FY 2008

U.S. DEPARTMENT OF

ENERGY

ANNUAL PERFORMANCE REPORT

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Introduction

The Department of Energy (Department or DOE) is pleased to present its *Annual Performance Report* (*APR*) which outlines the Department's performance in fiscal year 2008 against the goals that were set out in the President's proposed fiscal year 2008 budget. The metrics discussed in this report were outlined in the Department's congressional budget justifications and carried through the actual execution of the budget during the fiscal year. Because these metrics were created before final congressional allocations, in some cases the actual appropriation levels did not meet the Department's request and may have affected a program's ability to meet its proposed performance level.

This report fulfills the requirements of both the Government Performance and Results Act (GPRA) and the Office of Management and Budget's (OMB) Circular A-11 to report performance annually. The Department continues to participate in the Pilot Program for Alternative Approaches to Performance Accountability Reporting (PAR Pilot), pursuant to OMB Circular A-136. The goal of the pilot is to improve the quality and transparency of performance and financial reporting. The PAR Pilot gives the Department an alternative platform for presenting performance information, providing more detailed data and web links to assist the reader in finding additional information.

The PAR Pilot is comprised of three reporting components:

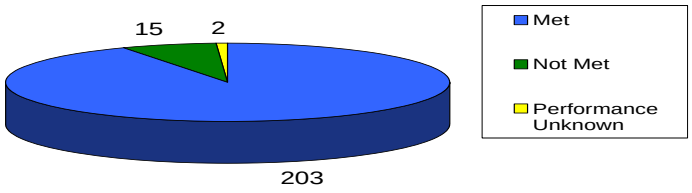
- The ***Agency Financial Report*** (*AFR*) was published, distributed, and placed on the DOE website (Energy.gov) on November 14, 2008. The *AFR* contains all of the required financial statements, accompanying notes, independent auditor's report, Inspector General management challenges, and Management Discussion and Analysis (MD&A). The MD&A section includes an analysis of the financial statements, management controls and compliance information, as well as a high-level discussion of Department performance as it relates to DOE's major priorities.

- The ***Annual Performance Report*** (*APR*) focuses on detailed performance information including performance targets associated with the Department's budget activities. The report discusses individual and summary performance measure results through narrative descriptions with references to supporting documentation, a concise statement on high-level program challenges and benefits, and the status of all FY 2007 unmet measures. This report was published on the Department of Energy's website (Energy.gov) on January 15, 2008.

- The ***Citizens' Report*** (previously titled *Highlights*) is a concise summary of the Department's financial results and performance information from the *AFR* and *APR* that employs a forward-looking perspective. It addresses both recent accomplishments and challenges for the Department. This report was published on the Department of Energy's website on January 15, 2008, with links to more comprehensive, publicly available information at ExpectMore.gov.

Performance Summary Scorecard

The Department was able to meet 92 percent of the FY 2008 targets based on its Government Performance and Results Act (GRPA) unit program performance measures, as illustrated in the graphic and table below. GPRA units are categories of performance measures that pertain to a specific program area. The Department has 53 GPRA units and tracks 220 performance measures which are also included in its annual budget.



Strategic Theme	Program Cost[a] (gross $ in millions)		GPRA Unit Performance Goal	FY 2008 Budgetary Expenditures Incurred[b] (million $)	FY 2008 Performance Targets		
	FY 2008	FY 2007			Met	Unmet	Unknown
1. Energy Security	$ 6,880	$ 6,552	1.1.1 Hydrogen/ Fuel Cell Technologies	22	8	1	0
			1.1.2 Freedom Car & Vehicle Technologies	191	5	0	0
			1.1.3 Solar Energy	509	4	0	0
			1.1.4 Wind Energy	45	3	1	0
			1.1.5 Geothermal Technology	13	2	0	0
			1.1.6 Biomass & Biorefinery R&D	114	5	0	0
			1.1.11 Petroleum Reserves	239	3	0	0
			1.1.12 Energy Information Administration	97	3	0	0
			1.2.8 Near-Zero Emissions Coal-Based Electricity & Hydrogen Production	415	15	1	1
			1.2.14 New Nuclear Generation Technologies	495	8	0	0
			1.2.15 National Nuclear Infrastructure	241	2	0	0
			1.3.16 Electricity Delivery & Energy Reliability	131	5	0	0
			1.3.17 Western Area Power Administration	755	3	0	0
			1.3.18 Bonneville Power Administration	2,719	3	0	0
			1.3.23 Southeastern Power Administration	115	2	0	0
			1.3.24 Southwestern Power Administration	35	5	0	0
			1.4.7 DEMP/FEMP	17	2	0	0
			1.4.19 Industrial Technologies	45	3	0	0
			1.4.20 Building Technologies	103	6	0	0
			1.4.21 Weatherization	234	2	0	0
			1.4.22 State Energy Programs	45	2	0	0
			Total	**6,624**	**91**	**3**	**1**

[a] Program Costs are taken from the Department Consolidated Statements of Net Cost.
[b] 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.

Strategic Theme	Program Cost[a] (gross $ in millions)		GPRA Unit Performance Goal	FY 2008 Budgetary Expenditures Incurred[b] (million $)	FY 2008 Performance Targets		
	FY 2008	FY 2007			Met	Unmet	Unknown
2. Nuclear Security	$ 9,088	$ 9,200	2.0.25 Office of the Administrator	368	1	0	0
			2.1.26 Directed Stockpile Work	1,404	4	1	0
			2.1.27 Science Campaign	289	6	0	0
			2.1.28 Engineering Campaign	153	5	0	0
			2.1.29 Inertial Confinement Fusion Ignition & High Yield Campaign	492	5	0	0
			2.1.30 Advanced Simulation & Computing Campaign	625	4	0	0
			2.1.31 Pit Manufacturing & Certification Campaign	219	3	1	0
			2.1.32 Readiness Campaign	166	3	0	0
			2.1.33 Readiness in Technical Base & Facilities (Operations)	1,659	3	1	0
			2.1.34 Secure Transportation Asset	231	5	0	0
			2.1.35 Nuclear Weapons Incident Response	157	1	0	0
			2.1.36 Facilities & Infrastructure Recapitalization Program	168	4	0	0
			2.1.57 Defense Nuclear Security	795	2	0	0
			2.1.38 Environmental Projects & Operations	8	2	0	0
			2.1.58 Cyber Security	c	2	1	0
			2.2.39 Nonproliferation & Verification R&D	306	6	0	0
			2.2.40 Elimination of Weapons-Grade Plutonium Production	119	2	1	0
			2.2.41 Nonproliferation & International Security	142	5	0	0
			2.2.42 International Nuclear Materials Protection, Control & Cooperation	574	4	1	0
			2.2.43 Fissile Materials Disposition	424	2	0	1
			2.2.44 Global Threat Reduction Initiative	194	5	0	0
			2.3.45 Naval Reactors	798	5	0	0
			Total	**9,304**	**79**	**6**	**1**
3. Scientific Discovery and Innovation	$ 3,790	$ 4,004	3.1/2.46 High Energy Physics	729	5	0	0
			3.1/2.47 Nuclear Physics	443	5	0	0
			3.1/2.48 Biological & Environmental Research	585	6	1	0
			3.1/2.49 Fusion Energy Sciences	316	3	1	0
			3.1/2.50 Basic Energy Sciences	1,322	4	0	0
			3.1/2.51 Advance Scientific Computing Research	342	2	0	0
			3.3.52 Research Integration	--	1	0	0
			Total	**3,737**	**26**	**2**	**0**
4. Environmental Responsibility	$ 5,678	$ 5,918	4.1.53 Environmental Management	6,585	3	3	0
			4.2.54 Nuclear Waste Disposal	419	2	1	0
			4.2.55 Legacy Management	184	2	0	0
			Total	**7,191**	**7**	**4**	**0**
5. Management Excellence	Not covered by GPRA ratings						

[c] Expenditures included in GPRA Unit 2.1.57.

Department Performance

Theme 1 – Energy Security: *Promoting America's energy security through reliable, clean, and affordable energy*

Energy is a vital force powering business, manufacturing, and the transportation of goods and services to serve the American and world economies. Energy supply and demand plays an important role in the national security and the economic output of the nation. The Department of Energy is working to meet these challenges through implementing four goals to improve energy security. This effort includes increasing the diversity of domestic energy supply options, which in turn reduces susceptibility to fluctuation in the energy markets. DOE is working to discover clean-energy alternatives that minimize the impacts to the environment but at a competitive cost that does not burden the U.S. consumer. DOE is pursuing technologies to improve the reliability of the energy infrastructure to meet higher future energy needs and is working to improve the efficiency of energy use to reduce costs and curtail increasing demand for energy.

The Department tracked 95 performance measures under the Energy Security Theme: 91 measures were met, 3 were unmet, and the results for 1 were not available at the time of publication of this report. Highlights of the measures met include the following: the modeled cost of a 25-kilowatt passenger vehicle lithium ion battery system for conventional hybrid vehicles (exceeded target of $625), efficiency of solid-state lighting (exceeded target of 101 lumens per watt), market penetration for EnergyStar appliances (exceeded target of 33 percent), and the Strategic Petroleum Reserve drawdown capability (met target of 4.4 million barrels per day). DOE-sponsored research in FY 2008 tested a new hydrogen reformer and has met the target of 35-percent fuel-cell electrical efficiency. This accomplishment will support development of fuel-cell power systems as alternative power sources to grid-based electricity for buildings and other stationary applications. The Nuclear Power 2010 cost-shared regulatory demonstration program supported the submission of two combined Construction and Operating License applications by industry partners to the Nuclear Regulatory Commission in the first half of FY 2008. Achievement of these milestones is critical to enabling an industry decision in 2010 to build a new nuclear power plant.

The three measures which were not met in FY 2008 were related to the Hydrogen, Wind, and Coal programs. The Department plans to submit applications in January 2009 for projects that will promote and bring the best emerging new coal-based power generating technologies to demonstration through the use of industry partnerships. The Department missed its goal of 9.2 cents per kilowatthour for land-based Class 4 areas, but met its goal in shallow offshore Class 6 areas; and will continue to support public-private partnerships and other means to improve large turbine systems which help to reduce energy costs for both land-based and offshore systems. The Hydrogen program just missed is FY 2008 target of $70 per kilowatt for its fuel cell power system; the modeled cost was estimated at $73 per kilowatt. The overhead rate (which is a measure of operational efficiency) of our Fossil Energy program did not meet the target rate due to congressional appropriations for program direction in excess of those requested by the President. We will work with Congress to achieve the

appropriate balance in appropriations between overhead and direct work in future appropriations. The Clean Coal Power Initiative (CCPI) did not meet its goal of completing project selections in 2008. The CCPI Round 3 solicitation was delayed, because sufficient funding was not available. Since the plan to issue a solicitation was announced in early 2007, there has been a significant rise in steel, concrete, and construction services costs. As a result, some funds planned for new projects were used to cover cost escalation at existing plants. Similarly, the anticipated cost of new projects has also increased. To provide the additional funds needed for a meaningful new solicitation, the decision was made to move the selection to 2009, thus allowing for inclusion of FY 2009 appropriations. The recent cancelation of some previously selected projects could allow their funds to be used in the CPPI Round 3 solicitation. The solicitation was issued and is currently on schedule to receive proposals on January 15, 2009, and announce selections in July 2009.

Theme 2 – Nuclear Security: *Ensuring America's nuclear security*

The Department of Energy works to ensure national nuclear security by maintaining a reliable and functional nuclear deterrent while transforming our nuclear capability to handle emerging 21st century threats such as terrorism. The Department is also working to prevent nuclear weapons or radiological materials falling into the hands of terrorists or other hostile entities by securing nuclear materials and pursuing an aggressive nonproliferation strategy. Also, the Department works to provide the U.S. Navy with safe and effective nuclear propulsion plants.

The Department tracked 86 performance measures under the Nuclear Security Theme: 79 measures were met, 6 were unmet, and the results for 1 were not available at the time of publication of this report. DOE exceeded the target for cumulative number of second line of defense sites with nuclear detection equipment installed at 251 sites (border crossings and seaports). These installations provide host governments with the technical means to detect, deter, and interdict illicit trafficking of nuclear and other radioactive materials. A cumulative total of 2,133 kilograms of highly enriched uranium and plutonium was removed, as targeted. This removal will reduce the world-wide threat of weapons of mass destruction. DOE achieved an annual target of 100 percent certification of warheads in the nuclear weapons stockpile that are safe, secure, reliable, and available to the President for deployment. This certification ensures the overall availability of the stockpile for the nation's nuclear deterrent. DOE exceeded the annual target of 2,500 by 110 for a total of 2,660 international and domestic experts trained in nonproliferation. This training fulfills the President's policy from 2004 and implements the U.S.-sponsored U.N. Security Council Resolution criminalizing proliferation; it educates experts in the prevention of proliferation of nuclear and nuclear-related materials, equipment, and technology.

The six unmet measures were related to Directed Stockpile Work, Pit Manufacturing and Verification Campaign, International Nuclear Materials Protection and Cooperation, Elimination of Weapons-Grade Plutonium Production, Cyber Security, and Readiness in Technical Base and Facilities programs. The Department has implemented an action plan and is implementing additional cost efficiencies to reduce the unit cost associated with projected W76 warhead production related to Directed Stockpile Work. The Pit

Manufacturing and Certification Campaign ended in FY 2008, and remaining elements will be absorbed into Directed Stockpile Work and the NNSA Science Campaign. The Department is on track to establish two megaports with host country sharing in FY 2009 working toward a cost savings for the U.S. Government of $13 million in the International Nuclear Materials Protection and Cooperation program. The construction of the Zheleznogorsk Fossil plant will be re-baselined in FY 2009, which will help facilitate the shut down of one weapons-grade plutonium production reactor in the Elimination of Weapons-Grade Plutonium Production program. In the Cyber Security program the Department continues to work towards 100 percent of planned cyber security site assessment visits conducted by the Office of the Chief Financial Officer at NNSA sites rated effective in FY 2009. The Readiness in Technical Base and Facilities program will re-baseline two major construction projects and recover the schedule for another to execute major construction projects within 90 percent of approved cost and schedule baselines in FY 2009.

Theme 3 – Scientific Discovery and Innovation: *Strengthening U.S. scientific discovery, economic competitiveness, and improving quality of life through innovations in science and technology*

The Department of Energy delivers discoveries and scientific tools that transform understanding of energy and matter and advance the national, economic, and energy security of the United States. The Department endeavors to achieve the major scientific discoveries that will drive U.S. competitiveness, inspire America, and revolutionize approaches to the nation's energy, national security, and environmental quality challenges. DOE also delivers the scientific facilities, trains the next generation of scientists and engineers, provides stewardship for 10 national laboratories and their capabilities and infrastructure required for U.S. scientific primacy, and integrates basic and applied research to accelerate innovation.

The Department tracked 28 performance measures under the Scientific Discovery and Innovation Theme: 26 measures were met and 2 were unmet. Three new major DOE Bioenergy Research Centers were opened, mobilizing the nation's top scientists to discover breakthroughs that will make biofuel production cost effective. DOE research met a computing-capability goal by devoting 30 percent of the resources of primary supercomputer at the National Energy Research Scientific Computing Center to computations that require at least one-eighth of that computer's processors. This capability will enable researchers to simulate complex physical, biological, and socioeconomic systems with greater realism and predictive power.

The two measures that were not met within this theme were in the Biological and Environmental Research and Fusion Energy programs. The target for achieving operating times of the life sciences scientific user facility will be revised with appropriated funding levels for FY 2009.

Theme 4 – Environmental Responsibility: *Protecting the environment by providing a responsible resolution to the environmental legacy of nuclear weapons production*

The federal government is charged with the dual responsibilities of addressing the nuclear weapons production legacy of our past and providing the necessary environmental infrastructure for today that will ensure a clean and safe environment for future generations. To meet those objectives, the Department of Energy seeks to complete the cleanup of the contaminated nuclear weapons manufacturing research and testing sites across the United States and manage the Department's post-closure environmental responsibilities while ensuring the future protection of human health and the environment.

The Department tracked 11 performance measures under the Environmental Responsibility Theme: 7 measures were met, and 4 were unmet. DOE met an environmental cleanup goal for FY 2008 to package for disposition a cumulative total of 326 radioactive facilities, an increase of 15 facilities over FY 2007 completions. Remediation work was completed at a cumulative total of 6,747 release sites, an increase of 206 sites over FY 2007 completions, although this total was 60 sites short of the FY 2008 target because of delays at Richland, Sandia National Laboratory, and Los Alamos National Laboratory. Reductions in the cost of performing long-term surveillance and monitoring activities while meeting all regulatory requirements to protect human health and the environment exceeded the 2-percent target in FY 2008. DOE submitted a license application to the Nuclear Regulatory Commission on June 3, 2008, for the Yucca Mountain repository to store spent nuclear fuel and high-level waste, a month ahead of the target date. DOE also met its measure to publish a Final Rail Alignment Environmental Impact Statement.

The three performance measures which were unmet were in the Department's Civilian Radioactive Waste Management and Environmental Management programs. The Civilian Radioactive Waste Management program did not succeed in having reform legislation enacted that would facilitate financing and construction of the repository and its administrative overhead costs exceeded the target (23% versus 22%), because programmatic appropriations were less than requested and many associated overhead costs were relatively fixed. The program is working to develop improved metrics for determining the operational efficiency of the program in FY 2009. In Environmental Management, the Department is working to complete remediation of the Richland, Sandia, and Los Alamos National Laboratory sites in FY 2009. Cleaning up the environment is a key responsibility of the Department; sites will continue characterizing, packaging, and shipping TRU waste throughout FY 2009 to make up for the FY 2008 shortfall.

Program Assessment Rating Tool (PART)

In 2002, the Office of Management and Budget (OMB) developed the Program Assessment Rating Tool (PART) as an instrument for implementing the President's Management Agenda (PMA) and the Budget and Performance Integration Initiative. The PART provides federal agencies with a tool for assessing program planning, management, and performance against quantitative, outcome-oriented goals. It is a means to inform the funding and management decisions so that programs can become more effective and efficient. As an instrument for periodically evaluating the efficiency and effectiveness of federal programs, the PART enables managers to identify and rectify existing and potential problems associated with program performance.

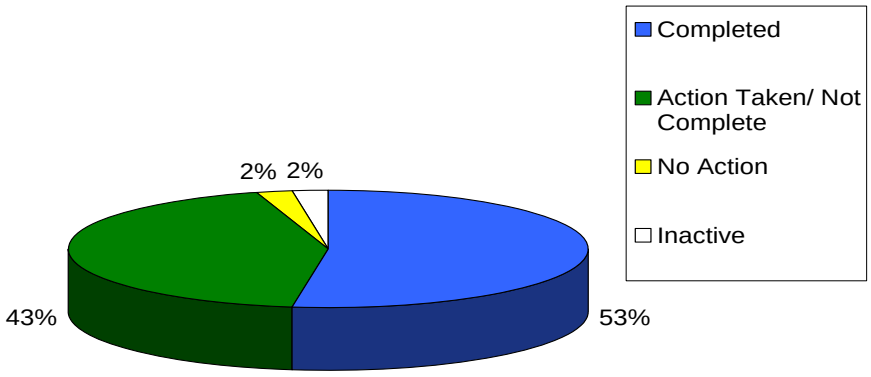
From FY 2002 through 2008, the Department has evaluated 55 of its current programs. Of the assessed programs, 75 percent are rated as "Moderately Effective" or "Effective." The following chart shows DOE's average results by strategic theme.

DOE PART Results By Strategic Theme		**Average Score**	**Average Rating**
Theme 1	Energy Security	68	Adequate
Theme 2	Nuclear Security	85	Effective
Theme 3	Scientific Discovery and Innovation	86	Effective
Theme 4	Environmental Responsibility	66	Adequate
DOE-Wide Results		**75**	**Moderately Effective**

More information on DOE PART scores and OMB findings is available at ExpectMore.gov.

A table follows this section that summarizes the FY 2008 status for the 55 Departmental programs which have completed a PART assessment. For each of the PART assessments, the table provides an overall rating of effectiveness with the date of last assessment, the number of program measures that met the FY 2008 targets, the number of measures that did not meet FY 2008 targets, and the number of measures with unknown status. An unknown status indicates that the actual FY 2008 performance was not yet reported at the time of publication. Links are included to detailed explanations of each PART program's performance measures, assessment scores, and improvement plans. Those plans are updated bi-annually. This website provides the public with information on all federal agency programs that have undergone a PART review.

In an effort to continually improve the quality of government programs, PART quality reviews have been conducted since 2002 by OMB. There have been 2,100 PART reviews of DOE activities between FY 2002 and 2008. Of those reviews, 1,098 improvement action plans have been completed, or 53 percent of the total reviews. Action has been taken but not completed on 910 reviews, no action has been taken on 46 reviews, and 46 reviews are classified as inactive. The following graphic illustrates this.



In addition to PART, a majority of the Department's assessed programs periodically initiated independent evaluations to gauge program effectiveness and to support program improvements. Departmental programs and activities are reviewed and audited on an on-going basis by the Department's Office of Inspector General and the Government Accountability Office.

PART Program FY 2008 Summary Table

Program Name	Rating/ Date of Assessment	Number of Targets Met in FY08	Number of Targets Unmet in FY08	Number of Targets Unknown Status in FY08	Link to Detailed Assessment (including specific performance measures)
Advanced Fuel Cycle Initiative	Moderately Effective 2003	1	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000072.2003.html
Advanced Scientific Computing Research	Moderately Effective 2003	2	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000074.2003.html
Basic Energy Sciences	Effective 2003	4	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000078.2003.html
Biological and Environmental Research	Effective 2003	4	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000080.2003.html
Biomass and Biorefinery Systems	Adequate 2005	0	0	1	http://www.whitehouse.gov/omb/expectmore/detail/10003400.2005.html
Bonneville Power Administration	Moderately Effective 2002	3	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000082.2002.html
Building Technologies	Adequate 2003	7	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000084.2003.html
Civilian Radioactive Waste Management Program: Yucca Mountain Project	Adequate 2003	4	2	0	http://www.whitehouse.gov/omb/expectmore/detail/10001049.2007.html
Coal Energy Technology	Adequate 2005	7	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000086.2005.html
Distributed Energy Resources	Moderately Effective 2003	0	0	8	http://www.whitehouse.gov/omb/expectmore/detail/10001043.2008.html

Program Name	Rating/ Date of Assessment	Number of Targets Met in FY08	Number of Targets Unmet in FY08	Number of Targets Unknown Status in FY08	Link to Detailed Assessment (including specific performance measures)
Electric System Research and Development	Moderately Effective 2006	3	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10003241.2006.html
Energy Information Administration	Results Not Demonstrated 2004	2	1	3	http://www.whitehouse.gov/omb/expectmore/detail/10002128.2004.html
Environmental and Post-Retirement Liabilities	Moderately Effective 2007	2	1	0	http://www.whitehouse.gov/omb/expectmore/detail/10009032.2007.html
Environmental Management	Adequate 2003	10	5	1	http://www.whitehouse.gov/omb/expectmore/detail/10001176.2003.html
Federal Energy Management Program	Moderately Effective 2005	2	0	2	http://www.whitehouse.gov/omb/expectmore/detail/10003401.2005.html
Fusion Energy Sciences	Moderately Effective 2003	1	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000096.2003.html
Generation IV Nuclear Energy Systems Initiative	Moderately Effective 2003	0	0	1	http://www.whitehouse.gov/omb/expectmore/detail/10000100.2003.html
Geothermal Technology	Moderately Effective 2003	1	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000102.2003.html
High Energy Physics	Moderately Effective 2003	4	1	0	http://www.whitehouse.gov/omb/expectmore/detail/10000104.2003.html
Hydrogen Technology	Adequate 2007	2	1	1	http://www.whitehouse.gov/omb/expectmore/detail/10000106.2007.html
Industrial Technologies Program	Adequate 2005	4	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10003402.2005.html

Program Name	Rating/ Date of Assessment	Number of Targets Met in FY08	Number of Targets Unmet in FY08	Number of Targets Unknown Status in FY08	Link to Detailed Assessment (including specific performance measures)
National Nuclear Infrastructure	Results Not Demonstrated 2004	0	0	5	http://www.whitehouse.gov/omb/expectmore/detail/10002130.2004.html
National Nuclear Security Administration: Advanced Simulation and Computing	Effective 2007	4	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000076.2007.html
National Nuclear Security Administration: Facilities and Infrastructure Recapitalization Program	Moderately Effective 2008	3	1	0	http://www.whitehouse.gov/omb/expectmore/detail/10000088.2002.html
National Nuclear Security Administration: Fissile Materials Disposition Program	Moderately Effective 2006	2	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10003238.2006.html
National Nuclear Security Administration: Global Threat Reduction Initiative Program	Effective 2006	3	1	0	http://www.whitehouse.gov/omb/expectmore/detail/10003239.2006.html
National Nuclear Security Administration: International Nuclear Materials Protection and Cooperation	Effective 2007	1	2	2	http://www.whitehouse.gov/omb/expectmore/detail/10000108.2007.html
National Nuclear Security Administration: Naval Reactors	Effective 2005	5	1	0	http://www.whitehouse.gov/omb/expectmore/detail/10003404.2005.html

Program Name	Rating/ Date of Assessment	Number of Targets Met in FY08	Number of Targets Unmet in FY08	Number of Targets Unknown Status in FY08	Link to Detailed Assessment (including specific performance measures)
National Nuclear Security Administration: Nonproliferation and Verification Research and Development	Moderately Effective 2005	6	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10003408.2005.html
National Nuclear Security Administration: Nuclear Weapons Incident Response Program	Moderately Effective 2006	1	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10003240.2006.html
National Nuclear Security Administration: Pit Manufacturing and Certification Campaign	Effective 2006	2	1	0	http://www.whitehouse.gov/omb/expectmore/detail/10003237.2006.html
National Nuclear Security Administration: Readiness Campaign	Effective 2005	3	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10003406.2005.html
National Nuclear Security Administration: Science Campaign	Moderately Effective 2005	8	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10003405.2005.html
National Nuclear Security Administration: Directed Stockpile Work	Moderately Effective 2008	4	1	0	http://www.whitehouse.gov/omb/expectmore/detail/10002126.2004.html
National Nuclear Security Administration: Elimination of Weapons-Grade Plutonium Production Program	Effective 2005	1	2	0	http://www.whitehouse.gov/omb/expectmore/detail/10001044.2005.html

Program Name	Rating/ Date of Assessment	Number of Targets Met in FY08	Number of Targets Unmet in FY08	Number of Targets Unknown Status in FY08	Link to Detailed Assessment (including specific performance measures)
National Nuclear Security Administration: Engineering Campaign	Moderately Effective 2006	5	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10003236.2006.html
National Nuclear Security Administration: Inertial Confinement Fusion Ignition and High Yield Campaign	Effective 2008	4	1	0	http://www.whitehouse.gov/omb/expectmore/detail/10001046.2003.html
National Nuclear Security Administration: Nonproliferation and International Security	Effective 2008	5	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10002132.2004.html
National Nuclear Security Administration: Readiness in Technical Base and Facilities	Moderately Effective 2007	3	1	0	http://www.whitehouse.gov/omb/expectmore/detail/10001047.2007.html
National Nuclear Security Administration: Safeguards and Security	Moderately Effective 2004	4	1	0	http://www.whitehouse.gov/omb/expectmore/detail/10000126.2004.html
National Nuclear Security Administration: Secure Transportation Asset	Moderately Effective 2004	2	3	0	http://www.whitehouse.gov/omb/expectmore/detail/10002134.2004.html
Natural Gas Technology	Ineffective 2003	1	0	1	http://www.whitehouse.gov/omb/expectmore/detail/10001183.2003.html
Nuclear Physics	Effective 2003	4	1	0	http://www.whitehouse.gov/omb/expectmore/detail/10000114.2003.html
Nuclear Power 2010	Moderately Effective 2008	5	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000116.2003.html

Program Name	Rating/ Date of Assessment	Number of Targets Met in FY08	Number of Targets Unmet in FY08	Number of Targets Unknown Status in FY08	Link to Detailed Assessment (including specific performance measures)
Oil Technology	Ineffective 2003	1	0	1	http://www.whitehouse.gov/omb/expectmore/detail/10000118.2003.html
Solar Energy	Moderately Effective 2003	2	1	2	http://www.whitehouse.gov/omb/expectmore/detail/10000120.2003.html
Southeastern Power Administration	Moderately Effective 2002	4	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000122.2002.html
Southwestern Power Administration	Moderately Effective 2002	7	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000124.2002.html
State Energy Programs	Results Not Demonstrated 2004	0	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10002136.2004.html
Strategic Petroleum Reserve	Effective 2003	3	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10001048.2003.html
University Nuclear Education Programs	Results Not Demonstrated 2005	0	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10003403.2005.html
Vehicle Technologies	Moderately Effective 2004	5	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10002138.2004.html
Weatherization Assistance	Moderately Effective 2003	3	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000128.2003.html
Western Area Power Administration	Moderately Effective 2002	3	0	0	http://www.whitehouse.gov/omb/expectmore/detail/10000130.2002.html

Program Name	Rating/ Date of Assessment	Number of Targets Met in FY08	Number of Targets Unmet in FY08	Number of Targets Unknown Status in FY08	Link to Detailed Assessment (including specific performance measures)
Wind Energy	Moderately Effective 2003	3	1	0	http://www.whitehouse.gov/omb/expectmore/detail/10000216.2003.html
Total		**170**	**29**	**28**	

President's Management Agenda

In 2001, President Bush unveiled the President's Management Agenda (PMA) and challenged the federal government to become more efficient, effective, results-oriented, and accountable. During the past seven 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.

