue to work with the Office of the Inspector General, the Chief Financial Officer and other DOE organizations to improve the implementation of cyber security controls, specifically in the areas of password management, configuration management, and restriction of network services.

As stated in the OCIO comments on the FISMA report, the Department of Energy is committed to improving the protection of its information and information systems through a strong cyber security program. As part of this commitment, the Department's senior management during FY 2006 created the Cyber Security Executive Steering Committee, chaired by the CIO and including as active members the three Under Secretaries as well as the Chief Health, Safety, and Security Officer, the Administrator of the Energy Information Administration and a representative of the Power Marketing Administrations. The Secretary and the Deputy Secretary are personally involved in cyber security management, and they have guided the development of a Cyber Security Revitalization Plan to give more and higher level attention to the management of cyber security.

The Cyber Security Revitalization Plan, developed by the Executive Steering Committee, establishes a governance framework for cyber security management in the Department through a partnership between OCIO and the Under Secretaries and other senior management to provide adequate protection of all DOE information and information systems. The Plan was approved by the Deputy Secretary in March 2006.

Efforts to date implementing the Plan have included cyber security guidance issued by the OCIO addressing:

- Management, Operation, and Technical Controls for Information Systems;
- Certification and Accreditation;
- Risk Management for Information Systems;
- Vulnerability Management;
- Interconnection Agreements;
- Plans of Actions and Milestones;

- Contingency Planning;
- Password Management;
- Wireless Devices; and
- Protection of Personally Identifiable Information.

This guidance also addresses cyber security controls that support configuration management, and the restriction of network services. The CIO is also leading a Corporate Asset Management initiative which will further mitigate weaknesses identified in these areas.

The Steering Committee has also established a Cyber Security Working Group, which participates actively in the development of cyber security guidance and in other cyber security activities.

Performance Measurement Reporting

The Department presents performance measures and associated results in the Performance Results and Management's Discussion and Analysis sections of its *Fiscal Year 2006 Performance and Accountability Report*. The Department has implemented a system to collect performance measure results quarterly, from the various Headquarters, field, and contractor elements. The Department has also issued guidance to ensure that reported performance results are adequately supported by documentation that can be independently verified. However, the results of our 2006 testing indicated that the Department's performance reporting process does not always ensure that reported performance information reflects actual performance and is adequately supported.

Our procedures identified 2 of the 29 annual performance targets or performance measures that we selected for testing that were incorrectly reported. In addition, the Department was unable to provide underlying data to support the reported performance results for an additional 4 of the 29 annual performance targets tested.

Weaknesses in procedures designed to accurately report performance measure results limit the readers' ability to properly assess the Department's performance.

Recommendation:

We recommend that the Department's Chief Financial Officer strengthen internal controls to ensure the accuracy of reported performance data and the maintenance of related supporting documentation, and to provide for a supervisory review of reported performance results. We also recommend that additional training and guidance be issued to all Departmental elements with regards to enhancing internal controls over performance measurement reporting.

Management's Response:

The Department generally concurs with the auditor's recommendation that we strengthen internal controls to ensure the accuracy of reported performance data and the maintenance of related supporting documentation. To improve existing controls, the Department will strengthen documentation requirements and ensure training is provided to applicable Departmental elements.

Management will also strengthen the procedures pertaining to quality of reported results and supporting documentation prior to official submission. To that end, management will improve guidance with respect to quality control of submitted performance results and appropriate management oversight of those submissions. The end result is to ensure that errors do not occur in the data calculation and reporting process, and if they do that those errors are detected and corrected before performance data is officially submitted.

