

# DEPARTMENT OF ENERGY

## AT A GLANCE:

**2006 Discretionary Budget Authority:** \$23.4 billion  
(Decrease from 2005: 2 percent)

## Major Programs:

- Energy research and development
- Science
- Safety, security, reliability, and effectiveness of nuclear weapons
- Environmental clean-up



## MEETING PRESIDENTIAL GOALS

### *Promoting Economic Opportunity and Ownership*

- Promoting energy efficiency and a diverse supply of clean, reliable, and affordable energy by supporting the next generation of nuclear power, developing clean coal technologies, moving toward a hydrogen economy, advancing renewable energy, and improving the reliability of the electricity supply.
- Providing for the continued development of a permanent repository for nuclear materials so the Nation will finally have a safe, secure, and permanent solution for disposal of spent nuclear fuel and high-level radioactive wastes.

### *Protecting America*

- Safeguarding nuclear weapons, nuclear materials, and sensitive nuclear technology and expertise.
- Certifying the safety and reliability of the Nation's nuclear stockpile.

### *Supporting a Compassionate Society*

- Helping low-income families cut their utility bills while conserving energy through continued strong support for weatherization assistance.

## **MEETING PRESIDENTIAL GOALS—Continued**

### ***Making Government More Effective***

- Providing five-year funding plans for three major programs—nuclear security, environmental cleanup, and science—which will provide a better basis for making funding decisions for 2006 and future years.

### ***Agency-specific Goals***

- Providing a responsible resolution to the environmental legacy of the Cold War by accelerating the cleanup of nuclear weapons production sites.