Each agency is held accountable for its performance in carrying out the PMA through quarterly scorecards issued by the Office of Management and Budget (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. Green means that implementation is proceeding according to plan; yellow means that there is some slippage or other issue requiring adjustment of the plan; and red means that the initiative is in serious jeopardy absent significant management intervention. The Department is scored against six PMA initiatives. Each year, the Department and OMB consider progress made during the previous year and create a proud-to-be 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 ExpectMore.gov.

In FY 2008, DOE continued to make progress in the six PMA initiative areas, as follows:

Human Capital (yellow status, green progress) – The Department continued to link Human Capital strategies to the agency's mission and goals. It enhanced the performance culture and made improvements as a result of the Human Capital Accountability Report while linking initiatives and processes to the Departmental budget. The Department worked toward the goal of having a comprehensive enterprise talent management system in place that encompasses learning and development programs for competencies needed to continue to support the mission of the Department, a workforce pipeline for new talent by using intern and mentoring programs to develop talent and transfer knowledge. During FY 2008, the Department implemented a new employee performance appraisal process. All employees now have measurable results-focused performance plans to support continued improvement in organizational efficiencies and effectiveness.

Commercial Services Management (red status, yellow progress) – In July 2008, the Competitive Sourcing initiative was renamed "Commercial Services Management" (CSM) by OMB to reflect the fact that agencies improve the operation of their commercial functions using a variety of techniques. In addition to competitive sourcing, the CSM initiative will track in-sourcing opportunities, high-performing organizations, and business process reengineering efforts that rely on disciplined management practices (such as baselining of performance and costs and establishing performance agreements) but do not ordinarily involve public-private competition or the potential conversion of work from the government to the private sector. Congress did not appropriate funds for the competitive-sourcing office

in FY 2008. As a result, DOE consolidated this function within the Office of Procurement and Assistance Management to meet the continuing and expanded requirements of this initiative.

The Department studied 1,228 federal positions and more than 1,400 contractor positions since FY 2002 as part of eight competitive sourcing studies. As a result of the competitions, DOE expects to save $538 million over a 5- to 7-year period. DOE's Office of Legacy Management (LM) was recognized by OMB as a high-performing (cost-saving) organization. Through self-assessment and reorganization, LM transformed itself into a highly efficient organization that is expected to produce $15 million in savings over 5 years, a 29-percent reduction from baseline operational costs.

Financial Performance (green status, green progress) – The Department's FY 2008 financial statements were reviewed by independent auditors and received an unqualified "clean" opinion. No material weaknesses were identified in internal controls, and the auditors concluded that the Department had corrected a significant deficiency identified last year regarding controls over the accounting for estimated environmental liabilities. The Department also completed an evaluation of its financial management system and found it to be in general conformance with governmental financial system requirements and identified no material non-conformances.

The Department is implementing a plan to continuously expand the scope of its routine financial data used to inform management decision-making in additional areas of operations. A key to this effort is the iManage Dashboard, which uses data available in the iManage Data Warehouse (IDW) and other DOE management information systems. In 2008, the Department initiated an executive financial management review process hosted on the dashboard; budget execution reviews with a focus on uncosted balances were presented quarterly.

The Department also established a new Office of Cost Analysis in the Office of the Chief Financial Officer that has functional responsibility for all program and project cost estimating and analysis in support of Departmental budget, policy, and acquisition decisions. A primary function of this new office is to establish a database containing historical cost information for all DOE programs that is readily accessible through iManage, referred to as the DOE Cost Analysis System.

Electronic Government (yellow status, yellow progress) – E-Government uses technology to improve how the federal government serves citizens, businesses, and agencies alike. The Department continues to work on improving its efforts in expanding the use of electronic technology to provide public assess to and dissemination of its information. The Department demonstrated successful implementation of Earned Value Management related to information technology (IT) investments while building on established IT management processes including governance through the Information Technology Council (ITC). The ITC is responsible for reviewing IT investment business cases, overseeing project performance, and ensuring the remediation of poorly performing projects; strong IT project management ensured through a comprehensive IT project managers' certification program;

and updated IT policy and procedures establishing Departmental roles and responsibilities to reduce IT risk and improve investment performance. The Department continues to mature the Enterprise Architecture, which aligns to the Federal Enterprise Architecture, through the documentation and development of architecture segments integrated into the Modernization Roadmap. The Department also continues to support the reduction of redundant processes government-wide by participating in 21 of the President's 27 E-Government initiatives, including e-Authentication, and in 8 of the 9 Lines of Business established by OMB. In addition, the Department continues to leverage internal E-Government opportunities and has initiated or completed 13 of the 15 initiatives, with the remaining scheduled for implementation in the near future.

Performance Improvement (green status, green progress) – The Department's Strategic Plan provides a roadmap to address the energy, environmental, scientific, and nuclear security challenges facing our country. The heart of the plan is founded on innovation through science-driven development of new technologies. The Strategic Plan supports performance improvement by focusing on outcomes, reflecting spending priorities, and demonstrating to the American people the Department's commitment to using taxpayer's dollars wisely.

The Department and OMB have worked collaboratively to complete a Program Assessment Rating Tool (PART) review for 55 of the Department's programs. Since 2002, the Department's average PART rating has improved from "Adequate" to "Moderately Effective," reflecting higher average ratings for newly assessed programs between 2003 and 2008 and improved ratings (on average) for reassessed programs. The PART has become an important tool in helping the Department evaluate its programs to achieve results.

In FY 2008, the Department undertook an initiative with OMB to strengthen its performance measures and external reporting through participation in OMB's "Improving the Quality of PART Performance and Efficiency Goals" initiative. This initiative identified the Department's need to develop more outcome-oriented performance measures. DOE and OMB developed action plans to make necessary improvements to DOE's performance metrics and implemented those plans through the PART FY 2008 fall update. The Department revised 35 percent of its FY 2008 performance measures. The new and improved performance metrics will be reflected in the FY 2010 congressional budget submission. Further information on OMB PART scores and findings is located at ExpectMore.gov.

The current Departmental controls over documentation to support performance results require program offices to identify the supporting documentation that would be used to validate the performance results when a measure is initially submitted into the performance measurement tracking system. The Chief Financial Office also performed random samples of documentation verification against second-quarter performance results to provide management with reasonable assurance that this control was working effectively.

Real Property (green status, green progress) – The Department owns and maintains a real-property portfolio with a replacement value of approximately $77 billion. This portfolio

includes the national laboratories, 20,000 buildings and structures, and 3.1 million acres of land. Effective real-property management is critical to the efficient acquisition, maintenance, operation, and disposition of assets entrusted to the Department. The Department issued an Asset Management Plan providing the guidelines and principles for managing its real-property portfolio and an implementation document, the "Three Year Rolling Timeline," outlining specific activities to achieve the goals of the Asset Management Plan. The Department continues 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, the Department has implemented a statistical validation program to ensure the integrity of the real-property data and better support real-property decision making. Since FY 2002, the Department disposed of more than 12 million square feet of excess real property and has a plan to continue disposal of unneeded assets.

Performance Background

The Department of Energy's performance programs are designed to achieve well-defined outcome goals that support the strategic goals of the Department's Strategic Plan. Those strategic goals are organized around the five Departmental strategic themes: Energy Security, Nuclear Security, Scientific Discovery and Innovation, Environmental Responsibility, and Management Excellence.

Performance Framework

The Department uses a performance framework approach in developing program performance metrics to ensure that the right data are measured and to inform program managers, senior leaders, and stakeholders on the progress being made toward the strategic and program goals. The performance framework is a hierarchical relationship from the DOE mission to individual performance standards. During performance planning, high-level goals direct the scope of the supporting performance elements and progress against these goals is indicated by actual performance at the lower levels. These elements are described as follows:

- The **Mission** of the Department of Energy is "*Discovering the solutions to power and secure America's future.*"
- To accomplish the mission, DOE focuses on 5 supporting **Strategic Themes**.
- To support these 5 themes, DOE has developed 16 **Strategic Goals** that specify strategies that, if achieved, will result in accomplishing the mission. The majority of DOE's strategic goals relate to energy technology and security improvements and maintaining associated quality products and services.
- Budgeted programs are charged with helping to achieve these strategic goals. The Department has 52 programs, each with a clearly defined **Program Goal** that aligns with one of the 16 strategic goals.
- Annual **Performance Measures** and associated targets support achievement of the program goal. The performance measures and targets are the outputs and outcomes that each program must achieve to reach the program's goals.
- Individual Employee and Contractor **Performance Standards** are linked directly to specific performance measures to ensure that individuals are held accountable for achieving results.

Performance Validation and Verification

The Department employs periodic reviews and audits to validate and verify its performance. For quality and completeness, the Department internally reviews these results, while the independent auditors evaluate key internal controls related to performance reporting. The program offices, the national laboratories, and the Department's contractor work force

maintain source data substantiating performance results. Because of the size and diversity of the Department's portfolio, validation and verification are also supported by the following activities:

- **Budget Preparation Analysis**: Performance targets submitted at each phase of budget development are reviewed to ensure that they contribute effectively to the achievement of program and departmental goals and are aligned with the Department's strategic themes and goals.

- **Internal Controls**: Internal controls are used to strengthen the Department's validation and verification of performance results. The Department provides quarterly training to employees to assist them in formulating quality performance measures that meet internal control standards.

- **Performance Measure Manager System**: In FY 2008, the Department transitioned from the Joule performance measure tracking system to OMB's Line of Business, Performance Measure Manager (PMM). The PMM is a performance-management database facilitated by the Treasury Department with the capability of uploading performance metrics directly into OMB's PARTWeb system. The PMM organizes annual performance measures into various hierarchical structures to show the relationship between individual performance targets and overall departmental performance. Departmental program and staff offices input performance measures and results directly into PMM on a periodic basis. This system is then used to produce the "Performance Measure Details" section of the Department's *Annual Performance Report*.

Performance Measures Details

The Department's performance measures are tracked quarterly through a Performance Measure Manager (PMM) system. During FY 2008, the Department worked with OMB to align this new system and the OMB PART system with its congressional budget justifications; thus eliminating the prior Joule system. The prior system contained similar performance information, but was not identical. DOE also worked with OMB in FY 2008 to improve measurement quality. This analysis identified the Department's need to develop performance measures that were more outcome-focused and trendable (quantitative). More information on DOE PART scores and OMB findings is available at ExpectMore.gov.

For FY 2008, DOE tracked 220 performance measures that provide detailed information and assessment of progress for the Department's 52 program goals. These performance measures are listed in the FY 2008 Targets column of the Annual Performance Results and Targets table in DOE's FY 2009 Congressional Budget Request. The annual progress made toward outcome-oriented, multi-year program goals is a key indicator of whether the Department is making progress toward its 16 strategic goals. Performance measures are organized by DOE strategic theme, and within each strategic theme, by strategic goal. Each performance measure includes the following details:

- Office
- Program
- Strategic goals supported
- Measure name and description
- Commentary on FY 2008 results
- Future plans and explanation of shortfalls
- Supporting documentation
- Associated performance in prior years (FY 2005 through FY 2007)
- Program's PART rating and web link
- Program office web link

FY 2008 Performance Measures

THEME 1 - ENERGY SECURITY

Office:	Energy Efficiency and Renewable Energy	
Program:	Hydrogen/Fuel Cell Technologies (1.1.1)	
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity	
Measure:	**Hydrogen Storage Research and Development: Materials-Based** Develop chemical hydrogen storage regeneration methods at laboratory-scale, obtain initial data for efficiency and systems analysis, and demonstrate lab-scale reactions capable of at least 40 percent energy efficiency, leading to greater effective storage density and driving range for fuel cell vehicles.	
2008 Results		
Commentary:	Met	The Chemical Hydrogen Storage Center of Excellence has developed three regeneration methods for the hydrogen storage material ammonia borane (AB). The Center has demonstrated two of the AB regeneration schemes at laboratory-scale and obtained initial data for efficiency and systems analysis, for which the Center calculated overall thermodynamic energy efficiencies to be 60% and 45% for the two approaches. TIAX with input from Air Products and Argonne National Laboratory has completed the initial cost analysis using N-ethylcarbazole as a hydrogen carrier. The preliminary storage system cost onboard the vehicle is $15.4/kWh.
Future Plans / Explanation of Shortfalls:	Vehicular hydrogen storage continues to be a critical technology barrier and the Hydrogen Program will ramp up R&D to achieve the challenging DOE/FreedomCAR and Fuel Partnership targets. In FY 2009 the Program will complete a down-selection of sorbent-based materials with the potential to meet 2010 targets and will update system design projections using the most promising materials and evaluate them against the 2009 interim goal of 5 percent by weight (modeled) or 1.7 kWh/kg.	
Supporting Documentation:	DOE Chemical Hydrogen Storage Center of Excellence and TIAX report.	
Associated Performance in Prior Years		
FY 2007:	Met	Complete baseline on-board storage systems analyses, down select materials, and evaluate against 2007 targets of 1.5 kWh/kg (4.5% by weight) and 1.2 kWh/L.
FY 2006:	Met	Complete fabrication and testing of a sub-scale prototype metal hydride storage system; evaluate progress toward the 2007 target of 1.5 Wh/kg (4.5 wt.%), and complete preliminary design of system with potential to meet 2010 targets (2.0 kWh/kg [6 wt.%], 1.5 kWh/L).
FY 2005:	Met	Identify materials with the potential to meet 2010 targets of 2.0 kWh/kg (6 weight percent), 1.5 kWh/L.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000106.2007.html
Program Office:	http://www1.eere.energy.gov/hydrogenandfuelcells/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Hydrogen/Fuel Cell Technologies (1.1.1)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Hydrogen - Operational Efficiency Measure** Maintain administrative costs as a percent of total program costs less than 12 percent.

2008 Results

Commentary:	Met	Overall performance is 6.6%; annual target is to be less than 12%.
Future Plans / Explanation of Shortfalls:		Future plans are to keep administrative support below the 12% criteria, unless external budgetary decisions beyond EERE's control, such as recisions, extended continuing resolutions, etc., impact the criteria formula.
Supporting Documentation:		DOE financial accounting system (STARS), based on preliminary FY 2008 actuals.

Associated Performance in Prior Years

FY 2007:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12%.
FY 2006:	Met	Maintained total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12 percent.
FY 2005:	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 Hydrogen/Fuel Cell Program FY 2004 end of year adjusted uncosted baseline ($29,283K) until the target range is met.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000106.2007.html
Program Office:	http://www1.eere.energy.gov/hydrogenandfuelcells/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy	
Program:	Hydrogen/Fuel Cell Technologies (1.1.1)	
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity	
Measure:	**Hydrogen - Technology Validation** Fuel Cell vehicle(s) demonstrate the ability to achieve 250 mile range without impacting cargo or passenger compartments, leading to greater adoption of fuel cells. Technology Validation prior to FY 2008 showed 103-190 mile range under real world operating conditions.	

2008 Results

Commentary:	Met	The highest range demonstrated through the Technology Validation subprogram (based on the EPA drive cycle) was 254 miles. The Program had previously published the vehicle driving range from Generation 1 vehicles (which primarily used 350-bar tanks), as second-generation vehicles were introduced in 2007 and 2008, new data was reported that allowed an analysis of the range of second-generation vehicles based on 700-bar tanks with results indicating that hydrogen stored on-board vehicles at 700-bar can significantly increase driving range, however in several cases it still does so at the expense of passenger or cargo space.
Future Plans / Explanation of Shortfalls:	Continue vehicle and infrastructure learning demonstration efforts on track towards validating hydrogen and fuel cell targets for 2015 technology readiness.	
Supporting Documentation:	Fuel Cell Vehicle Range and Driving Behavior Technical Presentations by Composite Data Products.	

Associated Performance in Prior Years

FY 2007:	Met	Validate achievement of a refueling time of 5 minutes or less for 5 kg of hydrogen at 5,000 psi through the use of advanced sensor, control, and interface technologies.
FY 2006:	Met	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.
FY 2005:	Met	Complete validation of an energy station that can produce 5,000 psi hydrogen from natural gas for $3.60 per gallon of gasoline equivalent (including co-production of electricity), untaxed at the station with mature production volumes (e.g., 100 units/year).

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000106.2007.html
Program Office:	http://www1.eere.energy.gov/hydrogenandfuelcells/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy	
Program:	Hydrogen/Fuel Cell Technologies (1.1.1)	
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity	
Measure:	**Transportation Fuel Cell Systems and Fuel Cell Stack Component Research and Development** DOE-sponsored research will reduce the modeled technology cost of a hydrogen-fueled 80kW fuel cell power system to $70/kW. Reducing automotive fuel cell costs accelerates the market viability and deployment of fuel cell technologies, which contribute to the Department's goal of increased energy security and reduced greenhouse gas and pollutant emissions.	

2008 Results

Commentary:	Not Met	Research and development sponsored by the Hydrogen Program has resulted in a reduction in the modeled technology cost of a hydrogen-fueled 80kW fuel cell power system from $94/kW in FY 2007 to $73/kW in FY 2008, nearly meeting the FY 2008 target of $70/kW. Directed Technologies Inc. conducted a cost analysis in FY 2008 that shows the high volume modeled cost to be $73/kW based on the following: a production volume of 500,000 units per year, a platinum loading and power density representative of a commercially available membrane-electrode assembly, and 7,300 hours durability based on laboratory data achieved in FY 2008 for a membrane-electrode assembly.
Future Plans / Explanation of Shortfalls:	The Program will ramp up R&D in fuel cell components to enable meeting 2010 targets of $45/kW. New projects in Fuel Cell Stack Components R&D will be awarded in FY 2009 for topics including Catalyst Studies, Innovative Concepts, Fuel Cell Degradation Studies, and Transport within the PEM Stack.	
Supporting Documentation:	Technical presentation from Directed Technologies, Inc.	

Associated Performance in Prior Years

FY 2007:	Met	DOE-sponsored laboratory scale research will reduce the modeled technology cost to $90/kW for a hydrogen-fueled 80kW fuel cell power system.
FY 2006:	Met	DOE-sponsored laboratory scale research will reduce the modeled technology cost to $110/kW for a hydrogen-fueled 80 kW fuel cell power system.
FY 2005:	Met	DOE-sponsored research will reduce technology cost to $125/kW for a hydrogen-fueled 50kW fuel cell power system.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000106.2007.html
Program Office:	http://www1.eere.energy.gov/hydrogenandfuelcells/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy	
Program:	Hydrogen/Fuel Cell Technologies (1.1.1)	
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity	
Measure:	**Distributed Energy Fuel Cell Systems and Fuel Processor Research and Development** DOE-sponsored research will improve electrical efficiency to 35 percent at full power for a natural gas or propane fueled 5-250 kW stationary fuel cell power system verified by a 5-250 kW prototype. This will support development of fuel cell power systems as alternative power sources to grid-based electricity for buildings and other stationary applications.	

2008 Results

Commentary:	Met	Intelligent Energy tested a new reformer and has met the target of 35% fuel cell electrical efficiency as verified by a performance assessment by Sandia National Laboratory. These results were based on Hestia reformer data, new fuel cell data and parasitic power losses.
Future Plans / Explanation of Shortfalls:	New projects in Distributed Energy Fuel Cell Systems R&D will be awarded in FY 2009 in topics including Stationary PEM Power Systems, Solid Oxide Fuel Cell Power Systems, Emergency Backup Power Systems, Fuel Cell Powered Material Handling Equipment, Improved Materials for Portable Power (alternative-fuel fuel cells), and Portable Power.	
Supporting Documentation:	Annual Merit Review and Peer Evaluation presentation by Intelligent Energy.	

Associated Performance in Prior Years

FY 2007:	Met	DOE-sponsored research will improve electrical efficiency to 34% at full power for a natural gas or propane fueled 5-250 kW stationary fuel cell power system verified by a prototype (5-50 kW system).
FY 2006:	N/A	Due to Congressionally Directed Activities, there was no activity in this area in FY 2006.
FY 2005:	Met	Achieve 32 percent efficiency at full power for a natural gas or propane fueled 5-250kW stationary fuel cell system.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000106.2007.html
Program Office:	http://www1.eere.energy.gov/hydrogenandfuelcells/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy	
Program:	Hydrogen/Fuel Cell Technologies (1.1.1)	
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity	
Measure:	**Hydrogen Production and Delivery Research and Development: Renewable** Complete benchmark demonstration of reforming technologies and identify development pathways to meet the 2012 target of producing hydrogen from distributed reforming of renewable liquids for $<3.80 gge at large equipment production volumes (e.g., 500 units/yr) and for dispensing at 5,000 psi. Reduced costs of hydrogen production will support technology readiness for hydrogen powered vehicles.	

2008 Results

Commentary:	Met	Benchmark demonstrations of reforming technology were completed using bio-derived liquids at NREL, Ohio State, and Virent Energy Systems, Inc. Results from aqueous phase reforming of carbohydrates and vapor phase reforming of bio-oils indicate that these two pathways would meet the 2012 target cost of $3.80/gge for the production of hydrogen from renewable liquids, in addition, projected production cost of hydrogen from the vapor phase reforming of ethanol could provide an additional pathway with improved catalyst integrity and reduced hydrogen delivery cost.
Future Plans / Explanation of Shortfalls:	Activities in Hydrogen Production and Delivery R&D are being deferred until FY 2010 to allow for increased effort in the critical technology areas of on-board hydrogen storage and fuel cells R&D.	
Supporting Documentation:	Project Review & Quarterly Reports from NREL, Virent Energy Systems Inc., and Ohio State University.	

Associated Performance in Prior Years

FY 2007:	Met	Complete lab-scale electrolyzer, test to determine whether it achieves 64% energy efficiency and evaluate systems capability to meet $5.50/gge hydrogen cost target, untaxed at the station, and with large equipment production volumes [e.g., 500 units/year].
FY 2006:	N/A	Due to Congressionally Directed Activities, there was little activity in FY 2006. Target was delayed until FY 2007.
FY 2005:	Met	Model cost of hydrogen produced from renewable sources and assess versus the 2010 target of $2.85/gge, untaxed at the station at 5,000 psi.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000106.2007.html
Program Office:	http://www1.eere.energy.gov/hydrogenandfuelcells/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Hydrogen/Fuel Cell Technologies (1.1.1)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Hydrogen - Reference Materials and Guidelines** Develop a hydrogen materials technical reference which reports on embrittlement issues for hydrogen usage up to 10,000 psi delivered. Publish a Best Practices Manual describing hydrogen safety guidelines and lessons learned. Wide acceptance of hydrogen technologies depends on developing and meeting safety standards in which the public has confidence.

2008 Results

Commentary:	Met	Sandia National Labs developed the Technical Reference for Hydrogen Compatibility of Materials, a living document that will continue to evolve as data are generated from materials testing and collected from the literature. DOE also published a Hydrogen Safety Best Practices Manual which contains eight hierarchical, peer-reviewed sections on best practices and is cross-referenced with the Hydrogen Incidents and Lessons Learned Database and the Hydrogen Safety Bibliographic Database.
Future Plans / Explanation of Shortfalls:	Continue safety, codes and standards efforts on track towards enabling the widespread commercialization of hydrogen and fuel cell technologies	
Supporting Documentation:	Technical Reference for Hydrogen Compatibility of Materials at http://www.ca.sandia.gov/matlsTechRef/ and Hydrogen Safety Best Practices Manual at http://www.h2bestpractices.org.	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000106.2007.html
Program Office:	http://www1.eere.energy.gov/hydrogenandfuelcells/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Hydrogen/Fuel Cell Technologies (1.1.1)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Hydrogen - Macro System Model** Complete and validate Macro system Model for complete hydrogen and delivery pathway analysis.

2008 Results

Commentary:	Met	The macro-system model (MSM) has been completed and can estimate the financial results, primary energy source requirements, and emissions of multiple hydrogen production/delivery pathways by linking H2A, HDSAM, and GREET. The MSM was also validated through comparison with the European model (E3database) as part the HyWays IPHE project. Inputs and results for nine pathways were compared to similar analyses done using the E3database. The nine pathways covered 3 timeframes; both central and distributed hydrogen production; delivery as a liquid in trucks and gaseous delivery in pipelines; and production from natural gas, electricity, biomass, and coal.
Future Plans / Explanation of Shortfalls:		In FY 2009, the Program will complete feedstock, capital, capacity and utility sensitivity analyses on the cost of delivered hydrogen for 6 pathways using the Macro-System Model. This will aid in understanding and assessing technology needs and progress, potential environmental impacts, and the energy-related economic benefits of various hydrogen supply and demand pathways.
Supporting Documentation:		The model is available to registered users at http://h2-msm.son.sandia.gov/. Results were presented at the Hydrogen Program Annual Merit Review (http://www.hydrogen.energy.gov/pdfs/review08/an_4_ruth.pdf). A report summarizing the results of the U.S.-EU comparative analysis is available at http://www.hyways-iphe.org/

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000106.2007.html
Program Office:	http://www1.eere.energy.gov/hydrogenandfuelcells/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy	
Program:	Hydrogen/Fuel Cell Technologies (1.1.1)	
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity	
Measure:	**Hydrogen Production and Delivery Research and Development: Non-Renewable** Develop a hydrogen materials technical reference which reports on embrittlement issues for hydrogen usage up to 10,000 psi delivered. Publish a Best Practices Manual describing hydrogen safety guidelines and lessons learned. Wide acceptance of hydrogen technologies depends on developing and meeting safety standards in which the public has confidence.	