Independent Auditors' Report
Exhibit III – Status of Prior Year Audit Findings

Reportable Conditions from FY 2005 (with parenthetical disclosure of year first reported)	**Status at September 30, 2006**
Financial Management and Reporting Controls – Considered a Material Weakness (2005)	Partially implemented – In fiscal year 2006, the Department was able to resolve many of the issues raised during the fiscal year 2005 audit, such as reconciling payment information with the U.S. Department of the Treasury, reconciling integrated contractor trial balances with the Department's records, reconciling accounting system modules to the general ledger, resolving various posting errors, and identifying and reporting intragovernmental transactions. In addition, the Department was able to produce reports for management, internal control, and audit purposes that it was not able to produce in the previous year. However, unresolved weaknesses relating to obligations and undelivered orders continue to be reported in Exhibit I as a material weakness.
Unclassified Information Systems Security (1999)	Not implemented – Unclassified network and information systems security issues continue to be reported in Exhibit II as a reportable condition.

OTHER ACCOMPANYING INFORMATION

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

INSPECTOR GENERAL'S MANAGEMENT AND PERFORMANCE CHALLENGES

On an annual basis, the Office of Inspector General identifies what it considers to be the most significant management challenges facing the Department of Energy. Now codified as part of the Reports Consolidation Act of 2000, this effort assesses the agency's progress in addressing previously identified challenges and identifies key emerging issues. This process assists the Office of Inspector General in setting internal priorities as it evaluates Department of Energy programs and operations.

Representing risks inherent to the Department's complex operations as well as those related to management operations, the management challenges are, for the most part, not amenable to immediate resolution and must, therefore, be addressed through a concentrated, persistent effort, over time. This year, the Office of Inspector General identified seven management challenges:

- Safeguards and Security
- Environmental Cleanup
- Stockpile Stewardship
- Contract Management
- Project Management
- Cyber Security
- Energy Supply

In addition to identifying the management challenges, we also developed a "watch list," which consists of important issues that do not meet the threshold of being classified as management challenges, yet warrant continued attention by the Department. The watch list includes the following operational and programmatic functions: Financial Management and Reporting; Worker and Community Safety; and, Human Capital Management.

By aggressively addressing these challenges, the Department can enhance program efficiency and effectiveness; prevent fraud, waste, and abuse; and, achieve substantial operational cost savings.

Safeguards and Security

While the Department has shifted its focus over time, special emphasis on safeguards and security has remained a vital aspect of the Department's mission. The Department plays an important role in the Nation's security by ensuring the safety and reliability of the U.S. nuclear weapons stockpile, advancing international efforts in nuclear non-proliferation and providing safe and efficient nuclear propulsion systems for the United States Navy. Due to the sensitivity of these missions, the Department maintains a substantial security regime, including over 4,000 protective force personnel and various physical safeguards for classified material and other sensitive property.

Over the past year, the Department made strides toward improving safeguards that protect the agency's employees and facilities. While we view this progress as a positive step, during FY 2006, we conducted several reviews which highlighted the need for continued improvement in this area. For example:

- An October 2005 audit of the Department's implementation of the Design Basis Threat (DBT) process, which reflects the most credible threats posed to Departmental assets and operations, revealed that the National Nuclear Security Administration experienced delays in implementing changes to meet the safeguards and security performance requirements contained in the 2003 DBT.
- A recent audit of the Department's management of non-nuclear high explosives found that two National Nuclear Security Administration defense laboratories were not maintaining control, accountability and safety over its inventory of explosives.

Clearly, the Department's core mission must be conducted in a safe and secure environment. The issues disclosed in our work during FY 2006 suggest the need for continued focus by Department management on this crucial challenge.

Environmental Cleanup

Largely a result of the legacy of the Manhattan Project and subsequent activities, the Department's environmental remediation activities are among it most important programs. The Department is responsible for cleaning contaminated sites and disposing of radioactive, hazardous and mixed waste resulting from over half a century of nuclear weapons production, research and other activities. The projected cost of these remediation efforts is over $180 billion, which represents the third largest liability on the overall financial statement of the U.S. Government.