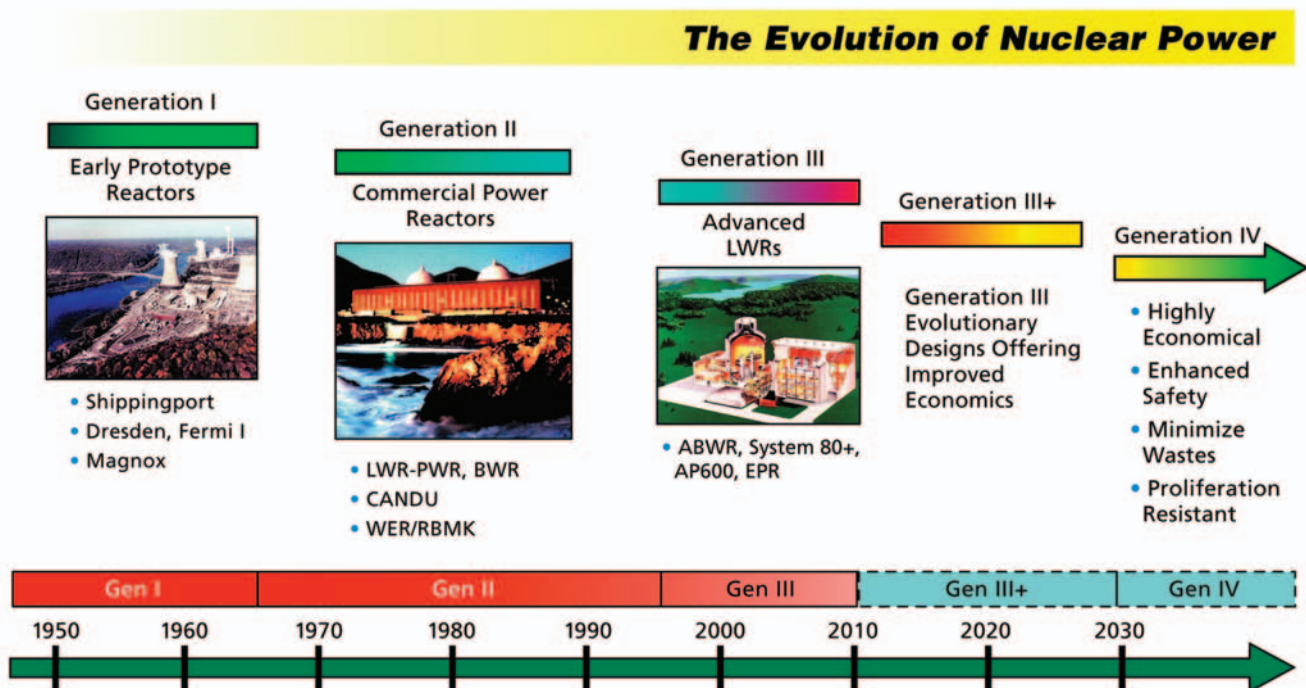
## PROMOTING ECONOMIC OPPORTUNITY AND OWNERSHIP

An important element of the President’s six-point plan for promoting economic prosperity is ensuring diverse, safe, affordable, and reliable sources of energy. The Department of Energy (DOE) has far-ranging responsibilities in this area, from investing in energy technologies that have the potential to transform the way we produce and use energy to ensuring the safe disposition of high-level nuclear waste material. Consistent with the National Energy Policy approved by the President, the 2006 Budget proposes significant spending on research and development toward a hydrogen economy that includes affordable zero-emission fuel cell vehicles; on developing carbon sequestration and advanced coal technologies to ensure that the United States’ 250-year coal reserves can be used with significantly less impact on the environment; and on continuing research on advanced nuclear technologies and the potential for fusion energy. It also focuses on making current forms of energy use more secure, efficient, and environmentally benign.

### *Promoting Nuclear Energy*

The 2006 Budget includes a package of initiatives that will aggressively promote clean nuclear power, including investments to advance near-term construction of new nuclear power plant designs.

The Budget provides a total of \$56 million in 2006 for the Nuclear Power 2010 initiative to make it feasible for new nuclear power plants to be built in the United States for the first time in three decades. Under this initiative, the Department and two private consortia, comprising many of the country’s major nuclear utilities and reactor vendors, have created public-private partnerships to develop applications and obtain Nuclear Regulatory Commission licenses for new Generation III+ nuclear power plant designs. These efforts will reduce the uncertainty of getting the designs approved, which is a major obstacle to their financial viability. If successful, this seven-year, \$1.1 billion effort,



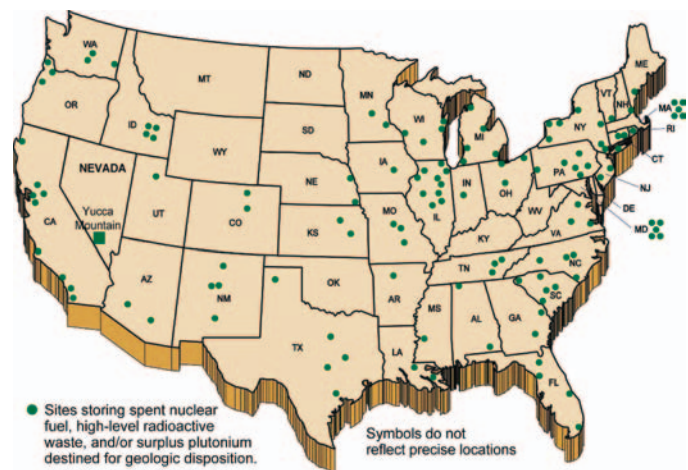
## PROMOTING ECONOMIC OPPORTUNITY AND OWNERSHIP—Continued

50 percent of which would be non-Federal funding, could result in a new nuclear power plant order by 2009 and a new nuclear power plant constructed by the private sector and in operation by 2014.

The 2006 Budget is also looking ahead to the next generation of nuclear power plants. The Budget provides \$45 million for research and development to support Generation IV nuclear energy systems. Generation IV technology offers the promise of a safe, economic, and proliferation-resistant source of clean nuclear power and hydrogen. The Budget also continues research on advanced, proliferation-resistant nuclear fuel cycles, which would allow the Nation to extract the energy potential from spent nuclear fuel and dramatically reduce the quantity and toxicity of the remaining waste. It also proposes tax changes to help ensure nuclear plant decommissioning costs are adequately funded and increases funding to provide a deep geological repository for high-level nuclear waste at the Yucca Mountain site in Nevada.

### *Yucca Mountain*

The long-term viability of nuclear power requires the Nation to provide environmentally sound management of nuclear waste. More than 20 years ago, the Congress assigned DOE responsibility for disposing the spent nuclear fuel generated by civilian nuclear power plants and the high-level waste generated over the past 50 years by defense activities of the U.S. military, the clean-up of World War II-era weapons plants, and the reduction of the Nation's nuclear arsenal. More than 161 million Americans live within 75 miles of the 125 sites in 39 States that currently store these materials. After carefully considering over 20 years of scientific research, in 2002, the President recommended, and the Congress approved, designation of a site at Yucca Mountain, Nevada for the safe storage and disposal of this waste in a mined geologic repository. Successful completion of a repository at Yucca Mountain will ensure that the Nation has a single underground facility, secure from potential terrorist threats, where nuclear waste is disposed in a manner that protects the environment and our citizens.



The repository would consolidate at Yucca Mountain the nuclear waste now stored at some 125 sites in 39 States.