2008 Results

Commentary:	Met	Sandia National Labs developed the Technical Reference for Hydrogen Compatibility of Materials, a living document that will continue to evolve as data are generated from materials testing and collected from the literature. DOE also published a Hydrogen Safety Best Practices Manual which contains eight hierarchical, peer-reviewed sections on best practices and is cross-referenced with the Hydrogen Incidents and Lessons Learned Database and the Hydrogen Safety Bibliographic Database.
Future Plans / Explanation of Shortfalls:	Continue safety, codes and standards efforts on track towards enabling the widespread commercialization of hydrogen and fuel cell technologies.	
Supporting Documentation:	Technical Reference for Hydrogen Compatibility of Materials at http://www.ca.sandia.gov/matlsTechRef/ and Hydrogen Safety Best Practices Manual at http://www.h2bestpractices.org.	

Associated Performance in Prior Years

FY 2007:	Met	Complete preliminary lab scale tests to identify technologies that produce 5,000 psi hydrogen from natural gas for $2.50/gge, untaxed at the station and with large equipment production volumes [e.g., 500 units/year].
FY 2006:	Met	Complete the development of a laboratory scale distributed natural gas-to-hydrogen production and dispensing system that can produce 5,000 psi hydrogen for $3.00/gge.
FY 2005:	Met	Complete the research for a distributed natural gas-to-hydrogen production and dispensing system that can produce 5,000 psi hydrogen for $3.00/gge (untaxed and without co-producing electricity) at the station in 2006.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000106.2007.html
Program Office:	http://www1.eere.energy.gov/hydrogenandfuelcells/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Freedom Car & Vehicle Technologies (1.1.2)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Hybrid Electric Systems (Energy Storage)** Reduce the projected cost at high volume of a high power, 25 kW, passenger vehicle lithium ion battery to $625 per battery system for conventional hybrid vehicles.

2008 Results

Commentary:	Met	The projected cost for a 25 kilowatt battery is $621 for the Hybrid Electric Vehicle battery that was developed in the U.S. Advanced Battery Consortium battery development contract. This is expected to be the first entry of lithium ion batteries into a production vehicle.
Future Plans / Explanation of Shortfalls:	In FY 2009 DOE will continue to support the development of alternative lithium ion battery chemistries for conventional hybrid vehicles and will focus the R&D portfolio on developing batteries for Plug-In hybrid vehicles.	
Supporting Documentation:	Contractor July 2008 Quarterly Progress Review.	

Associated Performance in Prior Years

FY 2007:	Met	Reduce high power, 25 kW, passenger vehicle, lithium ion battery cost to $700 per battery system.
FY 2006:	Met	Reduce the projected cost at high volume of a high power, 25 kW, light vehicle, lithium ion battery to $750 per battery system.
FY 2005:	Met	Reduce high-power, 25 kW, light vehicle, lithium ion battery cost to $900 per battery system.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10002138.2004.html
Program Office:	http://www1.eere.energy.gov/vehiclesandfuels/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Freedom Car & Vehicle Technologies (1.1.2)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Lightweight Materials Technology** Reduce the modeled weight of a mid-sized passenger vehicle body and chassis components by 25 percent relative to baseline.

2008 Results

Commentary:	Met	The weight reduction and cost effectiveness were assessed based on the use of lightweight material options for body and chassis components under two plausible mid-size vehicle scenarios achieving reductions of 27-32%. Each scenario focused on a specific lightweight material option, i.e. aluminum or glass-fiber-reinforced polymer-matrix composites (FRPMC). The focus was on under-body systems, but additional chassis components were also selected for the glass-FRPMC scenario.
Future Plans / Explanation of Shortfalls:	R&D activities to reduce passenger vehicle weight will continue in FY 2009.	
Supporting Documentation:	Draft Oak Ridge National Report for the finings will be reported in the Vehicle Technologies Lightweight Materials annual report for FY 2008.	

Associated Performance in Prior Years

FY 2007:	Met	Develop technologies which, if implemented in high volume, could reduce the weight of body and chassis components by 10%.
FY 2006:	Not Met	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.
FY 2005:	Met	Complete R&D on technologies, which, if implemented in high volume, could reduce the price of automotive-grade carbon fiber to less than $4.50/pound.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10002138.2004.html
Program Office:	http://www1.eere.energy.gov/vehiclesandfuels/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy	
Program:	Freedom Car & Vehicle Technologies (1.1.2)	
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity	
Measure:	**Advanced Combustion Engine Research and Development** In the laboratory, demonstrate passenger vehicle combustion engines with a 43 percent brake thermal efficiency. Complete progress review of heavy-duty engine research and down-select from 4 to 2 the number of cooperative agreements for continued R&D, based on the best prospects of achieving the 2013 goal of 55 percent engine efficiency.	

2008 Results

Commentary:	Met	The Oak Ridge National Laboratory has demonstrated in the laboratory a brake thermal efficiency (BTE) of 43% on a General Motors 1.9-L diesel engine (an interim milestone to demonstrating the 2010 objective of 45% BTE with Tier 2 Bin 5 emissions for light-duty engines). Advanced efficiency technologies investigated in FY 2008 include thermal energy recovery, electrification of auxiliary components, lubricants, and fuel properties. A progress review of heavy-duty engine R&D was completed and preparation for a future down-select from 4 to 2 contracts was made.
Future Plans / Explanation of Shortfalls:	R&D activities to improve both passenger and commercial vehicle engine efficiency will continue in FY 2009, but R&D on commercial vehicles will be at a reduced level and implemetation of the down select is expected in FY 2009.	
Supporting Documentation:	Technical presentation at DOE Vehicle Technologies Program Merit Review.	

Associated Performance in Prior Years

FY 2007:	Met	In the laboratory, demonstrate passenger vehicle combustion engines with a 42% brake thermal efficiency.
FY 2006:	Met	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 g/hp-hr NOx), for heavy vehicle combustion engines.
FY 2005:	Met	Light vehicle combustion will reach 39 percent brake thermal efficiency and heavy vehicle combustion engines will be greater than 45 percent efficiency while meeting EPA 2007 emission standards (1.2 g/hp-hr NOx).

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10002138.2004.html
Program Office:	http://www1.eere.energy.gov/vehiclesandfuels/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Freedom Car & Vehicle Technologies (1.1.2)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Vehicles - Operational Efficiency Measure** Maintain administrative costs as a percent of total program costs less than 12 percent.

2008 Results

Commentary:	Met	Overall performance is 6.6%; annual target is to be less than 12%.
Future Plans / Explanation of Shortfalls:	Future plans are to keep administrative support below the 12% criteria, unless external budgetary decisions beyond EERE's control, such as recisions, extended continuing resolutions, etc., impact the criteria formula.	
Supporting Documentation:	DOE financial accounting system (STARS), based on preliminary FY 2008 actuals.	

Associated Performance in Prior Years

FY 2007:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12%.
FY 2006:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12 percent.
FY 2005:	Not 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 ($73,102K) until the target range is met.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10002138.2004.html
Program Office:	http://www1.eere.energy.gov/vehiclesandfuels/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Freedom Car & Vehicle Technologies (1.1.2)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Hybrid and Electric Propulsion/Advanced Power Electronics** In the laboratory, demonstrate a current source inverter for use in traction drive applications with an inherent boost capability of 3X, a reduction of motor voltage harmonic distortion of 90% and motor bearing leakage current by 90%, and a reduction in capacitor requirements from 2000uF to 200uF.

2008 Results

Commentary:	Met	The Oak Ridge National Laboratory has demonstrated in the laboratory a current source inverter for use in traction drive applications with an inherent boost capability of 3.45X, a reduction of motor voltage harmonic distortion of 90% and motor bearing leakage current by 90%, and a reduction in capacitor requirements from 2000uF to 195uF.
Future Plans / Explanation of Shortfalls:	R&D activities to improve cost and performance of electric powertrains for hybrid and plug-in hybrid electric vehicles will continue in FY 2009.	
Supporting Documentation:	Oak Ridge National Laboratory report.	

Associated Performance in Prior Years

FY 2007:	Met	Demonstrate in the laboratory a motor with a specific power of 1.0 kW/kg, power density of 3.0 kW/liter, projected cost of $9/kW peak, and efficiency of 90%.
FY 2006:	N/A	
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10002138.2004.html
Program Office:	http://www1.eere.energy.gov/hydrogenandfuelcells/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy	
Program:	Solar Energy (1.1.3)	
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity	
Measure:	**Concentrated Solar Power (CSP)** Modeled levelized cost of power from large-scale concentrating solar power (CSP) plants in the range of $0.11-$0.13/kWh from completed R&D.	

2008 Results

Commentary:	Met	Levelized cost of energy (LCOE) calculations are based on 2008 cost and performance projections for a 100 MW parabolic trough reference plant. These projections are used as inputs to the Solar Advisor Model, which generates financial and performance output metrics. The original Joule target was based on a 2006 dollar analysis, and the $2006 adjusted LCOE value for the plant is 11.6 ¢/kWh.
Future Plans / Explanation of Shortfalls:	The program will continue to work on improvements for concentrating solar technologies that address market barrier for generating electricity and fuels resulting in further reductions in levelized cost of energy.	
Supporting Documentation:	NREL Technical Document	

Associated Performance in Prior Years

FY 2007:	Met	Develop CSP trough collector and receiver technologies that enable a system conversion efficiency of 13.1%. The levelized cost of energy from such a system is expected to be in the range of $0.11-$0.13/kWh.
FY 2006:	Met	Conduct advanced research on trough collectors and receivers that will lead to a reduction in the modeled cost of energy from CSP troughs to $0.12-$0.14/kWh.
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000120.2003.html
Program Office:	http://www1.eere.energy.gov/solar/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Solar Energy (1.1.3)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Photovoltaic (PV) Energy Systems - Crystalline Silicon** Reduce producer manufacturing cost of silicon PV modules to $1.70 per Watt, roughly equivalent to a modeled levelized cost of energy of $0.14-$0.23/kWh.

2008 Results

Commentary:	Met	DOE is supporting company-led, early-stage PV projects under the Solar America Initiative's "PV Incubator" funding opportunity. Calisolar, one of the companies selected, has the capability to produce photovoltaic cells at a cost under $1.00 per Watt by using less expensive, metallurgical grade silicon. This process enables certain manufacturers to produce modules at a cost of $1.70 per Watt or less.
Future Plans / Explanation of Shortfalls:	Calisolar and other silicon technology PV Incubator awardees will scale up novel, low cost manufacturing techniques that will contribute to lowering the $/W for silicon PV manufacturing and help reach residential and commercial levelized cost of energy targets.	
Supporting Documentation:	Contractor Technical letter	

Associated Performance in Prior Years

FY 2007:	Met	Verify, using standard laboratory measurements, a conversion efficiency of 14.5% of U.S.-made, commercial crystalline silicon PV modules. Production cost of such modules is expected to be $1.80 per Watt.
FY 2006:	Met	Verify, using standard laboratory measurements, 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.
FY 2005:	Met	Verify, using standard laboratory measurements, a conversion efficiency of 13.5 percent of U.S.-made, commercial crystalline silicon PV modules. Production cost of such modules is expected to be $1.95 per Watt.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000120.2003.html
Program Office:	http://www1.eere.energy.gov/solar/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Solar Energy (1.1.3)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Photovoltaic Energy Systems - Thin-Film** Complete R&D that will reduce the direct manufacturing cost of thin film PV modules to $1.60 per Watt, roughly equivalent to a modeled levelized cost of energy of $0.14-$0.23/kWh.

2008 Results

Commentary:	Met	DOE provides funding to First Solar and other industry partners through the three-year subcontract “Development of Robust High Efficiency Thin-Film CdTe PV Modules.” A long-term objective of this relationship is to demonstrate commercial, low-cost, and reproducible PV modules. First Solar's "Corporate Overview Q2 2008" report states a module cost of $1.12/W.
Future Plans / Explanation of Shortfalls:	First Solar and thin film PV Incubator awardees will scale up novel, low cost manufacturing techniques that will contribute to lowering the $/W for thin film PV manufacturing and help reach residential and commercial levelized cost of energy targets.	
Supporting Documentation:	Contractor Technical Letter	

Associated Performance in Prior Years

FY 2007:	Met	Develop thin-film PV modules with an 11.8% conversion efficiency that are capable of commercial production in the U.S.
FY 2006:	Met	Develop thin-film PV modules with an 11.2 percent conversion efficiency that are capable of commercial production in the U.S.
FY 2005:	Met	Develop thin-film PV modules with an 11.0 percent conversion efficiency that are capable of commercial production in the U.S.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000120.2003.html
Program Office:	http://www1.eere.energy.gov/solar/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Solar Energy (1.1.3)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Solar - Operational Efficiency Measure** Maintain administrative costs as a percent of total program costs less than 12 percent.

2008 Results

Commentary:	Met	Overall performance is 6.6%; annual target is to be less than 12%.
Future Plans / Explanation of Shortfalls:	Future plans are to keep administrative support below the 12% criteria, unless external budgetary decisions beyond EERE's control, such as recisions, extended continuing resolutions, etc., impact the criteria formula.	
Supporting Documentation:	DOE financial accounting system (STARS), based on preliminary FY 2008 actuals.	

Associated Performance in Prior Years

FY 2007:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12%.
FY 2006:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12 percent.
FY 2005:	Met	Contributed 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 ($19,342K) until the target range is met.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000120.2003.html
Program Office:	http://www1.eere.energy.gov/solar/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy	
Program:	Wind Energy (1.1.4)	
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity	
Measure:	**Wind - Low Wind Speed Technology (LWST)** 4.0 cents per kWh modeled cost of wind power in land-based Class 4 wind speed areas (i.e., 13 mph annual average wind speed at 33 feet above ground); and 9.2 cents per kWh modeled cost of wind power in Class 6 wind speed areas (i.e., 15 mph annual average wind speed at 33 feet above ground) for shallow offshore systems.	

2008 Results

Commentary:	Not Met	Modeled cost of wind power in land-based Class 4 areas equaled 4.05 cents per kWh. Improved data incorporating experience gained in prototype testing led to higher-than-expected COE and the missed target. Modeled cost of wind power in shallow offshore Class 6 areas equaled 9.2 cents per kWh, meeting the target level.
Future Plans / Explanation of Shortfalls:	This represents approximately a 1% shortfall for 2008 for modeled cost of energy targets. The program will continue to support public-private partnerships and other means to achieve the technological improvement in large turbine systems that in turn drive targeted reductions in modeled cost of energy for both land-based and Offshore systems.	
Supporting Documentation:	NREL Technical letter	

Associated Performance in Prior Years

FY 2007:	Met	COE of 4.1 cents/kWh in onshore Class 4 winds; 9.25 cents/kWh for shallow water offshore systems in Class 6 winds; and 11.93 cents/kWh for transitional offshore systems in Class 6 winds.
FY 2006:	Met	Wind - LWST - COE Target: 4.2 cents per kWh in onshore Class 4 winds; 9.3 cents per kWh for offshore systems in Class 6 winds.
FY 2005:	Met	Complete fabrication and begin testing advanced variable speed power converter. Test first advanced blade, incorporating improved materials and manufacturing techniques. Field test the first full-scale Low Wind Speed Technology prototype turbine. This contributes to the Annual LWST COE Target: 4.3 cents per kWh in Class 4 winds.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000216.2003.html
Program Office:	http://www1.eere.energy.gov/windandhydro/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Wind Energy (1.1.4)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Wind - Operational Efficiency Measure** Maintain administrative costs as a percent of total program costs less than 12 percent.

2008 Results

Commentary:	Met	Overall performance is 6.6%; annual target is to be less than 12%.
Future Plans / Explanation of Shortfalls:	Future plans are to keep administrative support below the 12% criteria, unless external budgetary decisions beyond EERE's control, such as recisions, extended continuing resolutions, etc., impact the criteria formula.	
Supporting Documentation:	DOE financial accounting system (STARS), based on preliminary FY 2008 actuals.	

Associated Performance in Prior Years

FY 2007:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12%.
FY 2006:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12 percent.
FY 2005:	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 ($18,371K) until the target range is met.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000216.2003.html
Program Office:	http://www1.eere.energy.gov/windandhydro/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Wind Energy (1.1.4)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Wind - Technology Acceptance** 22 States with at least 100 megawatts (MW) of wind power capacity installed.

2008 Results

Commentary:	Met	23 states now exceed 100 MW of installed wind power capacity. Wind Powering America has provided extensive support to several states that achieved the 100 MW level in 2008.
Future Plans / Explanation of Shortfalls:	Wind Powering America will continue to support priority states struggling to meet target installed capacity levels and those nearing set installed capacity targets.	
Supporting Documentation:	NREL Technical Letter	

Associated Performance in Prior Years

FY 2007:	Not Met	20 States with over 100 MW wind installed.
FY 2006:	Not Met	19 States with over 100 MW wind installed.
FY 2005:	Not Met	32 States with over 20 MW installed; 15 States with over 100 MW installed.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000216.2003.html
Program Office:	http://www1.eere.energy.gov/windandhydro/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Wind Energy (1.1.4)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Wind - Distributed Wind Technology (DWT)** 500 new units of distributed wind turbines deployed in market.

2008 Results

Commentary:	Met	A total of 3,376 distributed wind turbines were deployed, exceeding the target of 500 new units deployed above the 2,400 unit baseline.
Future Plans / Explanation of Shortfalls:	Distributed Wind Turbine will continue to focus on projects in partnership with industry to develop innovative concepts, components, and prototypes primarily for residential, farm, and industrial applications, and explore the potential for larger turbines for distributed applications.	
Supporting Documentation:	NREL Technical Letter	

Associated Performance in Prior Years

FY 2007:	Met	COE of 10-15 cents /kWh in Class 3 winds.
FY 2006:	Met	COE of 11-16 cents /kWh in Class 3 winds.
FY 2005:	Met	Complete prototype testing of 1.8 kW Small Wind Turbine, finishing the International Electrotechnical Commission suite of tests for acoustics, power, durability, and safety. This contributes to the Annual DWT COE Target: 12-18 cents per kWh in Class 3 winds.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000216.2003.html
Program Office:	http://www1.eere.energy.gov/windandhydro/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Geothermal Technology (1.1.5)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity

Geothermal

Measure: Conclude EGS technology evaluation and publish a new Geothermal program plan.

2008 Results

Commentary:	Met	The program concluded it's EGS technology evaluation, the report entitled "An Evaluation of EGS Technology" has been finalized and published. Additionally the program released a new Geothermal program plan entitled, "Geothermal Technologies Program Draft Multi-Year Research, Development and Demonstration Plan 2009-2015".
Future Plans / Explanation of Shortfalls:		The Geothermal Program will continue to pursue developing Enhanced Geothermal System (EGS) demonstrations and EGS component research & development.
Supporting Documentation:		Report: "An Evaluation of EGS Technology"; and Geothermal Technologies Program Draft Multi-Year Research, Development and Demonstration Plan 2009-2015.

Associated Performance in Prior Years

FY 2007:	Met	Geothermal - Complete an iterim report on EGS technology evaluation, and report on completion of program activities and projects funded in FY 2006.
FY 2006:	Met	Develop an Electronic Repository which makes digitized copies of all Geothermal Technology Program Research Development and Deployment Technical Reports available via the internet, while demonstrating reduction in cost of power for flash systems to 4.9 cents/kWh from 5.3 cents/kWh in 2005 and reducing cost of binary to 8.2 cents/kWh from 8.5 in 2005 based on modeled analysis.
FY 2005:	Met	Field test a fully integrated Diagnostics-While-Drilling (DWD) advanced drilling system in a high-temperature geothermal well, verifying control of drilling operations in real time, thereby reducing costs. If successful, DWD will reduce drilling costs by one half of the total cost reduction target for drilling.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000102.2003.html
Program Office:	http://www1.eere.energy.gov/geothermal/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Geothermal Technology (1.1.5)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Geothermal - Operational Efficiency Measure** Maintain administrative costs as a percent of total program costs less than 12 percent.

2008 Results

Commentary:	Met	Overall performance is 6.6%; annual target is to be less than 12%.
Future Plans / Explanation of Shortfalls:		Future plans are to keep administrative support below the 12% criteria, unless external budgetary decisions beyond EERE's control, such as recisions, extended continuing resolutions, etc., impact the criteria formula.
Supporting Documentation:		DOE financial accounting system (STARS) based on preliminary FY 2008 actuals.

Associated Performance in Prior Years

FY 2007:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12 percent.
FY 2006:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12 percent.
FY 2005:	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 ($21,644K) until the target is met.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000102.2003.html
Program Office:	http://www1.eere.energy.gov/geothermal/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Biomass & Biorefinery R&D (1.1.6)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Biomass - Operational Efficiency Measure** Maintain administrative costs as a percent of total program costs less than 12 percent.

2008 Results

Commentary:	Met	Overall performance is 6.6%; annual target is to be less than 12%.
Future Plans / Explanation of Shortfalls:		Future plans are to keep administrative support below the 12% criteria, unless external budgetary decisions beyond EERE's control, such as recisions, extended continuing resolutions, etc., impact the criteria formula.
Supporting Documentation:		DOE financial accounting system (STARS), based on preliminary FY 2008 actuals.

Associated Performance in Prior Years

FY 2007:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12%.
FY 2006:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12 percent.
FY 2005:	Met	Contributed 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 Biomass & Biomass Refinery Systems Program FY 2004 end of year adjusted uncosted baseline ($62,235K) until the target range is met.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10003400.2005.html
Program Office:	http://www1.eere.energy.gov/biomass/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy	
Program:	Biomass & Biorefinery R&D (1.1.6)	
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity	
Measure:	**Biomass - Platforms Research and Development - Sugars** Achieve a modeled cost of a mixed, dilute sugar stream suitable for fermentation to ethanol of $0.13 per pound of sugars (equivalent to $2.39 per gallon of cellulosic ethanol) through the formulation of improved enzyme mixtures and pretreatments (in $2007). The cost of the sugar stream ties directly to the price of ethanol, a substitute for gasoline and key output of a biorefinery. Reduction in the cost of sugars can lead to commercialization of biorefineries that produce fuels (such as ethanol), chemicals, heat, and power from biomass.	

2008 Results

Commentary:	Met	Bench scale experiments identified the best available cocktails of commercial enzymes for production of fermentable sugars from corn stover, with batch operations and relatively dilute systems. Modeling based on experimental results verified the cost target of $0.13 per pound of fermentable sugars (in 2007 dollars) was met. These results were achieved by a combination of dilute acid pretreatment at 180°C and various mixtures of enzymes.
Future Plans / Explanation of Shortfalls:	The program will continue to work to achieve a modeled cost target of $0.12 per pound of sugars (in 2007 dollars and equivalent to $2.29 per gallon of cellulosic ethanol) through the formulation of improved enzyme mixtures and fermentation organisms. In FY 2009 the program will continue to work to achieve a modeled cost target of $0.12 per pound of sugars (in 2007 dollars and equivalent to $2.29 per gallon of cellulosic ethanol) through the formulation of improved enzyme mixtures and fermentation organisms.	
Supporting Documentation:	National Renewable Energy Laboratory Technical Reports	

Associated Performance in Prior Years

FY 2007:	Met	Complete integrated tests of pretreatment and enzymatic hydrolysis in conjunction with existing fermentation organisms at bench-scale on corn stover that validate $0.125 per pound sugars on the pathway to achieving $0.064 per pound in 2012.
FY 2006:	Met	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 sugar by 2007.
FY 2005:	Met	Completed a technical and economic evaluation of integrated biomass to fuels systems to validate the sugar cost of $0.135 per pound and syngas cost of $6.13 per million BTU.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10003400.2005.html
Program Office:	http://www1.eere.energy.gov/biomass/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy	
Program:	Biomass & Biorefinery R&D (1.1.6)	
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity	
Measure:	**Biomass - Biomass Feedstock Platform** Conduct replicated field trials across regions to determine the impact of residue removal on grain yield (in subsequent years); field trials (including genetic evaluations) to develop energy crops within a geographical region; resource assessments to determine regional feedstock supply curves (variable costs of feedstock across various sites); and economic studies that identify the best site conditions and general locations for biorefineries within a region, all of which can demonstrably contribute to the goal of producing feedstocks at $32 per dry ton by 2012.	

2008 Results

Commentary:	Met	Replicated field trials using model energy crops were established across the most promising energy crop regions, and field trials are also underway to determine the effect of residue removal on crop productivity and soil health and obtain time series data on net primary productivity and sustainability metrics for soil carbon and other soil nutrients. Interagency Regional Feedstock Partnership development of a corn stover residue removal computer model also began, and a Geographic Information System team has also been established at the five SunGrant centers and will supply their area data for modeling and storage purposes
Future Plans / Explanation of Shortfalls:		The replicated field trials established in 2008 will continue in 2009 in an effort to ascertain baseline data on plant productivity, soil health, and sustainability metrics. The perennial energy crops (switchgrass, miscanthus, native grasses) will continue to be monitored and sampled until the crops are mature enough for a full harvest (approximately three years time). Annual energy crops such as energycane and sorghum will be replanted in 2009 and harvested to determine composition and productivity. The annual agricultural residue trials (corn and cereal stover) will also be replanted and harvested and their plant and soils data collected for monitoring and modeling purposes. Data from all of these trials, as well as from other efforts funded by the Program, will be incorporated into a GIS-based framework that will provide the best biomass resource database, models, and tools available for a wide variety of users including Federal and State governments, biorefinery developers, growers, and researchers.
Supporting Documentation:	Oak Ridge National Laboratory Technical Reports	

Associated Performance in Prior Years

FY 2007:	Met	Complete a core R&D engineering design and techno-economic assessment of an integrated wet storage - biomass field pre-processing assembly system with a pretreatment process that could potentially be scaled up to produce feedstocks to achieve a reduction to $35 per ton by 2012 from $53 per ton as of 2003. This is based on the original baseline and cost reduction targets specific to corn stover.
FY 2006:	N/A	
FY 2005:	N/A	

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10003400.2005.html
Program Office:	http://www1.eere.energy.gov/biomass/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy	
Program:	Biomass & Biorefinery R&D (1.1.6)	
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity	
Measure:	**Biomass - Platforms Research and Development - Syngas** Achieve a modeled cost of a cleaned and reformed biomass-derived synthesis gas or oils of $6.88/MBtu by demonstrating pilot-scale technology capable of economically converting biomass residues, pulping liquors, or waste fats and greases. Reduction in the cost of syngas can lead to commercialization of biorefineries that produce fuels, chemicals, heat, and power from biomass.	

2008 Results

Commentary:	Met	The achievement of an Minimum Ethanol Selling Price (MESP) of $1.92 per gallon (in 2007 dollars, based on a feedstock cost of $60/ton) was verified through modeling and calculations based on data from laboratory trials completed in FY 2008. The laboratory trials involved biomass gasification, syngas cleanup and mixed alcohols synthesis, followed by ethanol separation.
Future Plans / Explanation of Shortfalls:	Research and development and analysis will continue on synthesis gas cleanup to facilitate cost effective production of biofuels. The performance goal for the conversion platforms is to reduce the processing cost of converting cellulosic feedstocks to ethanol to $0.82/gallon by 2012 and $0.60/gallon by 2017.	
Supporting Documentation:	Laboratory and Contracter Technical Reports	

Associated Performance in Prior Years

FY 2007:	Met	Demonstrate conversion of 50% of non-methane (C2+ higher) hydrocarbons that result in a syngas cost of $7.15/MBtu in 2007 (equivalent electricity cost of 6.83 cents/kWh).
FY 2006:	N/A	
FY 2005:	N/A	

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10003400.2005.html
Program Office:	http://www1.eere.energy.gov/biomass/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Biomass & Biorefinery R&D (1.1.6)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Biomass - Utilization of Platform Outputs** Approve a final engineering design package of at least one commercial scale biorefinery capable of processing up to 700 metric tones per day of lignocellulosic feedstocks. The approved design package must address any findings from an independent engineering review to validate contractor costs and scheduled timeline. Validation of biorefinery concepts will reduce technological risk and attract additional sources of capital to accelerate deployment and oil displacement.