During FY 2006, due to the risks and hazards associated with this difficult and costly task, we conducted a series of reviews to assess the progress of the Department's environmental cleanup activities. For example:

- An October 2005 audit disclosed that, in terms of both schedule and cost, the Department will not meet its milestone under the 1989 Tri-Party Agreement between the Department, the Washington State Department of Ecology, and the Environmental Protection Agency, for the retrieval of waste from single-shell tanks located at the Hanford Site's C-Farm.
- A May 2006 audit found that there have been delays in developing and implementing a spent nuclear fuel program at the Savannah River Site. As a result, the current conventional processing facility, known as H-Canyon will have to be maintained in an idle, but operational mode for at least two years, which is projected to cost taxpayers approximately $300 million.

While the Department made significant remediation progress at a number of contaminated sites over the past year, it continues to experience delays in accelerated cleanup programs and has faced quality assurance concerns at the Yucca Mountain Project. Thus, in our judgment, Environmental Cleanup remains a management challenge that will warrant significant attention into the future.

Stockpile Stewardship

The Department is responsible for the maintenance, certification and reliability of the Nation's nuclear weapons stockpile. In order to ensure that our nuclear weapons continue to serve their essential deterrence role, the Department maintains stockpile surveillance and engineering capability, refurbishes selected nuclear systems and sustains the ability to restore the manufacturing infrastructure for the production of replacement weapons.

Given the importance and complexity of the Department's role in ensuring the vitality of the U.S. nuclear stockpile, the Office of Inspector General classified Stockpile Stewardship as a significant management challenge. Over the past year, the Office of Inspector General has conducted a series of reviews to examine the Department's activities and management strategies in this crucial area.

- In response to the aging of the Nation's nuclear weapons stockpile, the National Nuclear Security Administration, working with the U.S. Department of Defense, developed strategies, known as Life Extension Programs, to refurbish the weapons stockpile to extend its deployment life. As part of this process, the W76 weapon system will undergo refurbishment at a cost of $916 million through the first production unit date to address aging concerns and to provide long-term certification of the system. A recent audit concluded that the National Nuclear Security Administration is at risk of not achieving the first production unit for the W76 refurbishment within the scope, schedule, and cost parameters detailed in the project plan.
- The Department's Sandia National Laboratory is refurbishing the Spin Rocket Motor, which is a prime component of the B61 nuclear weapon system. A September 2006 audit found that the National Nuclear Security Administration had not adequately validated key Spin Rocket Motor data provided by Sandia National Laboratory prior to the approval of the new project.

The Department has taken steps to further enhance the safety and reliability of the U.S. weapons stockpile. Most prominently, in FY 2006, the Department announced the details of a comprehensive plan to employ a smaller, safer and more secure weapons stockpile in order to improve our capability to respond to changing security challenges. The goal of the plan, as stated by the Department, is to facilitate an improved research and development infrastructure, modernize production facilities and consolidate nuclear materials. Although in its initial stages, the program is a positive step toward improving the Department's Stockpile Stewardship Program.

Contract Management

The Department places significant reliance on contractors, employing over 100,000 contractor employees. Contracts are awarded to industrial companies, academic institutions and non-profit organizations that operate a broad range of Department facilities, including its most sensitive national security facilities. In fact, most of the Department's operations are carried out through contracts that consume about three-fourths of its budget. As a result, effective contract management is an essential component of the performance of the Department's programs.

During FY 2006, Office of Inspector General reviews highlighted the need for improved management oversight in the administration of Departmental contracts. For example:

- A December 2005 review determined that the cost of the Mixed Oxide Fuel Fabrication (MOX) Facility at the Savannah River Site will significantly exceed the amounts reported to Congress in 2002. During the course of our review, we found that the Department's estimate for the design and construction of the MOX Facility was approximately $3.5 billion, which was $2.5 billion more than previously estimated.
- In FY 2005, the Department and its contractors spent over $1.2 billion on information technology (IT) infrastructure and support, including activities such as server and network technical services, database management and administration, and desktop support. An April 2005 audit revealed that while the Department had initiated action to consolidate requirements for services provided to Federal employees, it continues to face a number of challenges related to contractor procured IT support services.