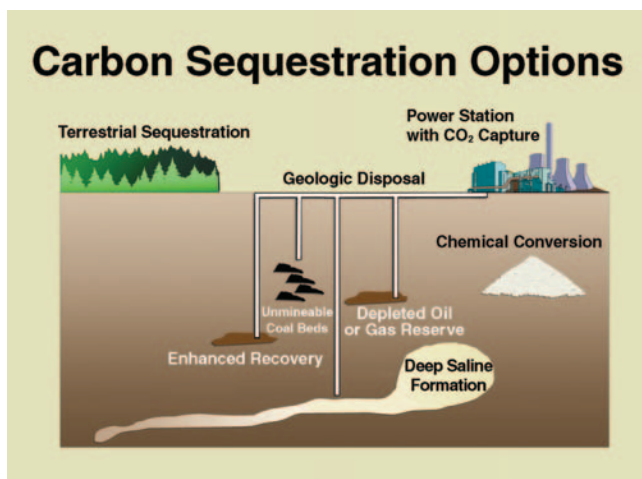
### **Costly Delays**

The cost of the delay in opening a safe repository for nuclear waste is large and growing. In August 2004, the Justice Department settled the first claim brought by a nuclear energy utility for the Federal Government's failure to begin taking waste in January 1998, the legally required start date. Under the settlement, the United States agreed to pay Exelon \$80 million for its waste storage costs incurred through 2003, and will pay the additional costs it will incur until the Department has caught up on its obligation to accept Exelon's spent fuel. Similar lawsuits with over 60 other utilities could require taxpayers to make enormous future payments to these utilities for the costs of delay.

The Administration is committed to completing the license application process and constructing the repository expeditiously, always mindful of health, safety, and sound science. To accomplish this, the Budget includes \$651 million for the repository in 2006. The Administration believes that the fees currently paid to the Government by utilities to finance the repository should be treated as offsetting collections against the appropriation from the Nuclear Waste Fund. The amount credited as offsetting collections should not exceed the amount appropriated for the repository.

### ***Developing Cleaner Coal Technologies***

The 2006 Budget provides \$286 million for the President's Coal Research Initiative to improve the environmental performance of coal power plants by reducing emissions and improving efficiency. This includes \$68 million for the Clean Coal Power Initiative, of which \$18 million is allocated to continue development of the FutureGen coal-fueled, zero-emissions, electricity and hydrogen generation project announced by the President in February 2003. FutureGen is guided by an industry and international partnership that will work cooperatively on research, development, and deployment of technologies that will dramatically reduce air pollution from coal-fueled electricity generation plants, generate hydrogen, and capture and store greenhouse gas emissions. The Budget ensures that unexpended funds available from prior years' clean coal projects are available to fund future clean coal activities, beginning with FutureGen. The Budget also increases funding for research and development of other clean coal technologies, such as Integrated Gasification Combined Cycle systems, carbon sequestration, and next-generation turbines.



Carbon sequestration is a family of methods for capturing and permanently isolating carbon dioxide. Sequestration of carbon dioxide emissions from coal could help retain coal's strategic value as a low-cost, abundant, domestic fuel.

### ***Hydrogen Fuel Initiative***

In February 2003, President Bush announced a five-year, \$1.2 billion Hydrogen Fuel Initiative to reverse America's growing dependence on foreign oil. The initiative focuses on developing the science and technology for clean hydrogen production, distribution infrastructure, and commercially viable hydrogen-powered fuel cells, which produce virtually no pollution or greenhouse gases. The President's Initiative established the United States as the international leader in hydrogen and fuel cell research and spurred significant private-sector investment in these areas. The 2006 Budget includes \$260 million for the Hydrogen Fuel Initiative to develop the

#### **Making Fuel Cell Vehicles More Affordable**

DOE is making progress towards the goal of a 2015 commercialization decision on hydrogen-powered fuel cell vehicles and the infrastructure to fuel them. The high-volume cost of automotive fuel cells has been reduced from \$275/kW in 2002 to \$200/kW in 2004 using innovative processes developed by the national laboratories and fuel cell developers. Additional research is needed for fuel cells to achieve the cost competitive target of less than \$50/kW, which roughly equates to the cost of today's typical internal combustion engine.

the

## **PROMOTING ECONOMIC OPPORTUNITY AND OWNERSHIP—Continued**

fundamental science and technologies to produce, store, and distribute hydrogen for use in fuel-cell vehicles, electricity generation, and other applications. The 2006 Budget continues strong support for high-risk, high-payoff basic research that is closely coupled and coordinated with the initiative's applied research and development programs. The Department is also leading the International Partnership for a Hydrogen Economy, a 15-nation research effort aimed at reducing the cost of hydrogen production, hydrogen delivery infrastructure technologies, and fuel cell components, and developing uniform technical codes and standards. With complementary work ongoing under the FreedomCAR partnership, these efforts keep the Hydrogen Fuel Initiative on track for a 2015 commercialization decision by industry that could revolutionize personal transportation, provide consumers better performance and more choice, and significantly reduce environmental and international energy security concerns.