2008 Results

Commentary:	Met	A final engineering design package was approved for a commercial scale lignocellulosic biorefinery. It is for the gasifier system, which is a critical, major component. The gasifier system is for the first module. At final plant build out combed modules are planned to process up to 2750 tonnes per day of lignocellulosic feedstock. Significant progress is being made on the other design packages such as the alcohol synthesis reactors, and some are also nearing final design. The design package has been sent out for vendor quotes and are expected to be returned by 10-15-08. Purchase Orders for fabrication are expected to be placed by 11-01-08. The Independent Engineer, R.W. Beck, and the DOE Project Officer participated in a design review of the above noted process equipment on September 25, 2008 and no major issues were identified.
Future Plans / Explanation of Shortfalls:		The program will continue to demonstrate and deploy advanced integrated biorefinery technologies which will include the following: initiate construction of at least one commercial-scale biorefinery project and approve final engineering design of two additional commercial scale integrated biorefinery projects selected in 2007 under the 932(d) solicitation; approve preliminary engineering design packages, conduct market analysis and financial projections for at least five demonstration scale biorefinery selected in FY 2008; and issue a funding opportunity for additional demonstration and pilot plant projects early in FY09.
Supporting Documentation:		Technical Reports

Associated Performance in Prior Years

FY 2007:	Met	Complete a preliminary engineering design package, market analysis, and financial projection for at least one industrial-scale project for near term agricultural pathways (corn wet mill, corn dry mill, oilseed) to produce a minimum of 15 million gallons of biofuels per year (as mandated by the Energy Policy Act).
FY 2006:	N/A	
FY 2005:	N/A	

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10003400.2005.html
Program Office:		http://www1.eere.energy.gov/biomass/

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Petroleum Reserves (1.1.11)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**SPR Operating Cost** Ensure cost efficiency of SPR operations by achieving operating cost per barrel of capacity of $0.204

2008 Results

Commentary:	Met	This measure is a calculation of annual program costs divided by the total storage capacity in barrels (727 million barrels). Year-end annual costs equate to an operating cost per barrel of $0.187. Cumulative costs were below the target due to cost efficiencies achieved.
Future Plans / Explanation of Shortfalls:	The program will continue efforts to achieve cost efficiencies wherever possible.	
Supporting Documentation:	Year-End financial reports from the Department's accounting system, STARS.	

Associated Performance in Prior Years

FY 2007:	Met	Achieve operating cost per barrel of capacity of $0.203.
FY 2006:	Met	Achieve operating cost per barrel of capacity of $0.204.
FY 2005:	N/A	

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001048.2003.html
Program Office:	http://www.fe.doe.gov/programs/reserves/index.html	

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Petroleum Reserves (1.1.11)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Sustained (90 day) Drawdown Rate** Enable ready distribution of SPR oil by achieving maximum sustained (90day) drawdown rate of 4.4 million barrels per day.

2008 Results

Commentary:	Met	The SPR maintained its drawdown rate of 4.4 million barrels per day. This metric reflects the drawdown rate (in barrels per day) that the SPR can sustain for an initial 90 days in order to distribute crude oil from underground storage sites to distribution points.
Future Plans / Explanation of Shortfalls:		Expansion of the Reserve to one billion barrels will enable an increase in the drawdown rate from 4.4 MMB/Day to 5.9 MMB/Day.
Supporting Documentation:		SPR Drawdown Readiness and Capability (RECAP) Report and the Online Readiness Computerized Assessment (ORCA) System.

Associated Performance in Prior Years

FY 2007:	Met	Achieve maximum sustained (90 day) drawdown rate of 4.4 MMB/Day.
FY 2006:	Met	Achieve maximum sustained (90 day) drawdown rate of 4.4 MMB.
FY 2005:	Met	Achieve maximum sustained (90 day) drawdown rate of 4.4 MMB.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001048.2003.html
Program Office:	http://www.fe.doe.gov/programs/reserves/index.html	

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Petroleum Reserves (1.1.11)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Drawdown Readiness** Ensure drawdown readiness by achieving > 95% of monthly maintenance and accessibility goals.

2008 Results

Commentary:	Met	This final rating of 98% represents the weighted average of several maintenance performance elements calculated on a monthly basis. Results for the fiscal year are based upon the average scores for all 12 months and exceeds the target of 95%.
Future Plans / Explanation of Shortfalls:	Not applicable.	
Supporting Documentation:	SPR Maintenance Performance Accountability Report (MPAR).	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001048.2003.html
Program Office:	http://www.fe.doe.gov/programs/reserves/index.html	

FY 2008 Performance Measures

Office:	Energy Information Administration
Program:	Energy Information Administration (1.1.12)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Quality of EIA Information Products** Quality of EIA Information Products: 90 percent or more of customers are satisfied or very satisfied with the quality of EIA information.

2008 Results

Commentary:	Met	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. This feedback helps EIA to continue to provide high-quality and relevant information.
Future Plans / Explanation of Shortfalls:	EIA has conducted customer surveys annually for over 10 years, and plans to continue to do so.	
Supporting Documentation:	The survey results are proof that the survey was conducted. EIA conducted the Customer Survey with OMB approval and the results are stored in the files of the National Energy Information Center office in EIA.	

Associated Performance in Prior Years

FY 2007:	Met	Complete customer satisfaction survey.
FY 2006:	Met	Quality of EIA Information Products: 90 percent or more of customers are satisfied or very satisfied with the quality of EIA information. Results: In FY 2006, 93 percent of customers were satisfied or very satisfied with the quality.
FY 2005:	Met	Quality of EIA Information Products: 90 percent or more of customers rate them-selves in customer surveys as satisfied or very satisfied with the quality of EIA information. Results: In FY 2005, 90 percent of customers were satisfied or very satisfied with the quality.

Additional Information

PART:	Results Not Determined	http://www.whitehouse.gov/omb/expectmore/detail/10002128.2004.html
Program Office:	www.eia.doe.gov	

FY 2008 Performance Measures

Office:	Energy Information Administration
Program:	Energy Information Administration (1.1.12)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Timeliness of EIA Information Products** Timeliness of EIA Information Products: 95 percent of selected EIA recurring products meet their release date targets (all product types).

2008 Results

Commentary:	Met	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.
Future Plans / Explanation of Shortfalls:	EIA is committed to providing our customers with information on schedule, and plans to continue to monitor this measure.	
Supporting Documentation:	Internal tracking: EIA selected which products to track, established scheduled release dates, and is tracking the actual and scheduled release dates. The Statistics and Methods Group within EIA verifies data and calculations and stores the file.	

Associated Performance in Prior Years

FY 2007:	Met	Products meeting release schedules.
FY 2006:	Met	Timeliness of EIA Information Products: 90 percent of selected EIA recurring products meet their release date targets (all product types). Results: In FY 2006, 94 percent of products met their release date targets.
FY 2005:	Met	Timeliness of EIA Information Products: 85 percent of EIA recurring products meet their release date targets. Results: In FY 2005, 91 percent of products met their release date targets.

Additional Information

PART:	Results Not Determined	http://www.whitehouse.gov/omb/expectmore/detail/10002128.2004.html
Program Office:	www.eia.doe.gov	

FY 2008 Performance Measures

Office:	Energy Information Administration
Program:	Energy Information Administration (1.1.12)
Strategic Goal(s) Supported:	Goal 1.1 Energy Diversity
Measure:	**Cost Savings Realized From Surveys** Cost savings realized from a subset of surveys, released on schedule, without any decrease in accuracy.

2008 Results

Commentary:	Met	EIA was able to operate one of its major surveys, the Annual Survey of Domestic Oil and Gas Reserves, in an efficient manner by reducing the costs of data purchases and using staff and contractors efficiently. In addition, we were able to add some features to the information that we release.
Future Plans / Explanation of Shortfalls:	EIA will continue to operate in an efficient manner, and will calculate an efficiency measure.	
Supporting Documentation:	Internal tracking. Costs are tracked by the office(s) responsible for the survey(s) and stored by the Statistics and methods Group within EIA.	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Results Not Determined	http://www.whitehouse.gov/omb/expectmore/detail/10002128.2004.html
Program Office:	www.eia.doe.gov	

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Advanced Research - Fiber Optic Sensors** Complete prototype demonstration of distributed fiber optic sensors capable of selective and accurate gas detection of hydrogen (H2) and carbon monoxide (CO). Demonstration of sensory technology will aim at functional sensors for high temperature (500ºC), high pressure (200 PSI0) in harsh (high temperature transient, corrosive and erosive) environments to be used in integrated temperature, pressure, and gas measurement applications by 2009, to enable and enhance the operation of gasification based near-zero emission power plants by providing measurement of key constituents.

2008 Results

Commentary:	Met	The feasibility of fabricating and designing fiber optic based gas sensors for synthesis gas has been successfully demonstrated in the laboratory. Sensor devices for Hydrogen (H2) and Carbon Monoxide (CO) have been developed using nanocrystalline materials coated on silica based optical fibers and is one of the first demonstrations of this technology for high temperature (500 oC) operations. Approximately 60 days of laboratory testing (tube furnace to 500oC with gas flow controls) of the sensor devices has been completed to demonstrate survivability and initial performance of the sensors. Characterization of the nano material structures and high temperature testing is continuing to support the transition of the technology out of the laboratory and to more realistic process conditions. Enabling the in situ detection of gases at high temperature will improve the real time operation of gasification, gas clean up, and fuel systems. Advancements in sensors and controls leads to improved operation of the power systems, specifically the gasification systems, as outlined in this annual target. Operation improvements leads to better overall efficiency, high plant reliability, and reduced emissions. Higher efficiencies and reduced emissions are primary pathways for achieving FE goals towards the development and deployment of environmentally benign Fossil Energy power systems.

Future Plans / Explanation of Shortfalls:	Future Pans for 2012 and Beyond: Continue development of harsh environments sensors including demonstration and commercialization of sensors that dramatically and positively impact the operation of power generation systems through improved computerized process control of the power systems. In 2012 and beyond, sensors are envisioned to be small, pervasive, and low cost. Process controls will represent both management of information as well as the algorithms and models to perform control without intervention by plant operators. It is further envisioned that sensors will be highly integrated with a process and the actuation technology used to manipulate equipment thus enabling the operation of complex processes in a seamless, reliable and optimally efficient manner.
Supporting Documentation:	Semi annual technical reports for award NT#42439, "Development of Nanocrystalline Doped Ceramic Enabled Fiber Sensors for High Temperature In-Situ Monitoring of Fossil Fuel Gases" to New Mexico Tech and semi annual and final technical reports for award NT#42438 to GE Global Research, "Distributed Fiber Optic Gas Sensing for Harsh Environments". Additionally there are informal updates and reviews of the projects and letters confirming accomplishment of the quarterly milestones.

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/detail/10000086.2005.html
Program Office:	http://www.fossil.energy.gov	

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Advanced Research - Steady State Simulator** Complete and validate the development of a prototype virtual power plant steady state simulator that can be integrated with NETL's Advanced Process Engineering Co-Simulator (APECS) together with an immersive virtual engineering plant walk-through environment for use by 2011 to ensure the availability of new generation power systems by reducing the cost and development time required for new clean coal fired power plants.

2008 Results

Commentary:	Met	Demonstrations of varying degrees have been performed and integrated with NETL's Advanced Process Engineering Co-Simulator (APECS) with an immersive virtual engineering plant walk-through capability. This effort has included increasing the efficiency of the process/computational fluid dynamic (CFD) co-simulation development process for a coal gasifier and other components of an advanced clean coal fired power plant. Initial work was critical to the simulation process since it provided the foundation for data storage and usage in the co-simulation process. Participants completed the coding and testing of an entrained flow gasifier model in a form such that an APECS user could adjust key parameters that impact gasifier performance. A final approach to development of a Reduced Order Model (ROM) using Principal Component Analysis (PCA) was completed to enable much faster CFD calculations. Resulting efforts enable the demonstration of the integrated CFD simulation within APECS including virtual engineering capability (VE-suite).
Future Plans / Explanation of Shortfalls:		While the basis and platform for APECS is underway, the utilization of the software, expansion of its simulation capabilities, and validation of the integrated models will continue to ensure the simulation environment provide the greatest value to designers and developers that will have access to APECS. As the modeling and simulation capabilities expand in all arenas, APECS will serve as primary source for relevant simulation of FE based power generation systems and facilities.
Supporting Documentation:		Documentation supporting this target include quarterly reports from ANSYS Inc., #NT42443, "Software Framework for Advanced Power Plant Simulations" and Reaction Engineering International, #NT42444, "A Virtual Engineering Framework for Simulating Advanced Power Systems." In addition, signed verification letters from users/observers of the virtual demonstration of the integrated co-simulation virtual platform have been provided for this target. Also, informal updates, emails, and reviews of the projects are available as additional and supporting documentation.

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000086.2005.html
Program Office:	http://www.fossil.energy.gov	

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Advanced Turbines** Initiate development of large frame hydrogen-fired turbine technologies (Phase II), including final combustion system down selection, and complete the test plan for the full head-end combustion system testing to achieve single digit NOx at progressively higher temperature and pressure. Complete preliminary rig tests of 3rd stage turbine blades as input to design for ability to withstand increased power output to ensure the availability of a new generation of electric power generating "platforms".

2008 Results

Commentary:	Met	A key requirement for developing turbines for coal based power systems that minimize the emissions of carbon dioxide is high temperature, stable and low NOx combustion of hydrogen fuels. In FY 08 the GE and Siemens hydrogen turbine projects made excellent progress in the area of hydrogen combustion through a full range of testing, including a full head-end combustor test. This was demonstrated in large part by meeting all four of the FY 08 GPRA quarterly milestones. Results from these tests demonstrated that low single digit NOx emissions at combustion temperatures high enough to attain projected efficiency increases are possible. Adding to the significance of these tests is that they were conducted with full-scale combustor hardware. The full head end represents the largest replicated component in the turbine combustion system (typically 14 – 16 combustor "head-ends" will comprise the combustion systems on a f-frame machine). This efficiency increase and the aerodynamic and mechanical improvement anticipated in third stage turbine blades will allow turbines to be built that are more efficient, have higher power output, lower emissions and cost less ($/kW). These turbines will allow coal based integrated gasification combined cycle power plants, which minimize the emissions of carbon dioxide, to be deployed with a lower cost of electricity.
Future Plans / Explanation of Shortfalls:		In FY 2012 the R&D testing associated with phase II of the GE and Siemens hydrogen turbine projects will conclude. It is anticipated that a competitively issued phase III award will be made in 2013 to design a pre commercial prototype machine. By 2015 a pre commercial prototype machine or the associated components may be tested.
Supporting Documentation:		1) Advanced IGCC/Hydrogen Gas Turbine Development, work performed by GE Energy Schenectady, NY 12345 through a DOE Cooperative Agreement. 2) Advanced Hydrogen Turbine Development; work performed by Siemens Power Generation, Inc., 4400 Alafaya Trail, Orlando, Florida 32826 through a DOE Cooperative Agreement. Official letters of quarterly milestone accomplishment have been submitted and project presentations made at quarterly review meetings.

Associated Performance in Prior Years

FY 2007:	Met	Complete prototype combustor module testing, demonstrate performance of achieving single digit NOx at lower flame temperatures (2100 degree F vs design inlet temperature of 2500 degrees F) and pressures, and identify the two most promising low NOx, high-hydrogen fueled, combustion concepts for further evaluation and testing in Phase II of the hydrogen turbine development projects.
FY 2006:	Met	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 ppm NOx emissions goal.
FY 2005:	N/A	

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000086.2005.html
Program Office:	http://www.fossil.energy.gov	

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Carbon Sequestration - Net Cost** Net cost of carbon dioxide (CO2) capture and sequestration as measured by percent of cost of electricity to 90% capture at a cost of electricity increase of 19% when compared to a conventional (off-the-shelf) non-capture power plant by validating technology improvements of an advanced power plant with carbon capture technology to ensure availability of affordable, environmentally responsible domestic energy.

2008 Results

Commentary:	Met	As indicated in the 2007 PART goal justification for the Sequestration Program, an advanced Integrated Gasification Combined Cycle plant with carbon capture and sequestration technologies under development at NETL, projects to have an increase in cost of electricity of 19%. This work has been done in laboratory scale experiments which are typically equivalent to kilowatt (kW) scale experimentation. Commercial based systems will require development to 100s of megawatts (MW) in size. Research in 2008 focused on the development of these types of technologies toward commercialization. Specifically, research was conducted to further develop polybenzimidazole (PBI) membranes for pre-combustion capture by SRI International and Los Alamos National Laboratory. This work involves the development of ASPEN-based engineering process models along with the production and evaluation of hollow-fiber based PBI membranes. Due to the need for additional technologies capable of approaching the 2012 program goals, a funding opportunity announcement for pre-combustion CO2 capture technologies was also released in 2008. Project selections and awards from this effort are expected in 2009. Research was also performed by the sequestration program on post-combustion CO2 capture during a transition of the research to another program at NETL.

Future Plans / Explanation of Shortfalls:	As the pre-combustion technologies currently funded and those selected next year for funding are successfully developed at the laboratory scale, CO2 capture options capable of achieving Sequestration program goals will then be scaled up toward commercialization. This involves the progression of capture system through pilot or slip-stream testing, large scale field testing, demonstration, and then ultimate commercialization.
Supporting Documentation:	Documentation of the cost of electricity of the IGCC system was provided in the 2007 PART justification through an analysis performed for NETL by Noblis. Project performance information is available through project quarterly reports and through presentations made at the 2008 Conference on Carbon Sequestration, May 2008, Pittsburgh, PA.

Associated Performance in Prior Years

FY 2007:	Met	Validate technology improvements of an advanced power plant with carbon capture technology that can be extrapolated and translates to 90% carbon capture at a cost of electricity increase of 20% when compared to a conventional (off-the-shelf) non-capture power plant.
FY 2006:	N/A	
FY 2005:	N/A	

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000086.2005.html
Program Office:	http://www.fossil.energy.gov	

FY 2008 Performance Measures

Office:	Fossil Energy	
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)	
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy	
Measure:	**Carbon Sequestration - Phase II** Complete site selection, reservoir modeling, site characterization, and begin injection at depleted oil reservoir, unmineable coal seam, and saline formation to demonstrate that storage of CO2 in geologic formations is a viable greenhouse gas mitigation option to develop technologies that can safely and economically store carbon dioxide from coal-based energy systems.	

2008 Results

Commentary:	Met	Site selection, reservoir modeling, site characterization, and injection at depleted oil reservoir, unmineable coal seam, and saline formations have all been performed or initiated during this year. These activities were accomplished by several of the Regional Partnerships. The development of technologies that can safely and economically store carbon dioxide from coal-based energy systems is vital if the CO2 emissions from a coal fired power plant are to be sequestered. These tests are at a scale of 100-10,000's of tons of CO2 and lay the initial work for large-scale development tests (scale of 1,000,000 tons of CO2). By understanding and working through the technical, regulatory issues, legal and public outreach at the Phase II level will help facilitate these issues for Phase III testing.
Future Plans / Explanation of Shortfalls:		The remaining Phase II injection tests will be started over the next FY and Best Management Practices will be developed that will be useful for Phase III and updated during the Phase III test results.
Supporting Documentation:		These activities are documented through project monthly reports, UIC permits, an external IOGCC report and several NETL techlines. RCSP Web page: http://www.netl.doe.gov/technologies/carbon_seq/partnerships/partnerships.html

Associated Performance in Prior Years

FY 2007:	N/A	
FY 2006:	Met	Performed pilot-scale testing and also laboratory testing of different CO2 capture technologies to lead to significant improvement in cost and performance, and initiated field sequestration activities within the Regional Partnerships, including selecting and awarding seven Phase II Regional Carbon Sequestration Partnerships that will begin to evaluate regional infrastructure and technologies to permanently sequester greenhouse gas emissions through small scale validations tests.
FY 2005:	Met	Completed at least two pilot scale tests on emerging advanced capture technologies related to oxyfuel, sorbents, membranes or hydrates.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000086.2005.html
Program Office:	http://www.fossil.energy.gov	

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Carbon Sequestration - Phase III** Award initial round of Phase III (development) of the Regional Carbon Sequestration Partnerships, conduct site selection, and complete National Environmental Policy Act (NEPA) activities for at least four large volume field tests through the use of industry partnerships bringing the best emerging new coal-based power generating technologies to deployment.

2008 Results

Commentary:	Met	Six Regional Carbon Sequestration Partnerships Phase III projects were awarded. Since award, these projects have begun their initial activities which include the site selection and documentation necessary for the National Environmental Policy Act (NEPA) requirements. NEPA requirements are being satisfied in the most cost effective and efficient manner to permit an accelerated schedule to injection. The following projects have completed NEPA requirements in accordance with the stage of the project: A Findings of No-Significant Impact (FONSI) was issued for Illinois Basin-Decatur Project by the Midwest Geological Sequestration Consortium (MGSC), and SECARB Development Phase Saline Formation Demonstration - Cranfield by the Southeast Regional Carbon Sequestration Partnership (SECARB). A Categorical Exclusion (CX) was issued for Fort Nelson CO2 Acid Gas Injection Project by the Plains CO2 Reduction Partnership (PCOR), Farnham Dome Deep Saline Development Project by the Southwest Regional Partnership for Carbon Sequestration (SWP), Large Volume Injection of CO2 in Western Ohio by the Midwest Regional Carbon Sequestration Partnership (MRCSP), and Sequestration of CO2 from Oxyfuel Combustion Unit by the West Coast Regional Carbon Sequestration Partnership (WESTCARB). These tests will inject up to 1 million tons of Carbon Dioxide (CO2) per project with some at this rate per year into regionally significant geologic storage sites. These large scale injection tests are key to establish the best practices and develop required regional infrastructure for CO2 sequestration in geologic formations.

Future Plans / Explanation of Shortfalls:	These Phase III Regional Partnership projects will have a performance period for up to 10 years and therefore will not be completed until after 2012. These partnership projects, along with FutureGen and Clean Coal Power Initiative projects, should lead to the deployment of commercial projects by 2020.
Supporting Documentation:	There are NETL Techline and award documents available for each award and also NEPA documents (CXz and EAs).

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/detail/10000086.2005.html
Program Office:	http://www.fossil.energy.gov	

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Clean Coal Power Initiative (CCPI) Technology Demonstrations - Round 1 and 2** Make go/no go decisions regarding continuation applications for projects awarded under Rounds 1 & 2 CCPI that will promote and bring the best emerging new coal-based power generating technologies to demonstration through the use of industry partnerships.

2008 Results

Commentary:	Met	Go/no go decisions were made for Rounds 1 and 2 projects. A decision to continue the Pegasus project was made based on successful completion of the requirements contained in Budget Period 1. The CCPI technical review team met on December 6, 2007, and approval to continue to Budget Period 2 was issued on December 11, 2007 as documented in memorandum on file. A go-decision was made to continue the Excelsior Mesaba Energy Project through a no-cost time extension to the cooperative agreement. The extension is intended to provide Excelsior sufficient time to complete the requirements of the current period; specifically, to accomplish permitting, siting, preliminary engineering and design, and offtake arrangements sufficient to arrive at a financial close determination. Go-decision for continuing the Excelsior Mesaba Energy Project through a no-cost time extension occurred March 11, 2008. Completion of these two milestones supports the FE goals by continuing active industrial projects, as appropriate, under competitive CCPI solicitations with the goal of successful completion of projects to meet the long-term objectives of the Clean Coal program.
Future Plans / Explanation of Shortfalls:		**Mesaba -** Pending successful completion of site permitting, and DOE's issuance of a favorable NEPA Record of Decision, construction is planned to be initiated in 2010. **Southern Company –**Pending successful completion of site permitting, and DOE's issuance of a favorable NEPA Record of Decision, construction is planned to be initiated in 2010. **WMPI –** Negotiations toward an award of this project have ended, therefore there are no future plans for this project.
Supporting Documentation:		Documentation of the decision to continue the Pegasus project into Budget Period 2 is documented by a memorandum by the CCPI technology team in the Pegasus project file. Pegasus (Pegasus was bought out by NeuCO): www.neuco.net/ Mesaba: www.excelsiorenergy.com

Associated Performance in Prior Years

FY 2007:	Met	Award CCPI-2 projects based on decisions made in FY 2006.
FY 2006:	Met	Make go/no go decisions regarding award of cooperative agreements for all projects selected under Round 2 CCPI.
FY 2005:	Met	Initiate 100% of the active industrial projects selected under the first round of the competitive CCPI solicitation and make project selections from the second round CCPI solicitation.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/detail/10000086.2005.html
Program Office:		http://www.fossil.energy.gov

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Clean Coal Power Initiative (CCPI) Technology Demonstrations - Round 3** Complete CCPI Round 3 solicitation, proposal evaluations and project selections to assemble the initial portfolio of advanced technology systems that sequester carbon dioxide to encourage the Nation's energy industry to identify and cost share the best emerging new coal-based power generating technology.

2008 Results

Commentary:	Not Met	The annual target is not met. The 4Q milestone will not be met before the end of the year. The issue with this milestone will impact schedule but not cost to achieve. The due date for submission of applications to the CCPI-3 Funding Opportunity Announcement is January 15, 2009. This amounts to a 3½ month schedule slip for this milestone. The annual target will be met by July 2009, when announcement of selections is scheduled for CCPI-3. There is no additional cost in meeting this annual target of completing the CCPI-3 solicitation. Activities are only delayed, there are no additional activities required to meet this milestone or annual target. The overall impact of this delay is that there will be delays in initiating and completing projects under Objective 7, Clean Coal Power Initiative (CCPI) Technology Demonstrations. Future solicitations will not be delayed because schedules for these future solicitations depend on future year appropriations, which are not affected by the delay in meeting this milestone.
Future Plans / Explanation of Shortfalls:		The milestone was not met in 2008. The CCPI Round 3 solicitation was delayed because sufficient funding was not available. Since the plan to issue a solicitation was announced in early 2007, there has been a significant rise in steel, concrete, and construction services costs. As a result, some funds planned for new projects were used to cover cost escalation at existing projects. Similarly, the anticipated cost of new projects has also increased. To provide the additional funds needed for a meaningful new solicitation, the decision was made to move the selection to 2009, thus allowing for inclusion of fiscal year 2009 appropriations. The recent cancelation of some previously selected projects could allow their funds to be used in the CCPI Round 3 solicitation. The solicitation was issued, and is currently on schedule to receive proposals on January 15, 2009, and announce selections in July 2009.
Supporting Documentation:		Announcement is posted on the Industry Interactive Procurement System (IIPS).

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000086.2005.html
Program Office:	http://www.fossil.energy.gov	

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**FE Operational Efficiency Measure** Maintain total administrative overhead costs in relation to total program costs of less than 17 percent. Baseline for administrative overhead rate currently being validated.

2008 Results

Commentary:	Data Not Available	FE is working on developing an appropriate methodology for calculating the operational efficiency measure.
Future Plans / Explanation of Shortfalls:	FE anticipates having an appropriate methodology for calculating the operational efficiency measure for the FY 2010 Budget.	
Supporting Documentation:	N/A	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000086.2005.html
Program Office:	http://www.fossil.energy.gov	

FY 2008 Performance Measures

Office:	Fossil Energy	
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)	
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy	
Measure:	**Fuels** Design and build a bench scale prototype system that combines multiple gas separation process and meets or exceeds hydrogen separation target of 95% purity to develop more affordable methods to extract commercial grade hydrogen.	