To its credit, in response to several of our reviews, the Department has developed strategies and programs to address contract management concerns. However, given the number of contracts awarded and managed by the Department on a yearly basis, combined with the issues raised in our reviews, the area of contract management remains a significant Department challenge.

Project Management

The Department undertakes numerous unique and complex multi-million dollar projects in order to support its various missions. In recent years, the Department, in responding to identified weaknesses in the area of project management, improved the discipline and structure for monitoring project performance. Further, by employing effective policies and controls to ensure that ongoing projects are evaluated frequently, the Department has focused on improving project management throughout the complex.

Recent Office of Inspector General reviews have identified additional improvements which are necessary to ensure that the Department's efforts to enhance project management throughout the complex are effective and accomplishing its goals. For example:

- In May 2001, the Office of Inspector General reported that the Department's Miamisburg Closure Project would not be completed under current cost and schedule requirements. A recent follow-up audit concluded that the Department is unlikely to achieve revised closure goals on the Miamisburg Closure Project.
- A December 2005 audit found that the curtailment of operations at the Radiological Calibration Laboratory at the Hanford Site, as planned by the Department, would leave the Office of Environmental Management without site capability to perform internal and external dosimetry assessments and radiological calibrations.

While the Department has continued to make progress toward improving project management principles, our reviews over the past year continue to highlight weaknesses in this area. Concerns related to project management within the Department were emphasized in the release of a recent review by the U.S. Army Corps of Engineers pertaining to the estimated cost of the Waste Treatment and Immobilization Plant at the Hanford Site. Given the complexity and importance of the Department's numerous multi-million dollar projects and the results of recent Office of Inspector General reports, Project Management remains a significant management challenge.

Cyber Security

The Department spends approximately $2.5 billion a year on information technology. As a result of the importance of information technology on its numerous projects, laboratories and assets, along with the vast array of data that is produced, cyber security has become a crucial aspect of the Department's overall security posture. In 2005, the Department established a Cyber Security Improvement initiative, the goal of which was to identify improvements for cyber security controls within the Department. In recent years, threats to the Government's information systems have become a national security risk. As a result of these risks and in light of recent efforts to intrude into the Department's systems, we have categorized Cyber Security as a significant management challenge.

During FY 2006, the Office of Inspector General conducted various reviews in this area, which highlighted the need for improvements in the overall cyber security program.

- A September 2006 audit disclosed deficiencies in the Department's unclassified cyber security program, which exposed critical systems to an increased risk of compromise. We found that continuing cyber security weaknesses occurred, at least in part, because program and field elements did not always implement or properly execute existing Departmental and Federal cyber security requirements.
- During a June 9, 2006, congressional hearing, Department officials publicly disclosed that an unclassified computer system was compromised at the NNSA Service Center in Albuquerque, New Mexico. As a result, a file containing the names and social security numbers of 1,502 NNSA employees was ex-filtrated. An Office of Inspector General special inquiry concluded that the Department's handling of this matter was largely dysfunctional and that the operational and procedural breakdowns were caused by questionable managerial judgments; significant confusion by key decision makers as to lines of authority, responsibility, and accountability; poor internal communications; and, insufficient follow-up on critically important issues and decisions.

To help address continuing weaknesses, the Department recently launched a revitalization effort designed to improve the management of its cyber security program to ensure that systems and data are secure. Due to the evolving nature of cyber security threats, immediate as well as long-term action is necessary to ensure the protection of the Department's information systems.