### ***Tax Incentives for Renewable Energy and Hybrid and Fuel Cell Vehicles***

The 2006 Budget proposes tax incentives totaling \$3.6 billion through 2010 to spur the use of clean, renewable energy and energy-efficient technologies. Consistent with the President's National Energy Policy, the tax incentives include credits for the purchase of hybrid and fuel-cell vehicles, residential solar heating systems, energy produced from landfill gas, electricity produced from alternative energy sources such as wind and biomass, and combined heat and power systems.

### ***Fusion Research***

In January 2003, President Bush committed the United States to participate in negotiations on the largest and most technologically sophisticated energy research project in the world—the International Thermonuclear Experimental Reactor (ITER). The United States and its international partners—the European Union, Japan, Russia, China, and South Korea—continue to work toward a consensus decision on the site for ITER early in 2005. If successful, this cost-shared \$5 billion research project will advance progress towards developing fusion's potential as a commercially viable and clean source of energy near the middle of this century. Assuming that international partners reach a timely site decision, the \$50 million provided in the 2006 Budget funds the first year of equipment fabrication for the United States' in-kind contributions to this important partnership.



### ***Long-term Investments in Basic Research***

The Department supports a broad array of basic research and operates a variety of unique scientific facilities to support its energy and national security missions. The 2006 Budget proposes \$3.5 billion for the Department's Office of Science. The Budget allocates funds to best performers and activities that provide the broadest benefits to society, including increases in priority research funding for nanotechnology, biotechnology, and the Hydrogen Fuel Initiative. The Budget provides funding to complete construction and begin operation of the Spallation Neutron Source and four new nanoscale science research centers. The Budget provides over \$80 million to begin construction on the Linac Coherent Light Source—a revolutionary new facility that will open entirely new realms of discovery in the chemical, materials, and biological sciences. Likewise, the Budget continues support for high-end computing research. With the completion of accelerator and detector upgrades, the two major particle physics facilities will operate at their designed peak of scientific productivity.



The \$1.4 billion Spallation Neutron Source at Oak Ridge National Laboratory in Tennessee will provide the most intense pulsed neutron beams in the world for scientific research and industrial development.

### ***Electricity Transmission***

In 2003, the Administration created the Office of Electric Transmission and Distribution to lead the Nation's effort to modernize and expand its electricity transmission and distribution system. This effort will help reduce the likelihood that blackouts and disruptions occur, and will help mitigate the impacts if they do occur. The Budget includes \$96 million for these activities. Recently enacted legislation provides tax incentives proposed in the 2005 Budget to rural electric cooperatives and to transmission-owning companies in their sale or disposition of transmission assets, which will accelerate the transition to competitive wholesale power markets. The Administration continues its strong support for legislation that would modernize the electricity transmission grid by reforming outdated laws, promoting open access to the electricity grid, promoting regional planning and coordination, and protecting consumers.

### ***Energy Information and Analysis***

The Budget includes \$86 million for Energy Information Administration's (EIA) programs to provide valuable data collection, information, and analysis related to energy prices, demand, and resources. EIA products are relied upon by both the private and public sectors in decision making on energy issues. Among the activities funded in 2006 are improvements to petroleum and natural gas data, continuation of energy consumption surveys, and the enhanced Voluntary Greenhouse Gases emissions reporting system.

### ***Power Marketing Administrations***

The Power Marketing Administrations (PMAs), Bonneville, Southeastern, Southwestern, and Western, sell electricity generated at Federal dams operated by the Corps of Engineers and the Department of the Interior's Bureau of Reclamation (BuRec). With the exception of Southeastern,

## PROMOTING ECONOMIC OPPORTUNITY AND OWNERSHIP—Continued

which leases transmission capacity, the PMAs own and operate over 33,000 miles of transmission lines from the Midwest to the West coast.

The Administration makes several proposals in this Budget to improve the performance of the PMAs by removing unnecessary Government intervention and allowing the PMAs to operate in a more business-like, efficient manner.

The 2006 Budget proposes a reclassification of receipts that are currently deposited to the Treasury and are collected based on appropriations for PMA expenses. The Budget proposes that these receipts directly offset appropriations requested for the Program Direction and Operation and Maintenance activities of the Southeastern, Southwestern, and Western Area Power Administrations. This proposal excludes Bonneville, which already finances its activities from receipts. This change will put PMA operations on a more business-like basis.