2008 Results

Commentary:	Met	During FY08, successful membrane tests were conducted by Eltron Research, Southwest Research Institute and Argonne National Laboratory. The tests demonstrated that hydrogen can be effectively separated from syngas with purity of greater than 95%. In addition, the tests demonstrated that high hydrogen flux rates can be achieved, which meet or exceed the 2010 target flux rates (although in absence of sulfur contaminants). Meeting the Annual Target supports the FE goals in that: The objective of the work conducted under the Hydrogen from Coal Program is to produce hydrogen, as an alternative fuel, from domestic coal resources in an efficient and environmentally friendly manner. The membrane testing was conducted at the bench-scale of research development. Following this scale, the technology will be matured to the pilot, pre-engineering, and pre-commercial scales prior to being considered at commercial readiness.
Future Plans / Explanation of Shortfalls:	By 2010, the Fuels Program will complete the development of modules capable of producing hydrogen from coal at $0.9 per kilogram ($30/barrel crude oil equivalent, without incentives or tax credits) when integrated with advanced coal power systems.	
Supporting Documentation:	Quarterly report for the project "Scale-up of Hydrogen Transport Membranes for IGCC & FutureGen Coal-to-Hydrogen Production Plants" - Project No. DE-FC26-05NT42469, Eltron Research, Inc. The report was issued on June 1, 2008 and covers the period January - March 2008. Quarterly report for the project "High Permeability Ternary Palladium Alloy Membranes with Improved Sulfur and Halide Tolerances" - Project No. DE-FC26-07NT43056, Southwest Research Institute. The report was issued in July 2008 and covers the period May - July 2008.	

Associated Performance in Prior Years

FY 2007:	Met	Develop industry standards for the design and operation of a scale-up reactor for simultaneous production of additional hydrogen and its separation in accordance with the standards and requirements in the RD&D plan.
FY 2006:	Met	Developed industry standards for the design and operation of a bench scale advanced hydrogen separation system, identify such standards and requirements in the RD&D plan, and conduct initial tests of a prototype unit to validate design parameters.
FY 2005:	Met	Completed analysis and continued compilation of data derived from hydrogen separations research and document in the Hydrogen from Coal RD&D Plan. These are in a format that can be used as the basis for developing industry standards needed to design and operate commercial-scale separation technology.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/detail/10000086.2005.html
Program Office:	http://www.fossil.energy.gov	

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**FutureGen** The performance measure for FutureGen was listed as under development in the FY 2009 Budget, due to the restructuring. The measure subsequently developed is: Complete the issuance of the Funding Opportunity Announcement for the restructured FutureGen project that will lead in future years to competitively awarded demonstration projects, which integrate commercial-scale, coal-based power generation with geologic sequestration of carbon dioxide.

2008 Results

Commentary:	Met	On June 24, 2008, the DOE approved and released the Final Funding Opportunity Announcement (FOA) for Restructured FutureGen. A DOE Press Release announced that the FOA was publically published in the DOE Industry Interactive Procurement System (IIPS). The interim annual target was to "Complete the issuance of the Funding Opportunity Announcement for the restructured FutureGen project that will lead in future years to competitively awarded demonstration projects, which integrate commercial-scale, coal-based power generation with geologic sequestration of carbon dioxide." The approval and release of the FOA was a major step toward receiving industry proposals. Meeting the Annual Target supports the FE goals in that the FOA is another opportunity to meet the FE goal to create public/private partnerships to provide technology to ensure continued electricity production from the extensive U.S. fossil fuel resource, including control technologies to permit reasonable-cost compliance with emerging regulations.
Future Plans / Explanation of Shortfalls:		The Restructured FutureGen approach aims to accelerate the near-term deployment of advanced clean coal technology by equipping new IGCC or other clean coal commercial power plants with CCS technology. By funding multiple projects DOE expects at least to double the amount of CO2 sequestered compared to the amount under the concept announced in 2003. When these plants are operational, they will be the cleanest coal-fired power plants in the world - each capturing and storing an expected 1 million metric tons of carbon dioxide per year.
Supporting Documentation:		The placement of Funding Opportunity Announcement in the Industry Interactive Procurement System (IIPS) on June 24, 2008. NETL Acquisition and Assistance Division has on file, approvals from DOE from the Business Clearance Review and Senior DOE Management approvals to release the solicitation.

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000086.2005.html
Program Office:	http://www.fossil.energy.gov	

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Gasification - Cost** Capital cost of advanced, coal-based, gasification energy plants, in $/kW (in constant 2003 dollars), of $1150/kW by validating technology improvements in gasifier feed (oxidizer and/or fuel), gasifier, gas cleanup, air separation, and turbine technology to ensure availability of affordable, environmentally responsible domestic energy.

2008 Results

Commentary:	Met	Based on data from test results conducted at pilot scale (0.1-0.2% of the size of a single train 250 MWe facility), systems analysis coordinated by NETL have shown that when incorporated into the IGCC process flow sheet, technology advancements in the Advanced Power Systems Program result in a 43% thermal efficiency at a capital cost of $1,140/kWe (2003 baseline of $1300/KW).
Future Plans / Explanation of Shortfalls:		Plans for 2012 and Beyond: Sponsor RD&D to continue scale-up of promising technologies with the goal of having them installed at working IGCC. In FY 2012 the R&D testing associated with phase II of the GE and Siemens hydrogen turbine projects will conclude. It is anticipated that a competitively issued phase III award will be made in 2013 to design a pre commercial prototype machine. By 2015 a pre commercial prototype machine or the associated components may be tested.
Supporting Documentation:		This result was documented in the 2008 Coal Performance Assessment Rating Tool (PART) Status Report.

Associated Performance in Prior Years

FY 2007:	Met	Validate technology improvements in gasifier feed (oxidizer and/or fuel), gasifier, gas cleanup and turbine technology that translate to a system with 42% efficiency at a capital cost of $1200/kW and progress toward the 2010 goal of an advanced coal-based power system capable of achieving 45-50% efficiency at a capital cost of $1000/kW or less.
FY 2006:	Met	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 kW from the baseline of $1200/kW for IGCC systems and efficiency improvements of >1 efficiency points.
FY 2005:	Met	Begin construction of slip stream test units, test planning, and testing of advanced gas cleanup concepts using real coal-derived synthesis gas. In FY 2005, the Gasification Technologies program will move ultra-clean cleanup, including economical and efficient sulfur removal and/or multi-contaminant cleanup, a significant step closer to commercialization, eventually leading to capital cost reductions of $60-80.kWe and efficiency improvements of >1 efficiency points and the turbine technology area of Advanced Power will show progress towards the contribution of 2 - 3 percentage points improvement in combined cycle turbine efficiency.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000086.2005.html
Program Office:	http://www.fossil.energy.gov	

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Gasification - Efficiency** Efficiency from advanced, coal-based, gasification energy plants (efficiency is the percent of fuel energy converted to electricity) capable of achieving 43% efficiency by validating technology improvements in gasifier feed (oxidizer and/or fuel), gasifier, gas cleanup and turbine technology to ensure availability of affordable, environmentally responsible domestic energy.

2008 Results

Commentary:	Met	Based on data from test results conducted at pilot scale (0.1-0.2% of the size of a single train 250 MWe facility), systems analysis coordinated by NETL have shown that when incorporated into the IGCC process flow sheet, technology advancements in the Advanced Power Systems Program result in a 43% thermal efficiency at a capital cost of $1,140/kWe (2003 baseline of $1300/KW).
Future Plans / Explanation of Shortfalls:		Future Plans for 2012 and Beyond: Sponsor RD&D to continue scale-up of promising technologies with the goal of having them installed at working IGCC. In FY 2012 the R&D testing associated with phase II of the GE and Siemens hydrogen turbine projects will conclude. It is anticipated that a competitively issued phase III award will be made in 2013 to design a pre commercial prototype machine. By 2015 a pre commercial prototype machine or the associated components may be tested.
Supporting Documentation:		This result was documented in the 2008 Coal Performance Assessment Rating Tool (PART) Status Report.

Associated Performance in Prior Years

FY 2007:	Met	Validate technology improvements in gasifier feed (oxidizer and/or fuel), gasifier, gas cleanup and turbine technology that translate to a system with 42% efficiency at a capital cost of $1200/kW and progress toward the 2010 goal of an advanced coal-based power system capable of achieving 45-50% efficiency at a capital cost of $1000/kW or less.
FY 2006:	Met	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 kW from the baseline of $1200/kW for IGCC systems and efficiency improvements of >1 efficiency points.
FY 2005:	Met	Begin construction of slip stream test units, test planning, and testing of advanced gas cleanup concepts using real coal-derived synthesis gas. In FY 2005, the Gasification Technologies program will move ultra-clean cleanup, including economical and efficient sulfur removal and/or multi-contaminant cleanup, a significant step closer to commercialization, eventually leading to capital cost reductions of $60-80.kWe and efficiency improvements of >1 efficiency points and the turbine technology area of Advanced Power will show progress towards the contribution of 2 - 3 percentage points improvement in combined cycle turbine efficiency.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/detail/10000086.2005.html
Program Office:	http://www.fossil.energy.gov	

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Innovations for Existing Plants** The performance measure for Innovations for Existing Plants in the FY 2009 Budget was: "Program activity will be redirected to the development of technology to reduce CO2 emissions from pulverized coal (PC) power plants. Annual performance targets are under development." The measure subsequently developed is: "Ensure a low cost option for reducing green house gases and allow continued use of the Nation's most abundant fossil resource by validating technology improvements of an advanced power plant with 90% carbon capture that can be extrapolated and translates to an electricity cost increase of 40% when compared to a conventional non-capture power plant."

2008 Results

Commentary:	Met	Over the past two decades, the Department of Energy's (DOE) Innovations for Existing Plants (IEP) Program has played an important role in moving advanced emission control technologies from concept to commercial reality. The successes from the program have been many. The IEP program has now taken on the challenge of climate change. The IEP program has shifted focus to R&D on carbon dioxide (CO2) capture technologies that can be retrofitted to existing pulverized coal-fired power plants. The interim IEP CO_2 capture performance (90% CO_2 capture) and cost target (no more than a 35% increase in COE) for new and existing pulverized coal power plants was established in 2008 through detailed engineering analyses studies specific to new and existing pulverized coal power plants. The program has established step wise targets for laboratory-scale development of post- and oxy-combustion CO_2 capture technologies that will show, through engineering and economic analyses, yearly progress towards meeting the performance and cost goals. In 2008, the key activity undertaken by the IEP program was the issuance of a funding opportunity announcement (FOA) specifically focused on post-combustion and oxy-combustion CO_2 capture technologies for existing coal-fired power plants. Projects selected from this FOA were selected based upon the potential ability of the technology to meet the IEP program goals.
Future Plans / Explanation of Shortfalls:	Fossil Energy and the Office of Management and Budget will reevaluate this measure as part of the FY 2010 budget process.	
Supporting Documentation:	The award documents for the 15 selections from the funding opportunity announcement along with the analysis and claims available in the project application. UOP project quarterly report.	

Associated Performance in Prior Years

FY 2007:	Met	Complete field tests of technologies deployable at 75% of conventional cost (50 - 75% removal).
FY 2006:	Met	Conducted initial pilot scale slipstream field test of at least one technology capable of 90% mercury removal.
FY 2005:	Met	Developed field performance and cost data for emission control technologies and established baseline for emissions transport from coal-fired boilers in support of proposed mercury and air quality regulations.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/detail/10000086.2005.html
Program Office:	http://www.fossil.energy.gov	

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**SECA Fuel Cells - Capital Costs (Stack Modules)** Capital cost of solid oxide fuel cell (SOFC) stack modules reduced to at least $225/kW of projected manufacturing costs by validating technology improvements to the SECA fuel cell stack to reduce the cost and environmental impact of new clean coal fired plants (Integrated Gasification Combined Cycle plants).

2008 Results

Commentary:	Met	FuelCell Energy, Inc. (FCE) is representative of the progress in solid oxide fuel cell (SOFC) system cost reduction within the Solid State Energy Conversion Alliance (SECA), having achieved a stack cost of $197/kW, surpassing the FY08 target of $225/kW. This cost is based upon stack tests initiated by FCE in July, 2008 and FCE's stack cost model. Stack tests were nominally 10kW. This represents a basic building block for any commercial scale plant. The basic building block may reach 50kW in the future but given the modularity of Solid Oxide fuel cell stacks the 10kW is sufficiently large to demonstrate commercial parameters. The Solid State Energy Conversion Alliance (SECA) program supports the development of advanced fuel cell systems through fuel cell power block research, development, design and manufacturing. This work, validated through stack testing, will reduce the cost and environmental impact of new clean coal fired plants (Integrated Gasification Combined Cycle plants), enable 99% CO2 Capture, reduce freshwater requirements substantially and increase energy security through increased use of domestic energy resources . Achievement of this annual target - system costs of $600/kW or less - reflects significant progress towards the SECA goal of low-cost, high-efficiency modular solid oxide fuel cell (SOFC) systems.

Future Plans / Explanation of Shortfalls:	Use SECA technology in intermediate and full scale central demonstrations with distributed generation spin-offs. Planned demonstrations are as follows: By 2010, the Fuel Cells activity will increase reliability of the Solid State Energy Conversion Alliance (SECA) fuel cell technology to commercially acceptable levels and reduce the cost of the fuel cell power block to $400/kW (assuming 250 MW per year production); and provide the technology base to permit low cost ($400/kW, a 10-fold reduction versus the 2000 baseline), ultra-clean, 40-60 percent electrical efficiency (when coal fueled), and kilowatt-scale solid oxide fuel cell modules for grid-independent distributed generation applications. Within current SECA industry teams, a new SECA manufacturing element will be initiated in FY 2009, with a scheduled completion date of FY 2012, supporting near-zero atmospheric emissions demonstration. By FY 2015, the activity will have tested multi-MW-class, coal and carbon capture fuel cell systems with a minimum 50 percent HHV efficiency, emissions of less than 0.5 ppm nitrogen oxides, carbon capture ready and suitable for integration with high efficiency gasification. Ultimately, by FY 2018, technology will be developed for 250 MW-class pressurized fuel cell/turbine systems for integration with high efficiency gasification. These systems capable of 50-60 percent HHV efficiency integrated with gasification will be available for demonstration in 2020. Support continued development of SECA technology and advanced electrochemical energy concepts including combined coal gasification and electrochemical energy conversion through R&D.
Supporting Documentation:	These results are documented in the FCE report to DOE titled "Phase 1 Baseline SOFC Power Block Factory Cost Estimate, Rev 00, Non-Proprietary." These results will be further documented in the EPAct-protected cost estimate, the Test Report and Phase I Final Report for the project).

Associated Performance in Prior Years

FY 2007:	Met	Validate technology improvements to the SECA fuel cell stack that reduce projected stack manufacturing costs to at least $250/kW.
FY 2006:	Met	Four SECA industry teams completed phase I prototype validation demonstrating SECA phase I efficiency and cost goals. Incorporate seal and interconnect concepts into fuel cell stacks and perform initial tests.
FY 2005:	Met	Began prototype validation of technical requirements for low cost SECA fuel cell systems. Tested prototype capable of achieving SECA cost reductions and efficiency Phase I goals. Under the SECA Core Program, validate one new sealing concept; 20% improvement in metallic interconnect performance relative to FY 2004; and 20% sulfur tolerance relative to FY 2004. These validations will aid SECA industry teams in achieving cost reduction and energy efficiency goals.

Additional Information

PART: Adequate http://www.whitehouse.gov/omb/expectmore/summary/10000086.2005.html

Program Office: http://www.fossil.energy.gov

FY 2008 Performance Measures

Office:	Fossil Energy
Program:	Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**SECA Fuel Cells - Capital Costs (System)** Capital cost of solid oxide fuel cell (SOFC) system reduced to at least $600/kW projected manufacturing costs by validating technology improvements of the Solid State Energy Conversion Alliance (SECA) fuel system to reduce the cost and environmental impact of new clean coal fired plants.

2008 Results

Commentary:	Met	FuelCell Energy, Inc. (FCE) is representative of the progress in solid oxide fuel cell (SOFC) system cost reduction within the Solid State Energy Conversion Alliance (SECA), having achieved a system cost of $560/kW, surpassing the FY08 target of $600/kW. This cost is based upon stack tests initiated by FCE in July, 2008 and systems modeling and analysis. The Solid State Energy Conversion Alliance (SECA) program supports the development of advanced fuel cell systems through fuel cell power block research, development, design and manufacturing. Stack tests were nominally 10kW. This represents a basic building block for any commercial scale plant. The basic building block may reach 50kW in the future but given the modularity of Solid Oxide fuel cell stacks the 10kW is sufficiently large to demonstrate commercial parameters. This work, validated through stack testing, will reduce the cost and environmental impact of new clean coal fired plants (Integrated Gasification Combined Cycle plants), enable 99% carbon dioxide (CO2) Capture, reduce freshwater requirements substantially and increase energy security through increased use of domestic energy resources. Achievement of this annual target - system costs of $600/kW or less - reflects significant progress towards the SECA goal of low-cost, high-efficiency modular solid oxide fuel cell (SOFC) systems.
Future Plans / Explanation of Shortfalls:		Use SECA technology in intermediate and full scale central demonstrations with distributed generation spin-offs. Planned demonstrations are as follows: By 2010, the Fuel Cells activity will increase reliability of the Solid State Energy Conversion Alliance (SECA) fuel cell technology to commercially acceptable levels and reduce the cost of the fuel cell power block to $400/kW (assuming 250 MW per year production); and provide the technology base to permit low cost ($400/kW, a 10-fold reduction versus the 2000 baseline), ultra-clean, 40-60 percent electrical efficiency (when coal fueled), and kilowatt-scale solid oxide fuel cell modules for grid-independent distributed generation applications. Within current SECA industry teams, a new SECA manufacturing element will be initiated in FY 2009, with a scheduled completion date of FY 2012, supporting near-zero atmospheric emissions demonstration. By FY 2015, the activity will have tested multi-MW-class, coal and carbon capture fuel cell systems with a minimum 50 percent HHV efficiency, emissions of less than 0.5 ppm nitrogen oxides, carbon capture ready and suitable for integration with high efficiency gasification. Ultimately, by FY 2018, technology will be developed for 250 MW-class pressurized fuel cell/turbine systems for integration with high efficiency gasification. These systems capable of 50-60 percent HHV efficiency integrated with gasification will be available for demonstration in 2020. Support continued development of SECA technology and advanced electrochemical energy concepts including combined coal gasification and electrochemical energy conversion through R&D.
Supporting Documentation:		These results are documented in the FCE report to DOE titled ""Phase 1 Baseline SOFC Power Block Factory Cost Estimate, Rev 00, Non-Proprietary." These results will be further documented in the EPAct-protected cost estimate, the Test Report and Phase I Final Report for the project (DOE project DE-FC26-04NT41837).

Associated Performance in Prior Years

FY 2007: N/A

FY 2006: N/A

FY 2005: N/A

Additional Information

PART: Adequate http://www.whitehouse.gov/omb/expectmore/summary/10000086.2005.html

Program Office: http://www.fossil.energy.gov

FY 2008 Performance Measures

Office: Fossil Energy

Program: Near-Zero Emissions Coal-Based Electricity & Hydrogen Production (1.2.8)

Strategic Goal(s) Supported: Goal 1.2 Environmental Impacts of Energy

Measure: **SECA Fuel Cells - Power Density**
Maintaining Economic Power Density of solid oxide fuel cell (SOFC) with increased size by validating technology improvements to at least 250 mW/cm2 in cost reduction full system test to reduce the cost and environmental impact of new clean coal fired plants (Integrated Gasification Combined Cycle plants).

2008 Results

Commentary: Met

FuelCell Energy, Inc. (FCE) is representative of the progress in solid oxide fuel cell (SOFC) system cost reduction within the Solid State Energy Conversion Alliance (SECA), having achieved a power density of 312mW/cm2 in scaled cells, surpassing the FY08 target of 250mW/cm2. Stack tests were nominally 10kW. This represents a basic building block for any commercial scale plant. The basic building block may reach 50kW in the future but given the modularity of Solid Oxide fuel cell stacks the 10kW is sufficiently large to demonstrate commercial parameters. This result is based upon stack tests initiated by FCE in July, 2008. The SECA program supports the development of advanced fuel cell systems through fuel cell power block research, development, design and manufacturing. This work, validated through stack testing, will reduce the cost and environmental impact of new clean coal fired plants (Integrated Gasification Combined Cycle plants), enable 99% Carbon Dioxide (CO2) Capture, reduce freshwater requirements substantially and increase energy security through increased use of domestic energy resources . Achievement of this annual target – system costs of $600/kW or less - reflects significant progress towards the SECA goal of low-cost, high-efficiency modular solid oxide fuel cell (SOFC) systems.

Future Plans / Explanation of Shortfalls:

Use SECA technology in intermediate and full scale central demonstrations with distributed generation spin-offs. Planned demonstrations are as follows: By 2010, the Fuel Cells activity will increase reliability of the Solid State Energy Conversion Alliance (SECA) fuel cell technology to commercially acceptable levels and reduce the cost of the fuel cell power block to $400/kW (assuming 250 MW per year production); and provide the technology base to permit low cost ($400/kW, a 10-fold reduction versus the 2000 baseline), ultra-clean, 40-60 percent electrical efficiency (when coal fueled), and kilowatt-scale solid oxide fuel cell modules for grid-independent distributed generation applications. Within current SECA industry teams, a new SECA manufacturing element will be initiated in FY 2009, with a scheduled completion date of FY 2012, supporting near-zero atmospheric emissions demonstration. By FY 2015, the activity will have tested multi-MW-class, coal and carbon capture fuel cell systems with a minimum 50 percent HHV efficiency, emissions of less than 0.5 ppm nitrogen oxides, carbon capture ready and suitable for integration with high efficiency gasification. Ultimately, by FY 2018, technology will be developed for 250 MW-class pressurized fuel cell/turbine systems for integration with high efficiency gasification. These systems capable of 50-60 percent HHV efficiency integrated with gasification will be available for demonstration in 2020. Support continued development of SECA technology and advanced electrochemical energy concepts including combined coal gasification and electrochemical energy conversion through R&D.

Supporting Documentation:

These results are documented in the FCE report to DOE titled “Phase 1 Baseline SOFC Power Block Factory Cost Estimate, Rev 00, Non-Proprietary.” These results will be further documented in the EPAct-protected cost estimate, the Test Report and Phase I Final Report for the project.

Associated Performance in Prior Years

FY 2007: N/A

FY 2006: N/A

FY 2005: N/A

Additional Information

PART: Adequate http://www.whitehouse.gov/omb/expectmore/summary/10000086.2005.html

Program Office: http://www.fossil.energy.gov

FY 2008 Performance Measures

Office:	Nuclear Energy
Program:	New Nuclear Generation Technologies (1.2.14)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Advanced Fuel Separations Technology** Create a technology development document on recycling technology options, including their readiness and risks, the state of technology development acheived to date, future research and development, and economic evaluations needed to achieve the GNEP vision.

2008 Results

Commentary:	Met	In FY 2008, the program met its annual target by completing the "Global Nuclear Energy Partnership Technology Roadmap Phase 1" which provides technology readiness and risks, the state of technology development achieved to date, future research and development, and economic evaluations needed to evaluate and realize potential recycle options. This report is supported by the results of previous fuel cycle research and development activities in the areas of spent fuel separations, advanced recycling reactor; transmutation fuel and related fabrication processes; safeguards and waste forms.
Future Plans / Explanation of Shortfalls:		Successful achievement of the FY 2008 annual target validates the need for continuation of advanced fuel cycle R&D activities in FY 2009. R&D results and other relevant information, including public comments on the GNEP Draft Programmatic Environmental Impact Statement will be collected to inform the future direction of the Advanced Fuel Cycle Initiative.
Supporting Documentation:		Monthly program reports and documentation validating specific milestones; Program Manager Certification Memorandum.

Associated Performance in Prior Years

FY 2007:	Met	Complete research and development activities, focused on advanced fuel separations technology development and demonstration, to support the Secretary of Energy's determination of the need for a second geologic repository for spent nuclear fuel by FY 2008.
FY 2006:	Met	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.
FY 2005:	Met	Issue preliminary report on the post-irradiation examination (PIE) of actinide-bearing metal and nitride transmutation fuels in the Advanced Test Reactor (ATR).

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000072.2003.html
Program Office:	http://nuclear.energy.gov	

FY 2008 Performance Measures

Office:	Nuclear Energy	
Program:	New Nuclear Generation Technologies (1.2.14)	
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy	
Measure:	**Generation IV Research and Development Activities** Determine a path forward for the design and construction of a next generation nuclear power plant (NGNP) by 2011 by submitting a Next Generation Nuclear Plant (NGNP) licensing strategy to Congress and completing NGNP conceptual design technology selection studies.	

2008 Results

Commentary:	Met	In FY 2008, Generation IV met its annual performance measure through a number of research, design and regulatory activities, including submission of the Next Generation Nuclear Plant (NGNP) Licensing Strategy, prepared jointly by DOE and the Nuclear Regulatory Commission (NRC), to Congress in August 2008. In addition, the program completed NGNP conceptual design technology selection studies and evaluated alternatives for entering into formal cost-sharing partnerships with industry. The program also made significant progress in fuels, graphite, and high temperature materials research and development in support of the NGNP.
Future Plans / Explanation of Shortfalls:		As a result of its FY 2008 accomplishments, the program is prepared to complete the first round of testing on potential fuels and high-temperature materials for the NGNP. In FY 2009, the program will initiate the second round of testing of fuels and materials. The program will also continue cooperation with NRC on NGNP R&D activities; these activities are focused on the early resolution of generic safety issues for gas cooled reactors. Finally, the program tentatively plans to begin the process of engaging industry in the cost-shared, public-private partnership for development of the NGNP in FY 2009
Supporting Documentation:		Monthly program reports and documentation validating specific milestones; Program Manager Certification Memorandum.

Associated Performance in Prior Years

FY 2007:	Met	Complete Generation IV Research and Development Activities.
FY 2006:	Met	Complete GenIV research and development activities to inform a design selection for the next generation nuclear power plant by FY 2011.
FY 2005:	Met	Issue the final design documents for the fuel capsule, test train, fission product monitoring system, and control system for the fuel irradiation shakedown test (AGR-1).

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000100.2003.html
Program Office:	http://nuclear.energy.gov	

FY 2008 Performance Measures

Office:	Nuclear Energy
Program:	New Nuclear Generation Technologies (1.2.14)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Nuclear Hydrogen Initiative (NHI) Research and Development Activities** Select a hydrogen production technology by 2011 that will be demonstrated in a pilot scale experiment by conducting integrated laboratory-scale experiments on sulfur-iodine, thermochemical and high temperature electrolysis processes.

2008 Results

Commentary:	Met	In FY 2008, the program met its annual performance measure through the operation of ILS experiments for both sulfur-iodine (S-I) and HTE hydrogen production processes. The SI ILS achieved its first integrated operation in April 2008, with hydrogen being produced from reactants that were generated within and transferred among the three sections of the experiment. In September 2008, the HTE ILS was operated at full power (with three modules installed) to produce hydrogen. In addition, a multi-cell electrolyzer for the Hybrid Sulfur cycle was successfully tested in March 2008, demonstrating the potential for that technology to be scaled-up to meet commercial needs. These tests provided valuable data on operating procedures, chemical reaction data, and performance of proposed materials of construction which will be incorporated into decision criteria for the technology to ultimately be carried forward.
Future Plans / Explanation of Shortfalls:		Successful achievement of the FY 2008 performance measure enables the program to continue experiments on the HTE, S-I, and Hybrid Sulfur hydrogen production technologies during FY 2009. This experimentation will help inform the selection of a hydrogen production technology to demonstrate at pilot scale by 2011.
Supporting Documentation:		Monthly program reports and documentation validating specific milestones; Program Manager Certification Memorandum.