Energy Supply

On August 8, 2005, the Energy Policy Act of 2005 was signed into law at the Department's Sandia National Laboratory in Albuquerque, New Mexico. Intended to establish a comprehensive, long-term energy policy, the Act provides incentives for traditional energy production as well as newer, more efficient energy technologies. The first comprehensive energy legislation in over a decade, the Act focuses on areas such as energy efficient building construction, hybrid vehicles, clean coal, and other renewable and alternative energy sources. The passage of the Energy Policy Act provides the Department with the opportunity to aggressively lead the effort to increase our national commitment to alternative fuels and clean energy technologies. The Department is charged with the task of helping to modernize our national energy infrastructure; expand the Strategic Petroleum Reserve; invest in clean energy technologies such as hydropower, wind, solar, and cellulosic biomass; and, to promote conservation in our homes and businesses.

The energy issues facing the United States today did not develop overnight and, therefore, will require both short-term and long-term solutions to address growing challenges. To combat challenges related to the modernization of the national energy infrastructure, in FY 2006, the Department announced the nomination of the first Assistant Secretary for Electricity Delivery and Energy Reliability. This position supports the Department's objective to improve research and development pertaining to electricity delivery infrastructure; conduct analyses of the physical, regulatory, and institutional barriers that interfere with the efficient and secure operation of electric transmission and distribution systems; and, bring public awareness to the developments that will help ensure the reliable flow of energy to all Americans.

Given the importance of stabilizing the country's energy supply and the challenges that this monumental task requires, we have categorized Energy Supply as a significant management challenge facing the Department.

IMPROPER PAYMENTS INFORMATION ACT REPORTING DETAILS

(UNAUDITED)

Improper Payment Outlook

As noted in the chart below, the Department's extremely low improper payment rate minimizes the Department's opportunities for future reductions in erroneous payments.

Improper Payment (IP) Reduction Outlook
FY 2006 – FY 2009 ($ in millions)

Class of Payment/Program	FY 2006 Outlays/Payments	FY 2006 IP%	FY 2006 IP$	FY 2007 IP%	FY 2008 IP%	FY 2009 IP%
Payroll	$ 6,646	0.12	$ 8.0	<.25	<.25	<.25
Travel	$ 494	0.09	$ .4	<.25	<.25	<.25
Vendors	$ 16,148	0.07	$ 10.0	<.25	<.25	<.25
Other	$ 363	0.00	$ 0.0	<.25	<.25	<.25

Note: Federal payroll not included due to outsourcing of this function. The payroll category in this chart represents payroll paid by DOE's major operating contractors.

Recovery Auditing

P.L. 107–107, "National Defense Authorization Act for FY 2002," requires agencies that enter into contracts with a total value in excess of $500 million in a fiscal year to carry out a cost effective program for identifying overpayments to contractors, and for recovering amounts overpaid. OMB memorandum M-03-07, "Programs to Identify and Recover Erroneous Payments," requires agencies to review their contractor payments for errors resulting in overpayments (recovery audit), take action to recover those overpayments, and report the results of these activities to OMB on an annual basis.

Recovery Auditing Statistics
FY 2006 ($ in millions)

Contractor Payments Reviewed	$ 9,620.000
Contractor Overpayments Identified	$ 11.900
Overpayments Recovered	$ 10.300
Overpayments Pending Recovery	$ 1.530
Overpayments Not Recoverable	$ .073
Total Cost of Recovery Audit Program	$ .159
Departmental Costs	$ .107
Recovery Auditing Contractor Costs	$ .052

OTHER STATUTORY REPORTING

Management's Response to Audit Reports

Pursuant to the Inspector General Act Amendments of 1988 (Public Law 100-504), agency heads are to report to Congress on the status of final action taken on audit report recommendations. This report complements a report prepared by the Department's Office of Inspector General (IG) that provides information on audit reports issued during the period and on the status of management decisions made on previously issued IG audit reports.

Inspector General Audit Reports

The Department responds to audit reports by evaluating the recommendations they contain, formally responding to the IG, and implementing agreed upon corrective actions. In some instances, we are able to take corrective action immediately and in others, action plans with long-term milestones are developed and implemented. The audit resolution and follow-up process is an integral part of the Department's effort to deliver its priorities more effectively and at the least cost. Actions taken by management on audit recommendations increase both the efficiency and effectiveness of our operations and strengthen our standards of accountability.