In addition, the Budget proposes reclassifying receipts to directly fund the hydropower portions of the Corps of Engineers and BuRec operations and maintenance expenses, totaling \$211 million for 2006. Currently PMAs collect receipts based on appropriations to the Corps and BuRec for these activities. Directly funded activities will include short-lived capital investments typically considered maintenance. Direct funding will enable the Corps and BuRec to perform needed maintenance and small rehabilitation projects in a more timely manner. The Administration repropose the direct financing of BuRec's hydropower research and development activities by Bonneville and Western, the primary beneficiaries of the program.

The Administration will propose legislation to very gradually bring PMA electricity rates closer to average market rates throughout the country. According to the Government Accountability Office, PMA rates are artificially low because taxpayers across the Nation have borne some of the PMAs' costs. Thus, the general taxpayer has helped subsidize the cost of PMA power purchased by electricity wholesalers. Reducing subsidies to electricity wholesalers is consistent with the Administration's fiscal policies, and this proposal will create a more level playing field for the Nation's electricity suppliers and encourage appropriate energy conservation.

Fulfilling a commitment in the President's 2005 Budget, the Budget proposes specific legislative language to clarify what Bonneville liabilities and obligations should be counted toward Bonneville's statutory cap on borrowing. Under Budget Enforcement Act scorekeeping procedures, some agency transactions, such as lease-purchases, result in liabilities that make a claim on future Bonneville resources, and therefore constitute a form of Federal debt for budget purposes. Bonneville entered into one such transaction in 2004 and is considering entering into others. To ensure the integrity and usefulness of Bonneville's \$4.45 billion debt limitation with the Treasury, the Administration is proposing legislation to ensure that, in the future, these types of debt-like transactions are treated as debt and counted toward Bonneville's statutory debt limit. In order to accommodate Bonneville's projections of its investment through 2010, including potential financing through transactions that would count against its debt cap under proposed legislation, the Budget is proposing to increase the limit on Bonneville's debt by \$200 million.



PMAs strive to provide reliable and dependable power to customers.



## PROTECTING AMERICA

The mission of DOE's National Nuclear Security Administration (NNSA) is to:

- Maintain and enhance the safety, security, reliability, and effectiveness of the Nation's nuclear weapons stockpile;
- Prevent the spread of materials, information, and technology of weapons of mass destruction by eliminating or securing nuclear materials, information, and related infrastructure; and
- Provide the Navy with safe and highly capable nuclear propulsion plants for warships.

### *Nuclear Stockpile Stewardship*

The Nation's nuclear deterrent remains a critical component of our defense strategy. NNSA manages this asset to assure that the Nation is capable of responding to whatever challenges it may be called upon to address. Since 1992 and the establishment of a moratorium on nuclear testing, DOE has maintained the safety, security, reliability, and effectiveness of the U.S. nuclear weapons stockpile through its science-based stockpile stewardship program. The program ensures the operational readiness of the Nation's nuclear weapons using science and technology to detect and predict problems in the stockpile. NNSA also relies on advanced engineering methods to develop and apply solutions to extend the life of aging warheads.



NNSA personnel and their contractors are responsible for producing, inspecting, refurbishing, and dismantling all parts of nuclear weapons, including outer cases, like the B83 bomb casing shown here.

Knowledge gained from this program improves the understanding of nuclear weapons physics, enables timely and effective maintenance and refurbishment of existing nuclear warheads, and maintains a design and manufacturing base that can respond rapidly to new challenges and produce new weapons if required. Three national laboratories (Los Alamos, Sandia, and Lawrence Livermore), the Nevada Test Site, and production facilities in Missouri, South Carolina, Tennessee, and Texas employ about 1,500 Federal and approximately 35,000 contract personnel to do this work.

The 2006 Budget continues to emphasize programs supported in the Nuclear Posture Review released by the Administration in January 2002. The 2006 Budget of \$6.6 billion for Weapons Activities strongly supports the science-based stockpile stewardship work that is the backbone of these programs. The 2006 funding levels will enable NNSA to fulfill the Nation's needs for a safe, secure, reliable, and effective nuclear force.

The Weapons Activities work consists of five major categories of programs:

- Directed Stockpile Work programs, which support the Department of Defense's (DOD) nuclear weapons requirements by maintaining and refurbishing warheads to ensure their safety, reliability, and performance. Programs include research, development, and production associated with weapons maintenance, life extensions, and certification of continued reliability. Currently, NNSA is in the process of refurbishing four weapons systems that originally entered service in the 1970s and 1980s. Without new warheads entering the inventory, a robust refurbishment program is the only way to maintain the nuclear deterrent with a high degree of confidence. In 2004, NNSA completed the first of four life-extension refurbishment programs to ensure that the

## PROTECTING AMERICA—Continued

Nation's aging nuclear weapons stockpile is capable of meeting national defense requirements without producing new warheads or conducting underground nuclear tests.