Associated Performance in Prior Years

FY 2007:	Met	Complete NHI research and development activities focused on thermochemical and high temperature electrolysis (HTE) processes to support the Department's selection of a hydrogen production technology in 2011.
FY 2006:	Met	Complete development of key technologies and infrastructure requirements in preparation for the thermochemical and hightemperature electrolysis integrated laboratory-scale experiments.
FY 2005:	Met	Issue conceptual design documents for the thermochemical and hightemperature electrolysis pilot scale experiments.

Additional Information

PART:	N/A
Program Office:	http://nuclear.energy.gov

FY 2008 Performance Measures

Office:	Nuclear Energy
Program:	New Nuclear Generation Technologies (1.2.14)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Nuclear Power (NP) 2010 Engineering and Licensing Activities** Enable industry to make a decision to build a new nuclear power plant by 2010 by supporting New Nuclear Plant Licensing Demonstration Projects and by administering the Department's standby support program.

2008 Results

Commentary:	Met	In FY 2008, the program met its annual performance measure through completion of final reports for the cost and schedule baselines from the program's two reactor manufacturing partners, issuance of Conditional Agreement guidance for the standby support program, and completion of a lessons learned report on the Early Site Permitting process. NP 2010's cost-shared regulatory demonstration program supported the submission of two combined Construction and Operating License (COL) applications by industry partners to the Nuclear Regulatory Commission (NRC) in the first half of FY 2008. Achievement of these milestones is critical to helping enable an industry decision in 2010 to build a new nuclear power plant.
Future Plans / Explanation of Shortfalls:		The NP 2010 Program will continue to support its industry and reactor vendor partners' work in achieving approved COLs and certified designs from NRC, leading to an industry decision to build and finalization of standardized new plant designs. Additionally, the program will continue to work on establishing the Standby Support program for the nuclear industry.
Supporting Documentation:		Monthly program reports and documentation validating specific milestones; Program Manager Performance Certification Memorandum.

Associated Performance in Prior Years

FY 2007:	Met	Complete NP 2010 engineering and licensing activities, focusing on the resolution of reactor certification and design issues and the preparation and review of Construction and Operation License (COL) applications, to enable an industry decision in 2010 to build a new nuclear power plant.
FY 2006:	Met	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.
FY 2005:	Met	Issue project implementation plans for two Construction and Operating Licensing (COL) Demonstration Projects.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000116.2003.html
Program Office:	http://www.nuclear.gov	

FY 2008 Performance Measures

Office:	Nuclear Energy
Program:	New Nuclear Generation Technologies (1.2.14)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Total NE Administrative Overhead Costs** Maintain total administrative overhead costs in relation to total program costs of less than eight percent.

2008 Results

Commentary:	Met	For FY 2008, the Office of Nuclear Energy maintained a total administrative overhead cost efficiency of 6.51%, in relation to total R&D program costs. Achievement of the annual target shows that R&D program management costs are being effectively controlled.
Future Plans / Explanation of Shortfalls:		The Department is pursuing a common approach for calculating total administrative over head costs in its applied R&D programs, allowing some measure of comparability among program offices. The Office of Nuclear Energy will continue to work to increase its R&D program management efficiency during FY 2009.
Supporting Documentation:		Quarterly Measure Calculation and Program Manager Performance Certification Memorandum

Associated Performance in Prior Years

FY 2007:	Met	Maintain total administrative overhead costs in relation to total program costs less than 8%.
FY 2006:	Met	Maintain total administrative overhead costs in relation to total R&D program costs of less than 8 percent. (Baseline for administrative overhead rate is currently being validated).
FY 2005:	Met	Achieve cumulative variance of less than 10 percent from each of the cost and schedule baselines for the Advanced Fuel Cycle, Generation IV Nuclear Energy Systems and Nuclear Hydrogen Initiatives.

Additional Information

PART:	N/A
Program Office:	http://www.nuclear.gov

FY 2008 Performance Measures

Office:	Nuclear Energy
Program:	New Nuclear Generation Technologies (1.2.14)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Advanced Fuel Cycle Facility** Complete trade-off studies of new versus existing facilities for an Advanced Fuel Cycle Facility, including economic evaluations.

2008 Results

Commentary:	Met	In FY 2008, the program met its annual target by completing four strategic trade-off studies of new versus existing facilities for am Advanced Fuel Cycle Facility. The analysis of existing facilities culminated with the report "Evaluation of Existing Department of Energy Facilities to Support the Advanced Fuel Cycle Facility Mission," issued in September 2008. Additionally, this work was valuable in supporting the development of the draft GNEP Programmatic Environmental Impact Statement (PEIS) and its underlying analyses.

Future Plans / Explanation of Shortfalls:	Successful achievement of the FY 2008 performance measure will help re-focus the advanced burner reactor program and technology development activities in support of Advanced Fuel Cycle Initiative (AFCI) R&D efforts. The concepts and analyses developed by the program can support AFCI's use of existing facilities for improving integrated laboratory-scale demonstration capabilities involving spent fuel separations, advanced waste form development, transmutation fuel and target fabrication, and integrated advanced safeguards technology.
Supporting Documentation:	Monthly program reports and documentation validating specific milestones; Program Manager Certification Memorandum.

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	N/A
Program Office:	http://nuclear.energy.gov

FY 2008 Performance Measures

Office:	Nuclear Energy
Program:	New Nuclear Generation Technologies (1.2.14)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Advanced Burner Reactor** Complete initial industry design studies for the Advanced Burner Reactor, including an evaluation of the development costs for the various prototype options.

2008 Results

Commentary:	Met	In FY 2008, the program met its annual target by completing initial industry design studies for the ABR. These activities included an evaluation of industry deliverables, including development costs for various prototype options, received in June 2008. Continuation awards were made to three industry teams in September 2008. An evaluation of the conceptual design studies, along with other related deliverables from the industry consortia, was also used to inform AFCI R&D activities for FY 2009 and beyond.

Future Plans / Explanation of Shortfalls:	Successful achievement of the FY 2008 performance measure will help re-focus the advanced burner reactor program and technology development activities. The final phase of industry feedback in FY 2009 will continue to help influence the scope of technology development activities within the Advanced Fuel Cycle Initiative (AFCI) program.
Supporting Documentation:	Monthly program reports and documentation validating specific milestones; Program Manager Certification Memorandum.

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	N/A
Program Office:	http://nuclear.energy.gov

FY 2008 Performance Measures

Office:	Nuclear Energy
Program:	New Nuclear Generation Technologies (1.2.14)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Consolidated Fuel Treatment Center** Complete technical and economic evaluations of four industry-led conceptual design studies for a nuclear fuel recycling center.

2008 Results

Commentary:	Met	In FY 2008, the program met its annual target by completing initial industry design studies for a nuclear fuel recycling center. These activities included an evaluation of industry deliverables, including development costs for various recycling facility options, received in June 2008. Continuation awards were made to three industry teams in September 2008. An evaluation of the conceptual design studies, along with other related deliverables from the industry consortia, was also used to inform AFCI R&D activities for FY 2009 and beyond.
Future Plans / Explanation of Shortfalls:	Successful achievement of the FY 2008 performance measure will help re-focus the used fuel recycling program and technology development activities. The final phase of industry feedback in FY 2009 will continue to help influence the scope of technology development activities within the Advanced Fuel Cycle Initiative (AFCI) program.	
Supporting Documentation:	Monthly program reports and documentation validating specific milestones; Program Manager Certification Memorandum.	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	N/A
Program Office:	http://nuclear.energy.gov

FY 2008 Performance Measures

Office:	Nuclear Energy
Program:	National Nuclear Infrastructure (1.2.15)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Cost and Schedule Baseline Variance** To ensure unique nuclear facilities are available to support critical Departmental missions, achieve cumulative variance of less than 10 percent from cost and schedule baselines at Idaho National Laboratory for Idaho Facilities Management program facilities and activities (which include facilities used by the Radiological Facilities Management program), consistent with safe operations.

2008 Results

Commentary:	Met	For FY 2008, the program met its target by achieving cumulative cost and schedule variances at Idaho National Laboratory of less than 10%. The cumulative cost variance (CV) was + 3.5 percent and the schedule variance (SV) was -4.8%. Monitoring performance against established baselines helps managers achieve desired program results consistent with NE's budget execution strategy, and provides early identification of possible problems in budget execution.
Future Plans / Explanation of Shortfalls:	This measure will be tracked in FY 2009 to continue to demonstrate the program's ability to execute work with established cost and schedule baselines. Maintaining this standard will enable to Office of Nuclear Energy to ensure critical infrastructure at Idaho National Laboratory is available to help meet program goals.	
Supporting Documentation:	Monthly Idaho Facilities Management Reports and Program Manager Performance Certification Memorandum	

Associated Performance in Prior Years

FY 2007:	Met	Consistent with safe operations, achieve cumulative variance of less than 10% from each of the cost and schedule baselines for the Radiological Facilities Management (RFM) and Idaho Facilities Management (IFM) programs at INL.
FY 2006:	Met	Consistent with safe operations, achieve cumulative variance of less than 10 percent from each of the cost and schedule baselines for the Reactor Technology Complex and the Materials and Fuels Complex.
FY 2005:	Met	Consistent with safe operations, achieve cumulative variance of less than 10 percent from each of the cost and schedule baselines for the Radiological Facilities Management and Idaho Facilities Management programs.

Additional Information

PART:	Results Not Determined	http://www.whitehouse.gov/omb/expectmore/summary/10002130.2004.html
Program Office:	http://www.nuclear.gov	

FY 2008 Performance Measures

Office:	Nuclear Energy
Program:	National Nuclear Infrastructure (1.2.15)
Strategic Goal(s) Supported:	Goal 1.2 Environmental Impacts of Energy
Measure:	**Facility Operability Index** To ensure unique nuclear facilities are available to support critical Departmental missions, maintain a facility operability index of 0.9 for key Idaho Facilities Management and Radiological Facilities Management program facilities.

2008 Results

Commentary:	Met	For FY 2008, the Idaho Facilities Management program achieved an overall FOI of 0.93; the Space and Defense program achieved an overall FOI of 0.98; and the Medical Isotopes program achieved an overall FOI of 0.99. Successful achievement of the milestones for each program indicates that essential infrastructure and associated activities are operational to ensure that the Department's unique nuclear infrastructure, required for advanced nuclear energy research and development, is available to support national priorities.

Future Plans / Explanation of Shortfalls:	This measure will continue to be tracked in FY 2009. The Space and Defense Power Systems program will continue to track the same elements from FY 2008. Idaho Facilities Management will evaluate its current list of critical operability elements and determine if revisions are required for FY 2009; due to increased customer requirements, it is anticipated that the number of elements will increase. All programs will continue to maintain a FOI of 0.9 or above.
Supporting Documentation:	Annual Operating Plans and Periodic Performance Reports; Program Manager Performance Certification Memorandum

Associated Performance in Prior Years

FY 2007:	Met	Maintain operability of key 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 (FOI) of 0.9 or greater.
FY 2006:	Met	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.
FY 2005:	Met	Keep cost and schedule milestones for upgrades and construction of key nuclear facilities within 10 percent of approved baselines, using the cost-weighted mean percent variance (+/-10 percent) approach.

Additional Information

PART:	Results Not Determined	http://www.whitehouse.gov/omb/expectmore/summary/10002130.2004.html
Program Office:	http://nuclear.energy.gov	

FY 2008 Performance Measures

Office:	Electricity Delivery and Energy Reliability	
Program:	Electricity Delivery and Energy Reliability (1.3.16)	
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure	
Measure:	**Energy Storage Program** Test three ionic liquids for possible use as electrolytes in batteries or electrochemical capacitors with the potential for doubling the energy and increasing the power by at least 50% for capacitors or doubling the lifetime and improving safety of rechargeable non-aqueous batteries.	

2008 Results

Commentary:	Met	The best candidate electrolyte was determined to be the cerium chloride-DMSO-based system having an 8 Volt working range, significantly higher than the typical 2.6-2.8 Volt systems and with a corresponding 3 to 4 fold increase in energy density. All of the ionic liquids (IL) evaluated do exhibit higher working voltages, however they also exhibit significantly higher ionic resistance. Consequently, the systems provide higher energy, but with a reduced power capability that is problematic for many applications. The cerium chloride-DMSO based system with a dissolved lithium salt exhibits much lower resistance and does not suffer from this reduced power behavior. Interaction of this electrolyte system with a variety of electrode materials was also explored for a better understanding of the fundamental processes associated with the passivation process.
Future Plans / Explanation of Shortfalls:	The cerium chloride - DMSO system will be further investigated during FY09 and individual cells in pouch and '1650' format will be assembled for testing.	
Supporting Documentation:	Electrolyte Research Final Report for the DOE Energy Storage Systems Program, FY08 Quarter 4 FileName: - Q4_ElectrolyteResearch_SAND_Draft.doc	

Associated Performance in Prior Years

FY 2007:	Met	Commission two major pioneering energy storage systems in collaboration with the CEC and NYSERDA, and complete data collection and monitoring of three systems commissioned during FY 2006.
FY 2006:	Met	Commissioned three pioneering energy storage systems in collaboration with the California Energy Commission and collect preliminary technical and economic data.
FY 2005:	Not Met	Complete the manufacture of and factory testing on a 2MW / 2MWh zinc-bromine battery system (consisting of four 500kW / 500kWh units) for supplying extra power during peak load conditions at a utility substation.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10001045.2003.html
Program Office:	http://oe.energy.gov/	

FY 2008 Performance Measures

Office:	Electricity Delivery and Energy Reliability
Program:	Electricity Delivery and Energy Reliability (1.3.16)
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure
Measure:	**High Temperature Superconductivity** Demonstrate prototype 50,000 A-m critical current-length for second generation wire.

2008 Results

Commentary:	Met	SuperPower produced and demonstrated 2G wire sections with I x L greater than 54,360 A-m. (360 x 151).
Future Plans / Explanation of Shortfalls:	Project completed. No future plans.	
Supporting Documentation:	SuperPower HTS Presentation of Second Generation Wire, September 2008	

Associated Performance in Prior Years

FY 2007:	Met	Complete six months operation of superconducting cable operating on the grid at greater than 10 kilovolts.
FY 2006:	Met	Operated a first-of-a-kind superconducting power cable on the electric grid for 240 hours.
FY 2005:	Met	Completed the manufacture of a 200m superconducting power cable for American Electric Power (AEP).

Additional Information

PART:	N/A
Program Office:	http://oe.energy.gov/

FY 2008 Performance Measures

Office:	Electricity Delivery and Energy Reliability
Program:	Electricity Delivery and Energy Reliability (1.3.16)
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure
Measure:	**Research and Development Program Efficiency Measure** Maintain total Research and Development Program Direction costs in relation to total Research and Development costs of less than 12%.

2008 Results

Commentary:	Met	Year end calculations indicates an overhead efficiency for OE R&D at 8.37%, below the 12% target.
Future Plans / Explanation of Shortfalls:	Continue to limit program direction costs to 12% or less over the entire year.	
Supporting Documentation:	RM Common R&D Efficiency Measure FY08 Summary in Excel (Common RD Efficiency Measure - Summary - FY08 4th Quarter 09.26.08.xls); RM Common R&D Efficiency Measure FY08 Calculation in Excel (Common RD Efficiency Measure - FY08 Calc Worksheet - 4th Quarter 09 12 08.xls); RM Common R&D Efficiency Measure FY08 METHODOLOGY in Excel. (Common RD Efficiency Measure – METHODOLOGY - FY08 4th Quarter 09.26.08.xls)	

Associated Performance in Prior Years

FY 2007:	Met	Maintain total Research and Development Program Direction costs in relation to total Research and Development costs of less than 12%.
FY 2006:	Met	Maintain total Research and Development Program Direction costs in relation to total Research and Development costs at less than 12%.
FY 2005:	Met	Reduce by 10% the total time required by OETD to complete its FY 2006 CFO, OMB and Congressional budget submissions as compared to its comparable FY 2005 budget submissions.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10001045.2003.html
Program Office:	http://oe.energy.gov/	

FY 2008 Performance Measures

Office:	Electricity Delivery and Energy Reliability	
Program:	Electricity Delivery and Energy Reliability (1.3.16)	
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure	
Measure:	**Visualization and Control** Commission an Area Interchange Error (AIE) visualization system at the North American Electric Reliability Corporation (NERC) for monitoring compliance with mandatory rules that will improve the reliability of the Nation's electric grid.	

2008 Results

Commentary:	Met	The Area Interchange Error (AIE) visualization system has been completed and delivered to NERC, and they have accepted the system. The NERC Board of Trustees Technology Committee (BOTTC) has reviewed and approved including the AIE tool as part of NERC Mission Critical applications. NERC Information Technology (IT) Group is now supporting and maintaining the AIE tool.
Future Plans / Explanation of Shortfalls:	Project completed. No future plans.	
Supporting Documentation:	CERTS 4th Quarter Report, September 2008, for the DOE/OE Transmission Reliability Program.	

Associated Performance in Prior Years

FY 2007:	Met	Develop a plan that delineates the division of duties between DOE and the Electric Reliability Organization (ERO) relative to the research and development activities of DOE, and the deployment of a wide area transmission reliability measurement network in North America by the ERO.
FY 2006:	Met	Facilitated 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.
FY 2005:	Met	Installed four additional data concentrators at four different data archiving and analysis locations, achieving a prototype wide area measurement system in the Nation's Eastern Interconnection consisting of six fully functioning data archiving and analysis locations installed at six different utilities. Completed field hardware installation at a cumulative total of at least 100 commercial, industrial and/or municipal customers participating in the demand response and load conservation network in Connecticut, and reduce peak demand (kilowatt hours) in real- time by 5-8% on average (as compared to non-curtailed kilowatt hour consumption) for all participating customers, thereby improving the energy efficiency of electricity usage.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10001045.2003.html
Program Office:	http://oe.energy.gov/	

FY 2008 Performance Measures

Office:	Electricity Delivery and Energy Reliability
Program:	Electricity Delivery and Energy Reliability (1.3.16)
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure
Measure:	**Improvement in Grid Utilization** Award contracts to demonstrate improvement in grid utilization of 5% by 2009 and 20% by 2015.

2008 Results

Commentary:	Met	Nine projects were selected. Cooperative agreements have been awarded and are in place and the National Energy Technology Laboratory (NETL). NETL was responsible for awarding contracts and will manage those cooperative agreements.
Future Plans / Explanation of Shortfalls:	Work tasks will begin through the cooperative agreements as project teams work to achieve peak load reduction goals for future years.	
Supporting Documentation:	Cooperative agreements are at NETL procurement. NETL procurement can be contacted on details of cooperative agreements.	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10001045.2003.html
Program Office:	http://oe.energy.gov/	

FY 2008 Performance Measures

Office:	Western Area Power Administration
Program:	Western Area Power Administration (1.3.17)
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure
Measure:	**System Reliability Performance - NERC Rating** Meet North American Electric Reliability Corporation (NERC) Control Performance Standards (CPS) of CPS1>100 and CPS2>90 and meet or exceed industry averages. CPS1 measures a generating system's performance at matching supply to changing demand requirements and supporting desired system frequency in one minute increments. CPS2 measures a generating system's performance at limiting the magnitude of generation and demand imbalances in ten minute increments.

2008 Results

Commentary:	Met	Western's FY 2008 CPS1 and CPS2 averages are 184.42 and 98.92, respectively. Balanced supply and demand reflect efficient power operations which contribute to the stability of the Nation's integrated electric grid.
Future Plans / Explanation of Shortfalls:	Western will continue to operate its system at the highest level of reliability and exceed NERC operating requirements.	
Supporting Documentation:	NERC Control Performance Report.	

Associated Performance in Prior Years

FY 2007:	Met	Attain acceptable North American Electric Reliability Corporation (NERC) ratings for the following NERC Control Performance Standards (CPS) measuring the balance between power generation and load: 1) CPS1 which measures generation/load balance and support system frequency on one minute intervals (rating >100); and 2) CPS2 which limits any imbalance magnitude to acceptable levels (rating >90).
FY 2006:	Met	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).
FY 2005:	Met	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).

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000130.2002.html
Program Office:	www.wapa.gov	

FY 2008 Performance Measures

Office:	Western Area Power Administration	
Program:	Western Area Power Administration (1.3.17)	
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure	
Measure:	**Repayment of Investment Performance** Ensure unpaid investment (UI) is equal to or less than the allowable unpaid investment (AUI) in accordance with DOE Order RA 6120.2 and Reclamation Law.	

2008 Results

Commentary:	Met	Western achieved its FY 2008 repayment ratio in that collective repayment data for the UI/AUI ratio was equal to or less than 1.00. This supports Western's commitment to repay Federal investment within required repayment periods, meeting our obligations to the U.S. Treasury.
Future Plans / Explanation of Shortfalls:	Western will continue to meet all long-term project repayment obligations.	
Supporting Documentation:	Final FY 2007 Power Repayment Studies.	

Associated Performance in Prior Years

FY 2007:	Met	Ensure unpaid investment is equal to or less than the allowable unpaid investment. Achieve a ratio of unpaid to allowable unpaid <= 1.00.
FY 2006:	N/A	
FY 2005:	Met	Ensure unpaid Federal Investment (UI) is equal to or less than the allowable unpaid investment (AUI). Achieve a ratio of unpaid to allowable unpaid <= 1.00. Actual: 1.0

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000130.2002.html
Program Office:	www.wapa.gov	

FY 2008 Performance Measures

Office:	Western Area Power Administration	
Program:	Western Area Power Administration (1.3.17)	
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure	
Measure:	**System Reliability Performance - Outages** Accountable customer and/or transmission element outages will not exceed 26 for FY 2008.	

2008 Results

Commentary:	Met	For FY 2008, Western reported 22 accountable outages against our target of 26 or less. Achieving this target reflects our ability to effectively operate and maintain the power system to ensure dependable service to customers.
Future Plans / Explanation of Shortfalls:	Western will continue to provide reliable service to our customers.	
Supporting Documentation:	FY 2008 Accountable Outages Report.	

Associated Performance in Prior Years

FY 2007:	Met	Accountable customer and/or transmission element outages will not exceed 26 for FY 2007.
FY 2006:	N/A	
FY 2005:	Met	System Reliability Performance: Accountable customer and/or transmission element outages will not exceed the average number of outages for the past five years. Goal: <= 23 outages; Actual: 23

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000130.2002.html
Program Office:	www.wapa.gov	

FY 2008 Performance Measures

Office:	Bonneville Power Administration	
Program:	Bonneville Power Administration (1.3.18)	
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure	
Measure:	**Hydropower Generation Efficiency Performance** Achieve > or = 97.5% 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.	

2008 Results

Commentary:	Met	BPA achieved this target with 99.6% Heavy-Load-Hour Availability for FY 2008, demonstrating 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 heavy load hour performance ensured that BPA had the system capacity to serve its system load.
Future Plans / Explanation of Shortfalls:	We will continue high levels of performance to meet program missions consistent with permanent authority.	
Supporting Documentation:	4th Quarter FY 2008 Findings Memo	

Associated Performance in Prior Years

FY 2007:	Met	Achieve > or = 97.5% 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.
FY 2006:	Met	Achieve 97% 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.
FY 2005:	Met	Same measure as FY 2006. Hydropower Generation EfficiencyPerformance: Met Goal (97%); Actual: 100%

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000082.2002.html
Program Office:	http://www.bpa.gov	

FY 2008 Performance Measures

Office:	Bonneville Power Administration	
Program:	Bonneville Power Administration (1.3.18)	
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure	
Measure:	**Repayment of Federal Power Investment Performance** Meet planned annual repayment of principal on Federal power investments.	

2008 Results

Commentary:	Met	BPA met this performance target for the 25th straight year, demonstrating Bonneville's ongoing commitment to meeting its obligations to U.S. taxpayers. BPA made a total $963 million payment, $211 million of which was additional amortization due to debt optimization (credits of $223 million resulted in a net cash payment of $740 million). Of this total, BPA's FY 2008 repayment of principal amount was $555 million.
Future Plans / Explanation of Shortfalls:	We will continue high levels of performance to meet program missions consistent with permanent authority.	
Supporting Documentation:	4th Quarter FY 2008 Findings Memo	

Associated Performance in Prior Years

FY 2007:	Met	Meet planned annual repayment of principal on Federal power investments.
FY 2006:	Met	Meet planned annual repayment of principal on Federal power investments. Met Goal ($304 million); Actual: $646 million.
FY 2005:	Met	Meet planned annual repayment of principal on Federal power investments. Met Goal ($303 million); Actual: $618 million.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000082.2002.html
Program Office:	http://www.bpa.gov	

FY 2008 Performance Measures

Office:	Bonneville Power Administration	
Program:	Bonneville Power Administration (1.3.18)	
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure	
Measure:	**BPA System Reliability Performance - NERC Rating** Attain average North American Reliability Council (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 > or = 100); and (2) CPS2, which limits any imbalance magnitude to acceptable levels (rating > or = 90).	

2008 Results

Commentary:	Met	BPA achieved 6 of 6 possible CPS pass ratings in all four quarters for FY 2008, demonstrating Bonneville's ongoing commitment and ability to provide reliable transmission for the region. For July, August and Sept. 2008 respectively, BPA achieved performance on CPS-1 of 197.0%, 187.6%, and 187.1%, against a target of no less than 100%; and on CPS-2 of 97.6%, 96.0%, and 96.8%, against a target of no less than 90%.
Future Plans / Explanation of Shortfalls:	We will continue high levels of performance to meet program missions consistent with permanent authority.	
Supporting Documentation:	4th Quarter FY 2008 Findings Memo	

Associated Performance in Prior Years

FY 2007:	Met	Attain average North American Electric Reliability Council (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 > or = 100); and (2) CPS2, which limits any imbalance magnitude to acceptable levels (rating > or = 90). (1.3.18.1)
FY 2006:	Met	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). Actual: Met - CPS1: 193.3%; CPS2: 96.1%
FY 2005:	Met	Same measure as FY 2006 Actual Met - CPS1: 198.5%;CPS2: 94.3%

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000082.2002.html
Program Office:	http://www.bpa.gov	

FY 2008 Performance Measures

Office:	Southeastern Power Administration	
Program:	Southeastern Power Administration (1.3.23)	
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure	
Measure:	**Repayment of Federal Power Investment Performance** Meet planned annual repayment of principal on Federal power investments. Repay the required repayment of $22.2 million in FY 08.	

2008 Results

Commentary:	Met	During FY 2008, Southeastern achieved 100% of required repayment of the Federal investment. Accomplishing this goal reflects Southeastern's commitment to repay the Federal investment and maintain financial integrity.
Future Plans / Explanation of Shortfalls:	Southeastern will continue to efficiently operate its system and meet or exceed its annual repayment obligations.	
Supporting Documentation:	FY 2008 Power Repayment Studies	

Associated Performance in Prior Years

FY 2007:	Met	Meet planned annual repayment of principal on Federal power investments. Repay the required repayment of $1.0 million.
FY 2006:	Not Met	Repay $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.
FY 2005:	Met	Meet planned annual repayment of principal on Federal power investment. Actual: $51 million

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000122.2002.html
Program Office:	http://www.bpa.gov	

FY 2008 Performance Measures

Office:	Southeastern Power Administration	
Program:	Southeastern Power Administration (1.3.23)	
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure	
Measure:	**System Reliability Performance - NERC** Meet North American Electric Reliability Council (NERC) Control Performance Standards (CPS) of CPS1>100 and CPS2>90 and meet or exceed industry averages. CPS1 measures a generating system's performance at matching supply to changing demand requirements and supporting desired system frequency in one minute increments. CPS2 measures a generating system's performance at limiting the magnitude of generation and demand imbalances in ten minute increments.	
	2008 Results	
Commentary:	Met	During FY 2008, Southeastern achieved 6 out of 6 control compliance ratings. Southeastern's average annual results are 207.19 for CPS 1 & 99.81 for CPS 2. Accomplishing this goal reflects Southeastern's ability to maintain safe, efficient and effective power system operation for control area performance.
Future Plans / Explanation of Shortfalls:	Southeastern will continue to operate its system at the highest level of reliability and meet or exceed NERC operating requirements.	
Supporting Documentation:	NERC Monthly Control compliance Rating Report for 2000 through 2008. Unlike other regions SERC data is not publicly available in the SERC section of the NERC website due to confidentiality issues. Data can be found by contacting SERC at http://www.nerc.com/filez/cps.html.	
	Associated Performance in Prior Years	
FY 2007:	Met	Meet North American Electric Reliability Council (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.
FY 2006:	Met	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.
FY 2005:	Met	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.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000122.2002.html
Program Office:	www.sepa.doe.gov	

FY 2008 Performance Measures

Office:	Southwestern Power Administration
Program:	Southwestern Power Administration (1.3.24)
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure
Measure:	**Annual Operating Cost Performance** Provide power at the lowest possible cost by keeping average operation and maintenance cost per kilowatt-hour below the National average for hydropower.