During FY 2006, the Department took final action on 55 IG reports with the agreed upon actions including final action on seven IG operational, financial, and pre-award audit reports with funds put to better use. At the end of the period, 102 reports awaited final action.

Status of Final Action on IG Audit Reports for FY 2006

The following chart provides more detail on the audit reports with open actions and the dollar value of recommendations and funds "put to better use" that were agreed to by management.

Audit Reports	Number of Reports	Agreed-Upon Funds Put to Better Use (in Millions)
Pending final action at the beginning of the period	96	$ 683
With actions agreed upon during the period	61	$ .079
Total pending final action	157	$ 683
Achieving final action during the period	55	$ 27 *
Requiring final action at the and of the period	102	$ 656

* Reflects a single amount also included in the IG's semi-annual report.

Inspector General's Contract Audit Reports

To begin this period, final action had not been taken on one IG contract audit report. At the end of the fiscal year, there are no contract audit reports pending final action.

Contract Audit Reports Statistical Table FY 2006

Total Number of IG Contract Audit Reports (Contract and Financial Assistance) and the dollar value of disallowed costs:

	Number of Reports	Disallowed Costs*
Contract audit reports with management decisions on which final action had not been taken at the beginning of the period	1	$ 151,354
Contract audit reports issued on which management decisions were made during the period	-	-
Total contract audit reports pending final action during the period	-	-
Contract audit reports on which final action was taken during the period:		
Recoveries	1	$ 151,354
Reinstatements	-	-
Total	1	$ 151,354
Contract audit reports needing final action at the end of the period	0	0

* The amount of costs questioned in the audit report with which the contracting officer concurs and has disallowed as a claim against the contract. Recoveries of disallowed costs are usually obtained by offset against current claims for payment and subsequently used for payment of other eligible costs under the contract.

Government Accountability Office Audit Reports

The U.S. Government Accountability Office (GAO) audits are a major component of the Department's audit follow-up program. At the beginning of FY 2006 there were 34 GAO audit reports awaiting final action. During FY 2006, the Department received 36 additional final GAO audit reports, of which 21 required tracking of corrective actions and 15 did not because the reports did not include actions to be taken by the Department. The Department completed agreed-upon corrective actions on 13 audit reports during FY 2006, leaving 42 GAO reports awaiting final action at year-end.