- Facility Operations and Infrastructure Programs underpin the stockpile work by providing for the operation and maintenance of existing facilities and construction of new facilities. NNSA is continuing its major effort to improve safety conditions throughout the complex at facilities that have continued to decay since the end of the Cold War.



SafeGuards Transporter trailers and their armored tractors are used to safely and securely transport DOE material across the continental United States. NNSA currently has 31 of these trailers.

- Security Programs protect the nuclear weapons complex, nuclear weapons and their components, and transportation of material between facilities. NNSA manages Emergency Operations and Nuclear Weapons Incident Response assets that provide first-responder teams in the event of a nuclear emergency. The 2006 Budget increases by nearly 10 percent funding for Emergency Operations infrastructure, recognizing the critical role played by this effort in the overall strategy to assure protection of the homeland against radiological or nuclear-based acts of terrorism.

Science and Engineering programs develop and maintain critical capabilities needed to certify the safety, reliability, and performance of the nuclear stockpile into the future. As the United States last produced a new weapon in 1990 and conducted an underground nuclear test in 1992, there is a growing need to develop tools that will allow NNSA to understand the effects of aging on the materials and systems in weapons through non-destructive means. This work will remain critical as the United States reduces the number of operationally deployed warheads to between 1,700 and 2,200 over the next 10 years.

- Beginning in 2006, NNSA will manage the environmental restoration, legacy waste disposition, newly generated waste, and decontamination and decommission activities at seven NNSA sites that were previously funded by the Environmental Management program.

### *Preventing the Spread of Weapons of Mass Destruction*

The convergence of heightened terrorist activities and the associated ease of terrorists moving material, technology, and information across borders have made the potential of weapons of mass destruction (WMD) the most serious threat facing the Nation. Preventing WMD terrorism is a top national security priority of this Administration. The 2006 Budget provides an unprecedented level of resources to protect the homeland from this threat.

The trends in global terrorism suggest that terrorists are increasingly sophisticated, increasingly interested in mass casualty attacks, and are increasingly interested in acquiring nuclear weapons or material. A sprawling nuclear complex in Russia and other locations in the former Soviet Union, and vulnerable nuclear material elsewhere, remain the most likely sources for the material, technology, and expertise needed to develop nuclear weapons. The Administration has targeted the nuclear terrorism challenge with aggressive nonproliferation programs that have achieved a number of major successes in recent years, including the dismantling of Libyan WMD programs and unraveling of the A.Q. Khan network.



The NNSA nonproliferation research and development program provides operational support for space-based and ground-based nuclear explosion monitoring systems.

Through the Global Partnership, a comprehensive effort of the G-8 countries to commit \$20 billion over 10 years to nonproliferation programs in Russia and other Newly Independent States, the United States is dedicating the necessary resources to combat this complex threat. The United States intends to provide half of the \$20 billion of G-8 funding, including over \$1 billion in the 2006 Budget in the nonproliferation programs in NNSA, DOD, and the Department of State. The 2006 Budget provides:

- \$526 million in NNSA programs that support programs to secure, remove, or eliminate weapons-usable material from vulnerable sites in Russia and other former Soviet States;
- \$416 million in DOD Cooperative Threat Reduction programs that provide assistance in dismantling nuclear weapons and provide transport and storage security; and
- \$71 million in Department of State programs that support export control programs and other nonproliferation efforts to include those targeted at preventing the spread of WMD expertise.

The NNSA uses the unique capabilities of the National Laboratories and many years of experience managing international nonproliferation programs to detect, prevent, and reverse nuclear proliferation. The 2006 Budget includes funding for the following programs:

- \$246 million for the International Nuclear Materials Protection and Cooperation program to secure nuclear material in Russia and the Newly Independent States. These programs fund critical activities, such as installation of intrusion detection and alarm systems and construction of fences around exposed nuclear sites. By the end of 2006, NNSA will have supported completion of security upgrades at nearly 80 percent of the sites covered by the current bilateral agreement to secure nuclear material and nuclear warheads in Russia and the Newly Independent States.