2008 Results

Commentary:	Met	During FY 2008, cost per kilowatt-hour statistics are as follows: Southwestern: $0.0130 National industry average: $0.0153 Therefore, Southwestern is less than the National industry average. Achieving this target reflects Southwestern's ability to control annual Operations and Maintenance costs, thereby providing power at the lowest possible cost.
Future Plans / Explanation of Shortfalls:	Southwestern will continue to provide the lowest possible cost power by keeping average operation and maintenance cost below the National average.	
Supporting Documentation:	Annual Reports, Energy Information Administration Form 1 Reports, CBO Budget and Economic Outlook Forecast.	

Associated Performance in Prior Years

FY 2007:	Met	Provide power at the lowest possible cost by keeping average operation and maintenance cost per kilowatt-hour below the National average for hydropower.
FY 2006:	Met	Provide power at the lowest possible cost by keeping average operation and maintenance cost per kilowatthour below the National average for hydropower. Actual: Southwestern: $0.0116; National industry average: $0.0136
FY 2005:	Met	Provide power at the lowest possible cost by keeping average operation and maintenance cost per kilowatt-hour below the National average for hydropower. Actual: Southwestern: $0.0109; National industry average: $0.0126

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000124.2002.html
Program Office:	http://www.swpa.gov/	

FY 2008 Performance Measures

Office:	Southwestern Power Administration
Program:	Southwestern Power Administration (1.3.24)
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure
Measure:	**Economic Benefit Performance** Provide $468 million in economic benefits to the region from the sale of hydroelectric power (under average water conditions).

2008 Results

Commentary:	Met	During FY 2008, Southwestern achieved 113%, or $537.8 million, of the $474 million annual goal. Achieving this target reflects Southwestern's 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.
Future Plans / Explanation of Shortfalls:		Southwestern will continue to provide economic benefits to the region.
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 5,570.0 gigawatt-hours of energy produced from average water conditions.

Associated Performance in Prior Years

FY 2007:	Met	Provide $468 million in economic benefits to the region from the sale of hydroelectric power (under average water conditions).
FY 2006:	Not Met	Provide $462 million in economic benefits to the region from the sale of hydroelectric power (under average water conditions). Actual: $322 million.
FY 2005:	Met	Provide $457 million in economic benefits to the region from the sale of hydroelectric power (under average water conditions). Actual: $488 million.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000124.2002.html
Program Office:	www.swpa.gov	

FY 2008 Performance Measures

Office:	Southwestern Power Administration
Program:	Southwestern Power Administration (1.3.24)
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure
Measure:	**Repayment of the Federal Power Investment Performance** Repay the Federal Investment within the required repayment period.

2008 Results

Commentary:	Met	During FY 2008, Southwestern achieved 100.0% of planned 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.
Future Plans / Explanation of Shortfalls:	Southwestern will continue to efficiently operate its system and meet or exceed its annual repayment obligations.	
Supporting Documentation:	FY 2008 Power Repayment Studies.	

Associated Performance in Prior Years

FY 2007:	Met	Repay the Federal Investment within the required payment period.
FY 2006:	Met	Repay the Federal investment within the required repayment period. Actual: met all required repayment.
FY 2005:	Met	Repay the Federal investment within the required repayment period. Actual: met all required repayment.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000124.2002.html
Program Office:	www.swpa.gov	

FY 2008 Performance Measures

Office:	Southwestern Power Administration
Program:	Southwestern Power Administration (1.3.24)
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure
Measure:	**System Reliability Performance - NERC Rating** Meet NERC Control Performance Standards (CPS) of CPS1>100 and CPS2>90 and meet or exceed industry averages. CPS1 measures a generating system's performance at matching supply to changing demand requirements and supporting desired system frequency in one minute increments. CPS2 measures a generating system's performance at limiting the magnitude of generation and demand imbalances in ten minute increments.

2008 Results

Commentary:	Met	During FY 2008, Southwestern achieved 6 out of 6 control compliance ratings. Southwestern's average annual results are 199.49 for CPS 1 & 99.82 for CPS 2. 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.
Future Plans / Explanation of Shortfalls:	Southwestern will continue to operate its system at the highest level of reliability and exceed NERC operating requirements.	
Supporting Documentation:	NERC Monthly Control compliance Rating Report for 2000 through 2008. Data can be found at http://www.nerc.com/~filez/cps.html.	

Associated Performance in Prior Years

FY 2007:	Met	Meet industry averages (CPS1: 161.81 and CPS2: 97.21) 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.
FY 2006:	Met	Meet industry averages (CPS1:161.8 and CPS2: 97.2) 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. Actual: CPS 1: 180.23; CPS 2: 99.18.
FY 2005:	Met	Meet industry averages (CPS1: 162.0 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. Actual: CPS 1: 186.74; CPS 2: 99.40.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000124.2002.html
Program Office:	www.swpa.gov	

FY 2008 Performance Measures

Office:	Southwestern Power Administration	
Program:	Southwestern Power Administration (1.3.24)	
Strategic Goal(s) Supported:	Goal 1.3 Energy Infrastructure	
Measure:	**System Reliability Performance - Outages** Operate the transmission system so there are no more than three preventable outages annually.	

2008 Results

Commentary:	Met	During FY 2008, Southwestern had no preventable customer outages. Achieving this target reflects Southwestern's ability to provide reliable service to customers each year, thereby maintaining power system reliability.
Future Plans / Explanation of Shortfalls:	Southwestern will continue to provide reliable service to their customers.	
Supporting Documentation:	Southwestern's Point of Delivery Incidents Log.	

Associated Performance in Prior Years

FY 2007:	Met	Operate the transmission system so there are no more than 3 preventable outages annually.
FY 2006:	Met	Operate the transmission system so there are no more than 3 preventable outages annually. Actual: Southwestern incurred one preventable outage.
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000124.2002.html
Program Office:	www.swpa.gov	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy	
Program:	Federal Energy Management Program (1.4.7)	
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity	
Measure:	**Federal Energy Management Program (FEMP) Contract Awards** Estimated lifecycle energy savings expected in Federal agencies' facilities as a result of FEMP activities are 20.2 trillion Btus (TBtu). FEMP's facilitation activities include alternative financing, technical assistance, and directly funded energy efficiency projects within the Department. These savings should result in about a 0.4 percent annual reduction in energy intensity.	

2008 Results

Commentary:	Met	Activities yielded 49.2 trillion cumulative lifecycle Btu savings through the end of the year which should result in about a 0.7 percent annual reduction in energy intensity.
Future Plans / Explanation of Shortfalls:	Estimated lifecycle energy savings expected in Federal agencies' facilities as a result of FEMP activities are 34.4 trillion Btus (TBtu). FEMP's facilitation activities include alternative financing and/or technical assistance.	
Supporting Documentation:	Copies of awarded contracts between the Energy Service Company (ESCO); For UESCs, memorandum from the Federal Agency receiving the award; for technical assistance, memorandum or reports from DOE National Laboratories or other contractors.	

Associated Performance in Prior Years

FY 2007:	Met	Complete Energy Savings Performance Contract (ESPC) and Utility Energy Savings Contract (UESC) contract awards, fund DOE retrofit projects and provide technical assistance that will result in lifecycle Btu savings of 17.1 trillion. (1.4.7.1)
FY 2006:	N/A	
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10003401.2005.html
Program Office:	http://www1.eere.energy.gov/femp/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Federal Energy Management Program (1.4.7)
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity
Measure:	**Federal Energy Management Program (FEMP) Operational Efficiency Measure** Maintain administrative costs as a percent of total program costs less than 12 percent.

2008 Results

Commentary:	Met	Overall performance is 6.6%; annual target is to be less than 12%.
Future Plans / Explanation of Shortfalls:	Future plans are to keep administrative support below the 12% criteria, unless external budgetary decisions beyond EERE's control, such as recisions, extended continuing resolutions, etc., impact the criteria formula.	
Supporting Documentation:	DOE financial accounting system (STARS) based on preliminary FY 2008 actuals.	

Associated Performance in Prior Years

FY 2007:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12%. (1.4.7.2)
FY 2006:	Met	Maintain total administrative overhead costs (defined as Program Direction and Program Support excluding earmarks) in relation to total program costs of less than 12 percent.
FY 2005:	Not 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/DEMP Program FY 2004 end of year adjusted uncosted baseline ($11,266K) until the target range is met.+

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10003401.2005.html
Program Office:	http://www1.eere.energy.gov/femp/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy	
Program:	Industrial Technologies (1.4.19)	
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity	
Measure:	**Industry - Emerging Technologies** Commercialize 3 new technologies in partnership with the most energy-intensive industries that improve energy efficiency of an industrial process or product by at least 10 percent.	
2008 Results		
Commentary:	Met	Three technologies were commercialized in partnership with industry, they included: Plastics or Fibers from Bio-Based Polymers; a technology in the Chemicals industry, Improved Methods for the Production of Polyurethane Foam; and Process for Converting Waste Glass Fiber into a Concrete Additive. Each technology resulted in substantial energy savings ranging from 20 percent to over 90 percent.
Future Plans / Explanation of Shortfalls:	The Industrial Technologies Program will continue to partner with energy intensive industries to commercialize more technologies with substantial reductions to energy efficiency.	
Supporting Documentation:	Pacific Northwest National Laboratory monthly reports	
Associated Performance in Prior Years		
FY 2007:	Met	Commercialize 3 new technologies in partnership with the most energy-intensive industries that improve energy efficiency of an industrial process or product by at least 10%.
FY 2006:	Met	Commercialize 3 new technologies in partnership with the most energy-intensive industries.
FY 2005:	Met	Commercialize 3 new technologies in partnership with the most energy-intensive industries.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10003402.2005.html
Program Office:	http://www1.eere.energy.gov/industry/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Industrial Technologies (1.4.19)
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity
Measure:	**Industry - Operational Efficiency Measure** Maintain administrative costs as a percent of total program costs less than 12 percent.

2008 Results

Commentary:	Met	Overall performance is 6.6%; annual target is to be less than 12%.
Future Plans / Explanation of Shortfalls:	Future plans are to keep administrative support below the 12% criteria, unless external budgetary decisions beyond EERE's control, such as recisions, extended continuing resolutions, etc., impact the criteria formula.	
Supporting Documentation:	DOE financial accounting system (STARS), based on preliminary FY 2008 actuals.	

Associated Performance in Prior Years

FY 2007:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12%.
FY 2006:	Met	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.
FY 2005:	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 ($40,741K) until the target range is met.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10003402.2005.html
Program Office:	http://www1.eere.energy.gov/industry/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Industrial Technologies (1.4.19)
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity
Measure:	**Industry - Unique Energy-Intensive Industrial Plants** An estimated 100 trillion Btus energy savings from applying EERE technologies and services to 400 energy-intensive U.S. plants.

2008 Results

Commentary:	Met	1,407 unique plants newly using the Department energy technologies and services were able to reduce energy intensity in their plants. Estimated savings from adoption of more efficient technologies and practices are 106 trilion Btus.
Future Plans / Explanation of Shortfalls:	The Industrial Technologies Program will continue to partner with energy intensive industries to commercialize more technologies with substantial reductions to energy efficiency.	
Supporting Documentation:	Oak Ridge National Laboratory supporting documents.	

Associated Performance in Prior Years

FY 2007:	Met	An estimated 125 trillion Btus saved by an additional 1,000 energy intensive U.S. plants applying EERE technologies and services.
FY 2006:	Met	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.
FY 2005:	Met	An additional 200 (leading to a cumulative 7000) energy intensive U.S. plants will apply EERE technologies and services.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10003402.2005.html
Program Office:	http://www1.eere.energy.gov/industry/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Building Technologies (1.4.20)
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity
Measure:	**Buildings - Appliance Standards** Complete 11-13 proposals to update appliance standards and test procedures publish in the Federal Register. Final rules will be issued for 1-2 of these product categories, consistent with the law, to amend appliance standards and test procedures that are economically justified and will result in significant energy savings.

2008 Results

Commentary:	Met	DOE completed 17 proposals to update appliance standards and test procedures, including the final rules for Packaged Terminal Air-Conditioners and Heat Pumps and Furnaces and Boilers.
Future Plans / Explanation of Shortfalls:	DOE will continue to work on on-going rulemakings.	
Supporting Documentation:	Rulemaking proposals submitted to the Federal Register. Rulemaking proposals completed this fiscal year include: Furnaces and Boilers Final Rule (3 products) (72 FR 65136), Home Appliances Group 1 ANOPR (4 products) (72 FR 64431), Lamps ANOPR (2 products) (73 FR 13620), Lamps Test Procedure NOPR (3 products) (73 FR 13465), Packaged Terminal Air-Conditioner NOPR (1 product) (73 FR 18858), Beverage Vending Machine ANOPR (1 product) (73 FR 34094), Packaged Terminal Air-Conditioner Final Rule (1 product) (Issued 9/29/08, pending publication), Home Appliances Group 1 NOPR (2 products) (Issued 9/29/08, pending publication).	

Associated Performance in Prior Years

FY 2007:	Not Met	Final rules will be issued for 3-5 product categories, consistent with enacted law, to amend appliance standards and test procedures that are economically justified and will result in significant energy savings. This includes final rules for distribution transformers and residential furnaces and boilers.
FY 2006:	Met	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 savings. Develop for DOE issuance notices of proposed rulemaking (NOPRs) regarding energy conservation standards for electric distribution transformers, commercial unitary air conditioners and heat pumps, and residential furnaces and boilers.
FY 2005:	Met	Complete analytical and regulatory steps necessary for DOE issuance of 3-4 rules, consistent with enacted law, to amend appliance standards and test procedures that are economically justified and will result in significant energy savings.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000084.2003.html
Program Office:	http://www1.eere.energy.gov/buildings/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Building Technologies (1.4.20)
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity
Measure:	**Buildings - Commercial Buildings** Complete four additional design technology packages for new commercial buildings (that achieve 30 percent increase in energy efficiency relative to the ASHRAE 90.1-2004 benchmark) with five year or less payback. These design technology packages will be for small to medium-sized commercial buildings.

2008 Results

Commentary:	Met	Commercial Buildings completed 4 design technology packages -- 2 of which provided at least 30% energy savings (highway lodging, warehouse). The other 2 provide energy savings of at least 50% (grocery stores and medium-box retail).
Future Plans / Explanation of Shortfalls:		Complete four additional design technology packages for new commercial buildings (that achieve 30% energy savings relative to ASHRAE Standard 90.1-2004).
Supporting Documentation:		Pacific Northwest National Laboratory Technical Support Documents: Warehouses--30% Energy Savings, December 2007, http://www.pnl.gov/main/publications/external/technical_reports/PNNL-17056.pdf Highway Lodging--30% Energy Savings, September 2008, http://www.pnl.gov/main/publications/external/technical_reports/PNNL-17875.pdf Medium Box Retail--50% Energy Savings, September 2008, http://www.nrel.gov/docs/fy08osti/42828.pdf Grocery Stores--50% Energy Savings, September 2008, http://www.nrel.gov/docs/fy08osti/42829.pdf

Associated Performance in Prior Years

FY 2007:	Met	Complete the development of one new design technology package for a second small to medium sized commercial building type to achieve 30% energy savings over American Society of Heating, Refrigerating and Air-Conditioning Engineers, Inc. (ASHRAE) 90.1-2004.
FY 2006:	Met	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.
FY 2005:	Met	Complete assessments of controls technology, optimization methods and market opportunities, with substantial input from designers and building owners, to establish a framework for development of programmatic pathways to achieve 50 percent or better energy performance in significant numbers of buildings enabling development of design and/or technology packages for new commercial buildings.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000084.2003.html
Program Office:	http://www1.eere.energy.gov/buildings/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Building Technologies (1.4.20)
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity
Measure:	**Buildings - Energy Star** Achieve market penetration target for ENERGY STAR® appliances of 33 percent (baseline 30 percent in 2003), 6 percent for CFLs (baseline 2% in 2003), and 48 percent for windows (baseline 40 percent in 2003).

2008 Results

Commentary:	Met	The FY08 ENERGY STAR market penetration was 47% for appliances, 20% for CFLs, and 57% for windows.
Future Plans / Explanation of Shortfalls:	Continue to revise ENERGY STAR criteria and conduct campaigns and partnership to increase market penetration.	
Supporting Documentation:	Compiled Data Reports by D&R International.	

Associated Performance in Prior Years

FY 2007:	Met	Increase market penetration of appliances to 30 to 32% (baseline 30% calendar year 2003), to 2.5 to 4% for compact fluorescent lamps (CFLs) (baseline 2% calendar year 2003) and 45 to 50% for windows (baseline 40% for calendar year 2003). Estimated energy savings will be 0.032 Quads and $671 million in consumer utility bill savings.
FY 2006:	Met	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 2percent, 2003 calendar year), and 40 percent to 45 percent for windows (baseline 40 percent, 2004). Estimated energy savings will be 0.30 quads and $657 million in consumer utility billing savings.
FY 2005:	Met	Recruit 500 additional retail stores, 5 additional utilities and 10 additional manufacturers. Complete draft Commercial Window specification. Begin update of Residential Window specification. Expand coordination with all gateway activities.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000084.2003.html
Program Office:	http://www1.eere.energy.gov/buildings/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Building Technologies (1.4.20)
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity
Measure:	**Buildings - Operational Efficiency Measure** Maintain administrative costs as a percent of total program costs less than 12 percent.

2008 Results

Commentary:	Met	Overall performance is 6.6%; annual target is to be less than 12%.
Future Plans / Explanation of Shortfalls:	Future plans are to keep administrative support below the 12% criteria, unless external budgetary decisions beyond EERE's control, such as recisions, extended continuing resolutions, etc., impact the criteria formula.	
Supporting Documentation:	DOE financial accounting system (STARS), based on preliminary FY 2008 actuals.	

Associated Performance in Prior Years

FY 2007:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12%.
FY 2006:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12 percent.
FY 2005:	Not Met	Contribute proportionately to EERE's corporate goal of reducing corporate and program uncosteds to a range of 20-25 percent by reducing program annual uncosteds by 10 percent in 2005 relative to the program uncosted baseline in 2004 ($33,417k) until the target range is met.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000084.2003.html
Program Office:	http://www1.eere.energy.gov/buildings/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Building Technologies (1.4.20)
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity
Measure:	**Buildings - Residential Buildings** Complete one design technology package for new residential buildings (that is 40 percent more energy efficient relative to the 2004 Building America benchmark) at net zero financed cost to the homeowner for one climate zone.

2008 Results

Commentary:	Exceeded	The Residential Buildings research report for the 40% energy savings level in the Marine Climate and five detailed case study reports have been completed. The report documents that ten homes have been cost effectively built in five communities to meet the Buildilng Technologies Program success criteria.
Future Plans / Explanation of Shortfalls:	Residential research activities in 2009 will focus on completing 40% technology packages for two additional climate regions.	
Supporting Documentation:	Five detailed 40% case study reports have been completed and posted on the Building America project management site, www.eere.energy.gov/extranet/buildings/building_america/joule_milestones08.html.	

Associated Performance in Prior Years

FY 2007:	Met	Document in Technology Package Research Reports research results for production ready new residential buildings that are 30% more efficient in 1 climate zone and 40% more efficient in 1 climate zone than the whole-house Building America benchmark.
FY 2006:	Met	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.
FY 2005:	Met	Complete the research for production-ready new residential buildings that are 30 percent more efficient than the whole-house Building America benchmark in 2 climate zones and document the results in Technology Package Research Reports.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000084.2003.html
Program Office:	http://www1.eere.energy.gov/buildings/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Building Technologies (1.4.20)
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity
Measure:	**Buildings - Solid State Lighting** Achieve efficiency of "white light" solid-state lighting in a lab device, of at least 101 lumens per Watt.

2008 Results

Commentary:	Met	Cree created a prototype cool white light-emitting diode (LED) that delivers 107 lumen per Watt (lm/W) at 350mA. Based on a 1 millimeter-square chip, the new prototype LED produces white light with a correlated color temperature (CCT) of 5500K and a color rendering index (CRI) of 73.
Future Plans / Explanation of Shortfalls:	Achieve at least 110 lumen/Watt of white light from a laboratory LED module, based on cost-shared research which is competitively selected.	
Supporting Documentation:	A data sheet that details the photometric testing from Cree.	

Associated Performance in Prior Years

FY 2007:	Met	Achieve at least 86 lumens per Watt (in a laboratory device) of white light from solid state devices based on cost-shared research which is competitively selected.
FY 2006:	Met	Conduct cost-shared, competitively selected research on technology to achieve 65 lm/W (in a laboratory device) of white light from solid state devices with industry, National Laboratories, and universities.
FY 2005:	Met	Select five new competitively based research awards for costshared research on technology (such as optical materials and device structures) to achieve =65 lm/W white light from solid state devices with industry, National Laboratories, and universities.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10000084.2003.html
Program Office:	http://www1.eere.energy.gov/buildings/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Weatherization (1.4.21)
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity
Measure:	**Weatherization - Operational Efficiency Measure** Maintain administrative costs as a percent of total program costs less than 12 percent.

2008 Results

Commentary:	Met	Overall performance is 6.6%; annual target is to be less than 12%.
Future Plans / Explanation of Shortfalls:	Future plans are to keep administrative support below the 12% criteria, unless external budgetary decisions beyond EERE's control, such as recisions, extended continuing resolutions, etc., impact the criteria formula.	
Supporting Documentation:	DOE financial accounting system (STARS), based on preliminary FY 2008 actuals.	

Associated Performance in Prior Years

FY 2007:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12%. (1.4.21.2)
FY 2006:	N/A	
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000128.2003.html
Program Office:	http://apps1.eere.energy.gov/weatherization/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	Weatherization (1.4.21)
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity
Measure:	**Weatherization Assistance Program** 75,848 low-income family homes weatherized annually with DOE funds, and support the weatherization of 50,000 additional homes with leveraged funds.

2008 Results

Commentary:	Met	Total of units weatherized is 94,487.
Future Plans / Explanation of Shortfalls:	EERE will continue to implement the Weatherization Program.	
Supporting Documentation:	WinSAGA Database.	

Associated Performance in Prior Years

FY 2007:	Met	Weatherize 70,051 units with DOE funds.
FY 2006:	Met	Weatherize 97,300 homes, with DOE funds.
FY 2005:	Met	Weatherize 92,500 homes, with DOE funds, and support the weatherization of approximately 100,000 additional homes with leveraged funds.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10000128.2003.html
Program Office:	http://apps1.eere.energy.gov/weatherization/	

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	State Energy Programs (1.4.22)
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity
Measure:	**State Energy Program** Achieve an average annual energy savings of 10-12 trillion source Btus (an estimated $60-70 million in annual energy cost savings) with DOE funds

2008 Results

Commentary:	Met	Total Btu savings for year are 11.35 trillion source Btu (an estimated $60-70 million in annual energy cost savings). Note that estimation methodology has been question….measures." replace with "Issues have been identified with the estimation methodology for energy savings, which are being addressed in a underway State Energy Program evaluation which will update the estimation methodology.
Future Plans / Explanation of Shortfalls:		The Department of Energy Inspector General has identified issues with the estimation methodology for energy savings, which are being addressed in an ongoing independent State Energy Program evaluation that will propose an update to the estimation methodology.
Supporting Documentation:		ORNL/CON 492: " An Evaluation of State Energy Program Accomplishments." DOE IG Report: Management Control Over the State Energy Program's Formula Grants http://www.ig.energy.gov/documents/CalendarYear2006/OAS-M-06-05.pdf

Associated Performance in Prior Years

FY 2007:	Met	Achieve an average annual energy savings of 12-14 trillion source Btus (an estimated $72-78 million in annual energy cost savings) with DOE funds. (1.4.22.1)
FY 2006:	Met	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.
FY 2005:	Met	Achieve an annual energy savings of 10,250,000 source Btus and $64,780.000 in annual energy cost savings with DOE funds. Achieve an annual energy savings 36,695,000 source Btus and $231,912.400 in annual energy cost savings with leveraged funds. Program will update Btu to dollar calculation derived from 2003 metrics study to establish new baseline.

Additional Information

PART:	Results Not Determined	http://www.whitehouse.gov/omb/expectmore/summary/10002136.2004.html
Program Office:		http://apps1.eere.energy.gov/state_energy_program/

FY 2008 Performance Measures

Office:	Energy Efficiency and Renewable Energy
Program:	State Energy Programs (1.4.22)
Strategic Goal(s) Supported:	Goal 1.4 Energy Productivity
Measure:	**State Energy Program - Operational Efficiency Measure** Maintain administrative costs as a percent of total program costs less than 12 percent.

2008 Results

Commentary:	Met	Overall performance is 6.6%; annual target is to be less than 12%.
Future Plans / Explanation of Shortfalls:	Future plans are to keep administrative support below the 12% criteria, unless external budgetary decisions beyond EERE's control, such as recisions, extended continuing resolutions, etc., impact the criteria formula.	
Supporting Documentation:	DOE financial accounting system (STARS), based on preliminary FY 2008 actuals.	

Associated Performance in Prior Years

FY 2007:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12%. (1.4.22.2)
FY 2006:	Met	Maintain total administrative overhead costs (defined as program direction and program support excluding earmarks) in relation to total program costs of less than 12 percent.
FY 2005:	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 ($21,257K) until the target range is met.

Additional Information

PART:	Results Not Determined	http://www.whitehouse.gov/omb/expectmore/summary/10002136.2004.html
Program Office:	http://apps1.eere.energy.gov/state_energy_program/	

FY 2008 Performance Measures

THEME 2 - NUCLEAR SECURITY

Office:	National Nuclear Security Administration
Program:	Office of the Administrator (2.0.25)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent and Goal 2.2 Weapons of Mass Destruction and Goal 2.3 Nuclear Propulsion Plants
Measure:	**OMB PART Score** Annual average NNSA Program score on the OMB Program Assessment Rating Tool (PART) assessment indicating progress in budget performance integration and results (EFFICIENCY MEASURE) FY 2008 target: 85%

2008 Results

Commentary:	Exceeded	Exceeded the annual target of an average OMB PART score by receiving a score of 88% in FY 2008. This result is important because it indicates that NNSA has set a challenging measure, that is not routinely met, and that NNSA's program managers are thoroughly involved in budget performance integration and achieving results.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant in FY 2009.	
Supporting Documentation:	OMB reported results on PARTWeb.	