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

GLOSSARY OF ACRONYMS

ACI .....American Competitiveness Initiative
AEI .....Advanced Energy Initiative
AFCI .....Advanced Fuel Cycle Initiative
AMP .....Asset Management Plan
APS .....Advanced Photon Source
ASCR.....Advanced Scientific Computing Research
ATLAS .....Argonne Tandem Linac Accelerator System
ATR .....Advanced Test Reactor
BABAR .....B and B-bar Experiment
BER.....Biological and Environmental Research
BES.....Basic Energy Sciences
BPA.....Bonneville Power Administration
CDF.....Collider
CEBAF.....Continuous Electron Beam Accelerator Facility
CFO.....Office of the Chief Financial Officer
CIO .....Chief Information Officer
CMS .....Centers for Medicare and Medicaid Services
COL.....Construction and Operating License
CSPT .....Cyber Security Project Team
CSRS.....Civil Service Retirement System
D&D .....Decontamination and Decommissioning
DARHT.....Dual-Axis Radiographic Hydrotest
DBT.....Design Basis Threat
DNN .....Defense Nuclear Nonproliferation
DoD.....Department of Defense
DOE.....Department of Energy
EERE.....Energy Efficiency and Renewable Energy
EIA .....Energy Information Administration
EM .....Office of Environmental Management
EPA .....Environmental Protection Agency
EPACT .....Energy Policy Act
ERISA .....Employee Retirement Income Security Act
ES&H .....Environmental Safety and Health
ESA.....Endangered Species Act
ESE.....Office of Energy, Science and Environment
EVMS .....Earned Value Management System
FCRPS.....Federal Columbia River Power System
FERC.....Federal Energy Regulatory Commission
FERS.....Federal Employees Retirement System
FES .....Fusion Energy Sciences
FFMIA .....Federal Financial Management Improvement Act
FISMA .....Federal Information Security Management Act
FMFIA .....Federal Managers' Financial Integrity Act
FSU .....Former Soviet Union
FY .....Fiscal Year
GAAP.....Generally Accepted Accounting Principles
GAO.....Government Accountability Office
GE .....General Electric
GMRA .....Government Management Reform Act
GNEP.....Global Nuclear Energy Partnership
GPRA.....Government Performance and Results Act
GWh .....Gigawatt Hour
HEP.....High Energy Physics
HEU.....Highly-Enriched Uranium
HRIBF .....Holifield Radioactive Ion Beam Facilities
HSS.....Office of Health, Safety and Security
IG .....Inspector General
IOU .....Investor Owned Utilities
IP .....Improper Payment
IPIA.....Improper Payment Information Act
IT .....Information Technology
ITER .....in Latin, iter means "the way"
kV .....Kilovolt
kW .....Kilowatt
kWh.....Kilowatt Hour
LANL .....Los Alamos National Laboratory
LEU.....Low Enriched Uranium
LM .....Office of Legacy Management
MEO .....Most Efficient Organization
MMS .....Mineral Management Service
MNA .....Monitored Natural Attenuation
MOX .....Mixed Oxide
NE .....Office of Nuclear Energy
NEP.....National Energy Policy
NERC .....North American Electric Reliability Council
NIF .....National Ignition Facility
NNSA.....National Nuclear Security Administration
NP .....Nuclear Physics
NRC .....Nuclear Regulatory Commission
NREL.....National Renewable Energy Laboratory
NSTX.....National Spherical Torus Experiment
NWF .....Nuclear Waste Fund
NWPA .....Nuclear Waste Policy Act
OMB .....Office of Management and Budget
P.L. .....Public Law
PAR.....Performance and Accountability Report
PART .....Program Assessment Rating Tool
PMA .....Power Marketing Administrations
PMA .....President's Management Agenda
PMA .....Power Marketing Administration
PRB.....Postretirement Benefits Other Than Pensions
PV .....Photovoltaic
R&D .....Research & Development
RHIC .....Relativistic Heavy Ion Collider
RRW .....Reliable Replacement Warhead
RSI .....Required Supplementary Information
RSSI .....Required Supplementary Stewardship Information
RTG.....Radioisotope Thermoelectric Generator
RW .....Office of Civilian Radioactive Waste Management
SAVs .....Site Assistance Visits
SC .....Office of Science
SCADA.....Supervisory Control and Data Acquisition
SCE.....Southern California Edison Company
SciDAC .....Scientific Discovery through Advanced Computing
SEPA .....Southeastern Power Administration
SFAS .....Statement of Financial Accounting Standards
SFFAS .....Statement of Federal Financial Accounting Standard
SLAC .....Stanford Linear Accelerator Center
SNF .....Spent Nuclear Fuel
SNS.....Spallation Neutron Source
SP .....Office of Security and Safety Performance Assurance
SSP.....Stockpile Stewardship Program
STARS .....Standard Accounting and Reporting System
SWPA.....Southwestern Power Administration
TRU.....Transuranic
TTC .....Transformational Technology Core
USEC.....United States Enrichment Corporation
WIPP .....Waste Isolation Pilot Plant

DEPARTMENT OF ENERGY
UNITED STATES OF AMERICA

We welcome your comments on how we can improve the Department of Energy's Performance and Accountability Report.

Please provide comments and requests for additional copies to:

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U.S. Department of Energy
1000 Independence Ave., SW
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