## PROTECTING AMERICA—Continued

- \$74 million for the Megaports Initiative to deploy radiation detection equipment at key overseas ports to pre-screen U.S.-bound cargo containers for nuclear or radioactive materials. This effort coordinates closely with the Department of Homeland Security's Container Security Initiative, and is an integrated component of the overall Administration strategy to detect illicit trafficking of WMD.
- \$98 million for a new initiative for expanded and accelerated efforts to secure and/or remove at-risk, nuclear and radioactive material in the world's most dangerous regions. The programs under this initiative have moved U.S.- and Russian-originated nuclear fuel to safe storage, converted reactors still fueled by proliferation-attractive highly enriched uranium, and secured radioactive sources in such places as Iraq, Yugoslavia, Belarus, Uzbekistan, Romania, and Libya in recent years.
- \$272 million for the Nonproliferation Research and Development program to develop technologies needed to detect nuclear proliferation, such as radiation detection sensors, monitor nuclear explosions, and verify treaty adherence.
- \$132 million to eliminate weapons-grade plutonium production in Russia. This program will replace three Soviet-era reactors with fossil fuel energy plants, enabling Russia to stop by 2011 the annual production of 1.2 metric tons of weapons-grade plutonium.
- \$653 million to support a program to dispose surplus weapons-useable plutonium. Under the agreement, both the United States and Russia agree to dispose 34 metric tons of plutonium by converting it to a mixed-oxide fuel and burning it in electricity-generating nuclear reactors.



Megaports first pilot project, in Rotterdam, the Netherlands, became operational in June 2004. Since then, the program has begun implementation at five other large international seaports.

### *Naval Reactors*

NNSA's Naval Reactors program has a long-standing duty to provide the U.S. Navy with safe, effective and reliable nuclear reactors to power the Navy's warships. The program is responsible for all naval nuclear propulsion work, beginning with technology development, continuing through reactor operation and, ultimately, to reactor plant disposal.

The 2006 Budget of \$786 million includes \$69 million for continuing work on the Transformational Technology Core (TTC), which will deliver a significant energy increase to future submarines. The TTC is a direct outgrowth of



Spectators witness the October 2004 christening of the USS VIRGINIA, the newest and most advanced nuclear attack submarine.

the Naval Reactors program in advanced reactor technology work and will not only help meet national security demands, but will also act as a stepping stone for future reactor plant development. Additionally, Naval Reactors funding in 2006 will provide for ongoing work on the new high-energy reactor design for the next-generation aircraft carrier, the CVN 21. This new nuclear propulsion plant design will enable the Navy to meet its current forecasted operational requirements, and will provide flexibility to deal with projected defense and national security needs in the future. Above all, the program will continue to ensure the safety and reliability of 103 operating naval reactor plants and will add to its record of 134 million miles without a reactor accident or a significant release of radioactivity to the environment.



## **SUPPORTING A COMPASSIONATE SOCIETY**

### ***Weatherization Assistance***

The 2006 Budget continues strong support for the Weatherization Assistance Program to cut the utility bills of low-income families while conserving energy. The Budget includes \$230 million for this program, which in 2006 will help insulate and improve the energy efficiency of an additional 92,300 homes of low-income families. Since 2001, the President has achieved a cumulative increase of nearly \$300 million for the program, helping 117,000 more low-income families than would have otherwise received assistance. At current energy prices, the program's energy-efficiency measures save each participating low-income family about \$235 annually on utility bills and about \$3,460 total over the life of the improvements, at an average one-time cost to the Government of about \$2,744.

## **MAKING GOVERNMENT MORE EFFECTIVE**

### ***Improving Program Performance***

The Department has completed Program Assessment Rating Tool (PART) assessments of 43 of its 60 programs, covering more than 75 percent of the Department's funding. It has made substantial progress in developing performance measures, including efficiency measures, which was one of the areas of improvement identified in many of the PART assessments. The Department is also making greater use of the conclusions of the PART assessments to inform its decision-making on funding. In some cases, this has resulted in allocating additional funds to correct a problem, such as increasing the multi-year funding profile of NNSA's Elimination of Weapons Grade Plutonium Production program to achieve annual and long-term performance goals. In others, the decision was made to reduce or eliminate funding, such as the decision in the 2006 Budget to eliminate funds for the Department's oil and gas research and development programs, which often duplicate private sector R&D efforts.

### ***Five-year Budgeting***

Since the creation of the National Nuclear Security Administration in 2001, the Department has developed a five-year budget plan for NNSA's future program spending. Expanding this practice to other parts of DOE will improve the ability to evaluate activities and funding planned for the next year in the context of plans for the near- and mid-term goals and funding of the program. With the 2006 Budget, five-year budgets have also been developed for the Department's Office of Science and Environmental Management programs.











### ***Applying Project Management Principles***

The Department has established a systematic approach for ensuring that its multi-billion dollar construction projects meet a defined mission need and are thoroughly planned within specific performance thresholds. DOE manages a portfolio of 202 projects valued at \$162 billion. The Department requires its programs to report cost, schedule, and performance indicators for all major projects. The 2006 Budget provides \$11 million to conduct external independent reviews to verify and validate the cost, schedule, and performance estimates of these major projects.



### ***Update on the President's Management Agenda***

The table that follows provides an update on DOE's implementation of the President's Management Agenda as of December 31, 2004.

**MAKING GOVERNMENT MORE EFFECTIVE—Continued**

	Human Capital	Competitive Sourcing	Financial Performance	E-Government	Budget and Performance Integration
<b>Status</b>					
<b>Progress</b>					

DOE remains a top performer in implementing the President's Management Agenda (PMA). It has sustained a high level of progress due to the efforts of its Management Council, chaired by the Deputy Secretary and established to oversee implementation of the PMA initiatives. Top executives are responsible for developing and implementing long-term action plans to get from concept to results. DOE received provisional authority for its senior executive performance evaluation system and it strategically uses buyouts and early retirement authority to successfully streamline its workforce while building its skill mix and limiting involuntary separations. DOE continues to implement its competitive sourcing plan, announcing its largest Federal employee competition to date, which includes 684 Federal positions. The competitions DOE completed in 2004 will yield \$40 million in savings over the next five years. DOE issued its 2004 financial statement in 45 days and received an unqualified clean audit opinion. Implementation of earned value management of DOE's major information technology (IT) investments continues as DOE works to demonstrate a 90 percent adherence to cost, schedule, and performance targets on \$2.5 billion of IT investments. On all 54 of its major non-IT capital assets, DOE can demonstrate a 90 percent adherence to these targets for 81 percent of the projects and for 94 percent of the dollar value, which exceeds \$13 billion.

Initiative	Status	Progress
Real Property Asset Management		
DOE developed a draft asset management plan and is working to complete and approve 10-year site infrastructure plans for its roughly 50 major site complexes.		

## AGENCY-SPECIFIC GOALS

### *Environmental Management*

A half century of nuclear weapons production and energy research, much of which occurred prior to the national commitment to a clean environment as a top priority, have left large amounts of radioactive contamination and hazardous waste at 114 sites in 31 States and one U.S. territory. By the end of 2005, DOE is scheduled to have cleaned up 79 of these sites, with the largest and most challenging site cleanups remaining.

#### **Reforms Clear Major Hurdle**

Recently enacted legislation will allow DOE, subject to Nuclear Regulatory Commission coordination, State permits, and judicial review, to proceed with its plans to accelerate treatment and disposal of certain wastes at sites in Savannah River, South Carolina, and in Idaho. The legislation allows DOE to empty and treat wastes from underground storage tanks to the greatest extent practicable, and to leave in place stabilized residual waste that meets low-level waste disposal standards. Safe and secure on-site disposition of these wastes will allow taxpayers to avoid tens of billions of dollars in additional costs.



The Rocky Flats clean-up will be completed by the end of 2006 at a savings of over \$28 billion from DOE's 1995 estimate.

For many years the Environmental Management (EM) program failed to achieve its risk-reduction mission, was unable to effectively control cost and schedule overruns, and experienced significant problems in project management and contract administration. However, under the Administration's aggressive reform initiative, program performance is beginning to turn around:

- DOE (including NNSA) expects to accelerate cleanup completion by 35 years and save \$54 billion (reducing the estimated total cost to clean up these sites from \$196 billion to \$142 billion).
- New acquisition strategies focus on unbundling work, using small businesses, competing contracts, and rewarding excellent performance.
- An effective workforce strategy has reduced the workforce necessary for cleanup by 39 percent since 2000—retaining capable employees and increasing management accountability.

The 2006 Budget provides \$6.5 billion for the EM program to continue implementing reforms that will accelerate the reduction of risk to the public and the environment, and provides \$222 million for clean-up and waste management of seven sites transferred in 2006 from EM to NNSA. The Budget also provides the funding needed in future years to ensure success of this important environmental initiative.

**Department of Energy**  
(In millions of dollars)

	2004 Actual	Estimate	
		2005	2006
<b>Spending</b>			
Discretionary Budget Authority:			
National Defense:			
National Nuclear Security Administration.....	8,691	8,914	9,397
Other Defense Activities.....	499	482	426
Energy Resources.....	2,787	2,817	2,737
Science and Technology.....	3,523	3,600	3,463
Environmental Management.....	7,041	7,284	6,505
Nuclear Waste Disposal.....	577	572	651
Corporate Management.....	232	250	261
Total, Discretionary budget authority.....	23,350	23,919	23,441
<i>Memorandum: Budget authority from enacted supplementals.....</i>	3	—	—
Total, Discretionary outlays.....	22,721	24,591	24,172
Mandatory Outlays:			
Existing law.....	-1,366	-1,372	-1,062
Legislative proposals.....	—	—	-40
Total, Mandatory Outlays.....	-1,366	-1,372	-1,102
Total Outlays.....	21,355	23,219	23,070