Associated Performance in Prior Years

FY 2007:	Not Met	Cumulative average NNSA Program score on the OMB PART assessment indicating progress in budget performance integration and results (EFFICIENCY MEASURE) FY 2007 target: 85%
FY 2006:	Met	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)
FY 2005:	Met	Achieve an average NNSA Program score of 75 percent (cumulative) on the OMB Program Assessment Rating Tool (PART) (NA GG 1/2.50.03)

Additional Information

PART:	N/A
Program Office:	http://nnsa.energy.gov/

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Directed Stockpile Work (2.1.26)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Annual Warheads Certification** Annual percentage of warheads in the Stockpile that are safe, secure, reliable, and available to the President for deployment (Annual Outcome) FY 2008 target: 100%

2008 Results

Commentary:	Met	Achieved the annual target of 100% of weapons as safe, secure, reliable, and available. This result is important because it ensures the overall availability of the nuclear weapons stockpile for the nation's nuclear deterrent.
Future Plans / Explanation of Shortfalls:	The annual target will remain at 100% in FY 2009.	
Supporting Documentation:	1. Annual Assessment Report: -Laboratory-published Warhead Annual Assessment Reports -Annual Laboratory Director Annual Assessment Letters -Report on Stockpile Assessment -Annual Certification Memorandum to the President (Secretaries of Defense & Energy) 2. Weapon Reliability Reports (WRRs) (Biannually) 3. Significant Finding Investigation Reports (Quarterly) 4. Weapon Yield Certification (Information in WRRs) 5. End-of-Year Reconciliation Report 6. NA-10 milestone Reporting Tool (MRT) status reports on critical DSW milestones	

Associated Performance in Prior Years

FY 2007:	Met	Annual percentage of warheads in the Stockpile that are safe, secure, reliable, and available to the President for deployment (Annual Outcome) FY 2007 target: 100%
FY 2006:	Met	Assure that 100 percent of warheads in the Stockpile are safe, secure, reliable, and available to the President for deployment (NA GG 1.27.01)
FY 2005:	Met	Assure that 100 percent of warheads in the Stockpile are safe, secure, reliable, and available to the President for deployment (NA GG 1.27.08)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002126.2004.html
Program Office:	http://nnsa.energy.gov/defense_programs/The_Stockpile.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Directed Stockpile Work (2.1.26)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**B61-7/11 LEP** Cumulative percentage of progress in completing NWC-approved B61-7/11 LEP activity (Long-term Output) FY 2008 target: 90%

2008 Results

Commentary:	Met	Achieved the cumulative target of 90% (increase of 20%) in accordance with the B61-7/11 baseline schedule. This result is important because, by extending the life of the B61-7/11 for the U.S. Air Force, the NNSA has demonstrated its ability to meet DoD requirements and national security needs on schedule.
Future Plans / Explanation of Shortfalls:	The annual target will increase to 100% in FY 2009.	
Supporting Documentation:	1. B61 7/11 ALT 357 CSA LEP NNSA Program Plan (revised under Enhanced Management Guidelines) 2. Production and Planning Directive (P&PD) 3. B61 7/11 Program Control Documents 4. B61 7/11 LEP Integrated Master Schedule 5. B61 7/11 LEP Selected Acquisition Report (SAR) 6. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of progress in completing NWC-approved B61-7/11 LEP activity (Long-term Output) (2.1.26.04) FY 2007 target: 70%
FY 2006:	Not Met	Complete 40 percent (cumulative) of the Nuclear Weapons Council (NWC) B61-7/11 Life Extension Progr am (LEP) activity (NA GG 1.27.06)
FY 2005:	Not Met	Complete 30 percent of progress (cumulative) in completing NWC-approved B61-7/11 Life Extension Program (LEP) activity (NA GG 1.27.03)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002126.2004.html
Program Office:	http://nnsa.energy.gov/defense_programs/The_Stockpile.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Directed Stockpile Work (2.1.26)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Stockpile Maintenance** Annual percentage of items supporting the Enduring Stockpile Maintenance completed (and Annual percentage of prior-year non-completed items completed) (Annual Output) FY 2008 target: 95% (100%)

2008 Results

Commentary:	Met	Achieved the annual target of completing scheduled stockpile maintenance annual target of 95% (100% of prior year). This result is important because it keeps active nuclear weapons fully operational, if needed by the President.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant at 95% (100%) in FY 2009.	
Supporting Documentation:	1. End-of-Year Reconciliation Report 2. Limited Life Component Exchange, including DoD shipping schedules/database 3. Program Control Document(s) (PCDs) 4. Quarterly Surveillance Backlog Report (From NA-122) 5. Approved Authorization Basis Document 6. Nuclear Safety Research & Development Working Group Report	

Associated Performance in Prior Years

FY 2007:	Met	Annual percentage of items supporting Enduring Stockpile Maintenance completed (Annual percentage of prior-year non-completed items completed) (Annual Output) (2.1.26.2) FY 2007 target: 95% (100%)
FY 2006:	Not Met	Complete 95 percent of items supporting Enduring Stockpile Maintenance (complete 100 percent of prior-year non-completed items) (NA GG 1.27.03)
FY 2005:	Not Met	Complete 95 percent of items supporting Enduring Stockpile Maintenance (annual percentage of prior-year non-completed items completed) (NA GG 1.27.02)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002126.2004.html
Program Office:	http://nnsa.energy.gov/defense_programs/The_Stockpile.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Directed Stockpile Work (2.1.26)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**W76-1 Life Extension Program (LEP)** Cumulative percentage of progress in completing Nuclear Weapons Council (NWC)-approved W76-1 Life Extension Program (LEP) activity (Long-term Output) FY 2008 target: 44%

2008 Results

Commentary:	Met	Achieved the cumulative annual target of 44% (schedule increase of 5%) in accordance with the current W76-1 baseline schedule; projected increase of 5.2% over last year's actual to cumulative 44%. Previous technical problems (affecting schedule) associated with production of the special material for the Canned Sub-Assembly have been resolved. This result is important because extending the life of the W76-1, a weapon system for Navy submarines, is on a highly success-oriented refurbishment schedule to meet DoD requirements and national security needs.

Future Plans / Explanation of Shortfalls: The annual target will increase to 48% in FY 2009.

Supporting Documentation:

1. W76-1 LEP Project Execution Plan (revised under Enhanced Management Guidelines)
2. Production and Planning Directive (P&PD)
3. W76-1 Program Control Documents
4. W76-1 LEP Full-Scale Engineering Development Schedule
5. W76-1 LEP Selected Acquisition Report (SAR)
6. NA-10 Milestone Reporting Tool (MRT) status reports

Associated Performance in Prior Years

FY 2007:	Not Met	Cumulative percentage of progress in completing Nuclear Weapons Council (NWC)-approved W76-1 Life Extension Program (LEP) activity (Long-term Output) (2.1.26.03) FY 2007 target: 39%
FY 2006:	Met	Complete 29 percent progress (cumulative) for Weapons Council (NWC)-approved W76-1 Life Extension Program (LEP) activities (NA GG 1.27.04)
FY 2005:	Met	Complete 29 percent progress (cumulative) for Weapons Council (NWC)-approved W76-1 Life Extension Program (LEP) activities (Long-term Output) FY 2005 target: 29%

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002126.2004.html

Program Office: http://nnsa.energy.gov/defense_programs/The_Stockpile.htm

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Directed Stockpile Work (2.1.26)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**LEP Production Costs** Cumulative percent reduction in projected W76 warhead production costs per warhead from established validated baseline, as computed and reported annually by the W76 LEP Cost Control Board (EFFICIENCY MEASURE) FY 2008 target: 1%

2008 Results

Commentary:	Not Met	Did not achieve the cumulative target of 1% (decrease of 0.5%) reduction of projected W76 warhead production costs per warhead from established validated baseline, but the program is on a recovery schedule; increase to a cumulative of 0.78% for FY 2008. This result is important because the NNSA must demonstrate an increasingly cost-effective life extension program within the nuclear weapons program. The annual target was missed because projected/realized cost increases in FY 2007 and FY 2008 resulted from the Canned Sub-Assembly special material technical issue, Arming, Fusing and Firing (AF&F) System issue, Electrostatic Discharge (ESD) issue at Pantex, and increasing health care and compensation costs passed on to the LEP from the M&O contractors. Although this target was missed, the majority of the cost increases will be offset by efficiencies elsewhere in the program.
Future Plans / Explanation of Shortfalls:	Additional cost efficiencies are being implemented in FY 2009 to reduce the unit cost. The annual target will be adjusted according to the Action Plan.	
Supporting Documentation:	1. W76-1 LEP Project Execution Plan (revised under Enhanced Management Guidelines) 2. W76-1 LEP Cost Control Board Reports 3. W76-1 LEP Selected Acquisition Report (SAR)	

Associated Performance in Prior Years

FY 2007:	Not Met	Cumulative percent reduction in projected W76 warhead production costs per warhead from established validated baseline, as computed and reported annually by the W76 LEP Cost Control Board (EFFICIENCY MEASURE) (2.1.26.05) FY 2007 target: .5%
FY 2006:	N/A	
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002126.2004.html
Program Office:	http://nnsa.energy.gov/defense_programs/The_Stockpile.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Science Campaign (2.1.27)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Dual-Axis Radiographic Hydrotest Facility (DARHT)** Cumulative percentage of progress towards completing the Dual-Axis Radiographic Hydrodynamic Test Facility (DARHT) to provide data required to certify the safety and reliability of the U.S. nuclear weapons stockpile (Long-term Outcome) FY 2008 target: 100%

2008 Results

Commentary:	Met	Achieved the annual cumulative target of 100% (increase of 20%) completion of DARHT. The project is 100% complete Critical Decision 4; "Start of Operations" was issued on May 16, 2008, ahead of the baseline schedule. This result is important because it enables the continued certification of weapons without underground nuclear testing.

Future Plans / Explanation of Shortfalls: No Future Plans. This performance measure has been completed.

Supporting Documentation:
1. Project schedule and major decision points documented in Project Plan
2. JASON Report, October 2006
3. On-site observation of the completed work (by Program Manager (on 031507)
4. Monthly and quarterly progress reports and reviews
5. PARS database/status
6. NA-10 Milestone Reporting Tool (MRT) status reports

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of progress towards completing the Dual-Axis Radiographic Hydrotest Facility (DARHT) to provide data required to certify the safety and reliability of the U.S. nuclear weapons stockpile (Long-term Outcome) (2.1.27.02) FY 2007 target: 80%
FY 2006:	Met	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)
FY 2005:	Met	Complete 25 percent of progress (cumulative) towards conducting the first 2-axis hydrodynamics test/hydro shot on the Dual-Axis Radiographic Hydrotest Facility (DARHT) to support assessment of nuclear performance required by the National Hydrodynamics Plan (NA GG 1.28.02)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003405.2005.html
Program Office:	http://nnsa.energy.gov/defense_programs/science.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Science Campaign (2.1.27)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Hydrodynamic Testing** Annual percentage of hydrodynamic tests completed in accordance with the National Hydrodynamics Plan, to support the assessment of nuclear performance (Annual Output) FY 2008 target: 75%

2008 Results

Commentary:	Met	Achieved the annual target of 75% of hydrodynamic tests completed. This result is important because these experiments are critical to W76-1 Life Extension Program and W88 certifications. The performance measure will be removed since the National Hydrotest Plan is now under DSW.
Future Plans / Explanation of Shortfalls:		The performance measure will be replaced in FY 2009 with a new measure more representative of current program goals.
Supporting Documentation:		1. This measure is documented in the National Hydrotest Plan. Milestones to support the performance measure are documented in the Campaign's plans. 2. Site report of individual hydrotest conducted 3. Radiographs and videotapes of the hydrotest tests conducted 4. NA-10 Milestone Reporting Tool (MRT) status reports

Associated Performance in Prior Years

FY 2007:	Met	Annual percentage of hydrodynamic tests completed in accordance with the National Hydrodynamics Plan, to support the assessment of nuclear performance (Annual Output) (2.1.27.04) FY 2007 target: 75%
FY 2006:	Met	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)
FY 2005:	Met	Complete 75 percent of annual hydrodynamic tests completed in accordance with the National Hydrodynamics Plan, to support the assessment of nuclear performance (NA GG 1.28.04)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003405.2005.html
Program Office:	http://nnsa.energy.gov/defense_programs/science.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Science Campaign (2.1.27)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**JASPER Facility Experiments** Annual average cost per test, expressed in terms of thousands of dollars, of obtaining plutonium experimental data on the Joint Actinide Shock Physics Experimental Research (JASPER) facility to support primary certification models (EFFICIENCY MEASURE) FY 2008 target: $340K

2008 Results

Commentary:	Met	Achieved the annual target of annual average cost of $340K per test. JASPER shutdown for recategorization to Cat 3 nuclear facility raised costs in FY 2008. This result is important because it demonstrates program efficiencies without drop in JASPER testing capabilities.
Future Plans / Explanation of Shortfalls:		The annual target will remain constant in FY 2009 at $340K. The performance measure will be replaced in FY 2010 with a new measure more representative of current program goals.
Supporting Documentation:		1. Reports for the measure are provided by LLNL at the end of each Quarter. Data submitted is verified with LLNL POC by program staff. 2. Log books supporting each test are available at LLNL for review by program manager/staff 3. NA-10 Milestone Reporting Tool (MRT) status reports

Associated Performance in Prior Years

FY 2007:	Met	Annual average cost per test, expressed in terms of thousands of dollars, of obtaining plutonium experimental data on the Joint Actinide Shock Physics Experimental Research (JASPER) facility to support primary certification models (EFFICIENCY MEASURE) (2.1.27.06) FY 2007 target: $360K
FY 2006:	Met	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)
FY 2005:	Met	Achieve 95 percent of baseline for obtaining plutonium experimental data on the Joint Actinide Shock Physics Experimental Research (JASPER) facility. (NA GG 1.28.05)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003405.2005.html
Program Office:	http://nnsa.energy.gov/defense_programs/science.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Science Campaign (2.1.27)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Quantification of Margins and Uncertainties (QMU)** Cumulative percentage of progress in development of the Quantification of Margins and Uncertainties (QMU) methodology to provide quantitative measures of confidence in the performance, safety, and reliability of the nuclear weapons stockpile (Long-term Outcome) FY 2008 target: 70%

2008 Results

Commentary:	Met	Achieved the annual cumulative target of 70% (increase of 15%) completion of the QMU methodology. This result is important because it enables the continued certification of weapons without underground nuclear testing.
Future Plans / Explanation of Shortfalls:	No Future Plans. This performance measure has been completed.	
Supporting Documentation:	1. Milestones supporting the performance measure are documented in the Campaign's Program and Implementation Plans; a classified plan has also been developed: the Predictive Capability Framework (PCF). [The outcome of these plans is documented in the annual assessment of the state of the nuclear weapons stockpile provided by the directors of the NNSA nuclear weapons laboratories.] 2. FY 2005 UGT Readiness Assessment (BN-LN005-0039) 3. FY 2007 National Academy of Science Review 4. JASON Report, October 2006 5. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of progress in development of the Quantification of Margins and Uncertainties (QMU) methodology to provide quantitative measures of confidence in the performance, safety, and reliability of the United States (U.S.) nuclear weapons stockpile (Long-term Outcome) (2.1.27.01) FY 2007 target: 55%
FY 2006:	Met	Develop 40 percent (cumulative) of the Quantification of Margins and Uncer tainties (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)
FY 2005:	Met	Complete 25 percent of progress (cumulative) along the Primary Predictive Capability Roadmap for development and implementation of the new Quantification of Margins and Uncertainties (QMU) certification and assessment methodology (NA GG 1.28.01)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003405.2005.html
Program Office:	http://nnsa.energy.gov/defense_programs/science.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Science Campaign (2.1.27)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Stockpile Stewardship Science** Cumulative percentage of progress towards creating and measuring extreme temperature and pressure conditions for the 2013 stockpile stewardship requirement (Long-term Outcome) FY 2008 target: 75%

2008 Results

Commentary:	Met	Achieved the annual cumulative target of 75% (increase of 5%) progress towards creating and measuring extreme temperature and pressure conditions. This result is important because it will improve nuclear weapon certification confidence.
Future Plans / Explanation of Shortfalls:	No Future Plans. This performance measure has been completed.	
Supporting Documentation:	1. Progress reports provided by Lawrence Livermore National Laboratory (LLNL), University of Rochester (Omega), and Z (Sandia). 2. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of progress towards creating and measuring extreme temperature and pressure conditions for the 2013 stockpile stewardship requirement (Long-term Outcome) (2.1.27.05) FY 2007 target: 70%
FY 2006:	Met	Complete 70 percent (cumulative) towards creating and measuring extreme temperature and pressure conditions for the 2013 stockpile stewardship requirement (NA GG 1.28.05)
FY 2005:	Met	Complete 68 percent of progress (cumulative) toward creating and measuring extreme conditions for the FY 2010 stockpile stewardship requirement (NA GG 1.30.01)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003405.2005.html
Program Office:	http://nnsa.energy.gov/defense_programs/science.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Science Campaign (2.1.27)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Test Readiness** Readiness, measured in months, to conduct an underground nuclear test as established by current NNSA policy (Long-term Outcome) FY 2008: 24-36 months

2008 Results

Commentary:	Met	Achieved the annual target of 24-36 month readiness. This result is important because it means that the United States has maintained a credible capability to test nuclear weapons, if required by the President.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant in FY 2009 at 24-36 months. The measure will be removed from the Science Campaign in FY 2010 since Test Readiness will be moved to RTBF in FY 2010.	
Supporting Documentation:	1. Milestones to support the performance measure are documented in the Campaign's plans. 2. FY 2005 UGT Readiness Assessment (BN-LN005-0039) & FY 2007 UGT Readiness Assessment, 3. Annual Test Scenarios and Capabilities Report (SRD) 4. Annual Test Readiness Completion Report 5. Monthly and Quarterly progress reports/reviews 6. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Met	Readiness, measured in months, to conduct an underground nuclear test as established by current NNSA policy (Long-term Outcome) (2.1.27.03) FY 2007 target: 24 months
FY 2006:	Met	Maintain a 24 month readiness to conduct an underground nuclear test as established by current NNSA policy (NA GG 1.28.03)
FY 2005:	Met	Achieve 24 month readiness to conduct an underground nuclear test as established by National Security policy (NA GG 1.28.03)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003405.2005.html
Program Office:	http://nnsa.energy.gov/defense_programs/science.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration	
Program:	Engineering Campaign (2.1.28)	
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent	
Measure:	**Design and Qualification Tools** Cumulative percentage of completion of design and qualification tools for meeting requirements for survivability in intense radiation environments needed for future alterations or modifications to replace the existing proof-testing approach that uses significant amounts of highly enriched uranium, measured by the number of milestones in the implementation plan, completed (Long-term Output) FY 2008 target: 48%	
2008 Results		
Commentary:	Met	Achieved the cumulative target of 48% by successfully completing all supporting milestones on or ahead of schedule. This result is important because the improved tools for the survivability of weapons in the future stockpile will meet nuclear survivability requirements for non-nuclear components in life extension programs and new insertion opportunities including weapon alterations and modifications; and these tools will aid in the development, validation, improvement, and sustainment of experimental and theoretical capabilities resulting in the development of radiation-hardening technologies to support the certification and effectiveness of the evolving and aging stockpile.
Future Plans / Explanation of Shortfalls:	The annual target will build on prior years' results, increasing 8% to achieve 56% of the annual performance target in FY 2009, as planned. This will be adjusted dependent upon the finalized FY 2009 Budget.	
Supporting Documentation:	1. Supporting schedule and milestones in approved program plans 2. Program reports of specific accomplishment 3. Program-specific quarterly review briefings 4. Weighted statistical tool used to calculate overall milestone scope accomplishment 5. NA-10 Milestone Reporting Tool (MRT) status reports	
Associated Performance in Prior Years		
FY 2007:	Met	Cumulative percentage of completion of design and qualification tools for meeting requirements for survivability in intense radiation environments needed by RRW and any future alts or mods to replace the existing proof-testing approach that uses dangerous amounts of highly radioactive materials, measured by the number of milestones, in the implementation plan, completed (Long-term Output) (2.1.28.05)FY 2007 target: 40%
FY 2006:	Met	Achieve cumulative 27 percent of progress towards meeting goals identified in the Nuclear Survivability Annex of the Engineering Campaign Program Plan and effectiveness tools and technologies (Long-term Output) (NA GG 1.29.05)
FY 2005:	Met	Achieve cumulative 24 percent of progress towards meeting goals identified in the Nuclear Survivability Annex of the Engineering Campaign Program Plan and effectiveness tools and technologies (Long-term Output) (NA GG 1.29.05)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003236.2006.html
Program Office:	http://www.nnsa.doe.gov/defense_programs/science.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Engineering Campaign (2.1.28)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Improved Initiation System** Cumulative percentage of progress towards an improved initiation system to meet detonation safety requirements for future alterations or modifications to stockpiled weapons, measured by the number of milestones, in the implementation plan, completed (Long-term Output) FY 2008 target: 75%

2008 Results

Commentary:	Met	Achieved the cumulative target of 75% by completing all active supporting milestones on or ahead of schedule. This result is important because new components and materials will enable future systems to better satisfy surety requirements outlined in departmental directives, and provide for a safer and more secure stockpile.
Future Plans / Explanation of Shortfalls:	The annual target will build on prior years' results, increasing 5% in FY 2009 to achieve 80% of the annual performance target in FY 2009, as planned. This will be adjusted dependent upon the finalized FY 2009 Budget.	
Supporting Documentation:	1. Supporting schedule and milestones in approved program plans 2. Program reports of specific accomplishment 3. Program-specific quarterly review briefings 4. Weighted statistical tool used to calculate overall milestone scope accomplishment 5. NA-10 Milestone Reporting Tool (MRT) status reports.	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of progress towards an improved initiation system to meet detonation safety requirements for the Reliable Replacement Warhead (RRW) and any future alterations or modifications to stockpiled weapons, measured by the number of milestones, in the implementation plan, completed (Long-term Output) (2.1.28.02) FY 2007 target: 70%
FY 2006:	Met	Achieve cumulative 70 percent of progress 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 (Long-term Output) (NA GG 1.29.02)
FY 2005:	Met	Achieve cumulative 60 percent of progress 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 (Long-term Output) (NA GG 1.29.02)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003236.2006.html
Program Office:	http://www.nnsa.doe.gov/defense_programs/science.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Engineering Campaign (2.1.28)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Microsystems and Engineering Sciences Applications (MESA)** Cumulative percentage 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 (EFFICIENCY MEASURE) FY 2008 target: 100%

2008 Results

Commentary:	Met	Achieved the cumulative target of 100% by completing the MESA construction project in May 2008. Contract closeout activities were completed Aug 2008, three years ahead of the baseline schedule and ~$45M under budget. This result is important because a key facility can now be utilized to support major campaign efforts.

Future Plans / Explanation of Shortfalls: The annual target will be deleted as MESA is a complete construction project, as planned.

Supporting Documentation:
1. Project schedule and major decision points documented in Project Plan
2. On-site observation of the completed work by Federal Project Director/Staff
3. Monthly and quarterly progress reports and reviews
4. DOE PARS database/project status
5. NA-10 Milestone reporting Tool (MRT) status reports

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of the Microsystems and Engineering Sciences Applications (MESA) facility project completed (total project cost), while maintaining a Cost Performance Index of 0.9-1 (EFFICIENCY MEASURE) (2.1.28.01) FY 2007 target: 75%
FY 2006:	Met	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)
FY 2005:	Met	Complete 50 percent (cumulative) of the Microsystems and Engineering Sciences Applications (MESA) facility project, while maintaining a Cost Performance Index of 0.9-1.15. (NA GG 1.29.01)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003236.2006.html
Program Office:	http://www.nnsa.doe.gov/defense_programs/science.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Engineering Campaign (2.1.28)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Science-Based Lifetime Predictions** Cumulative percentage of progress towards completion of aging models and assessments, diagnostics, and tools needed for science-based lifetime predictions of specific weapon components and for transformation to more predictive stockpile surveillance, measured by the number of milestones, in the implementation plans completed (Long-term Output) FY 2008 target: 47%

2008 Results

Commentary:	Met	Achieved the cumulative target of 47% by successfully completing the necessary amount of work scope on FY 2008 and outyear milestones. This result is important because this year's work enabled earlier identification of stockpile aging concerns, reduces the uncertainties in the assessment of stockpile health, assists in decisions for stockpile refurbishment, and provides tools for transforming to more predictive means to assess the stockpile.
Future Plans / Explanation of Shortfalls:		The annual target will build on prior years' results, increasing 6% to achieve 53% of the annual performance target in FY 2009, as planned. This may be adjusted dependent upon the finalized FY 2009 Budget.
Supporting Documentation:		1. Supporting schedule and milestones in approved program plans 2. Program reports of specific accomplishment 3. Program-specific quarterly review briefings 4. Weighted statistical tool used to calculate overall milestone scope accomplishment 5. NA-10 Milestone Reporting Tool (MRT) status reports

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of aging models, diagnostics, and tools needed for science-based lifetime predictions of specific components and a reduction in system-level stockpile surveillance testing, measured by the number of milestones, in the implementation plans completed (Long-term Output) (2.1.28.03) FY 2007 target: 40%
FY 2006:	Met	Achieve cumulative 32 percent of delivery of lifetime assessments, predictive aging models, and surveillance diagnostics, as documented in the Engineering Campaign Program Plan (Long-term Output) (NA GG 1.29.02)
FY 2005:	Met	Achieve cumulative 24 percent of delivery of lifetime assessments, predictive aging models, and surveillance diagnostics, as documented in the Engineering Campaign Program Plan (Long-term Output) (NA GG 1.29.02)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003236.2006.html
Program Office:	http://www.nnsa.doe.gov/defense_programs/science.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration	
Program:	Engineering Campaign (2.1.28)	
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent	
Measure:	**System Engineering Methodology** Cumulative percentage of progress towards system engineering methodology for assessing and predicting the effects of large thermal, mechanical, and combined forces on nuclear weapons for future alterations or modifications, measured by the number of experimental data sets, in the implementation plan, completed (Long-term Output) FY 2008 target: 53%	

2008 Results

Commentary:	Met	Achieved the cumulative target of 53% by successfully completing all milestones on or ahead of schedule. This result is important because these data sets will help develop the tools and technologies to validate structural and thermal models used by the Engineering Campaign to support the stockpile and will help the development of improved qualification tools and methodologies for the future stockpile.
Future Plans / Explanation of Shortfalls:	The annual target will build on prior years' results, increasing 14% to achieve 67% of the annual performance target in FY 2009, as planned. This may be adjusted dependent upon the finalized FY 2009 Budget.	
Supporting Documentation:	1. Supporting schedule and milestones in approved program plans 2. Program reports of specific accomplishment 3. Program-specific quarterly review briefings 4. Weighted statistical tool used to calculate overall milestone scope accomplishment 5. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of progress towards system engineering methodology for assessing and predicting the effects of large thermal, mechanical, and combined forces on nuclear weapons for the RRW and any future alts or mods, measured by the number of experimental data sets, in the implementation plan, completed (Long-term Output) (2.1.28.04) FY 2007 target: 45%
FY 2006:	Met	Achieve cumulative 37 percent of completed data sets used in developing tools and technologies to validate structural and thermal models with well-defined ranges of applicability and qualified uncertainties in accordance with the Engineering Campaign Program Plan.
FY 2005:	Not Met	Achieve cumulative 55 percent of completed data sets used in developing tools and technologies to validate structural and thermal models with well-defined ranges of applicability and qualified uncertainties in accordance with the Engineering Campaign Program Plan.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003236.2006.html
Program Office:	http://www.nnsa.doe.gov/defense_programs/science.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Inertial Confinement Fusion Ignition & High Yield Campaign (2.1.29)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**National Ignition Facility (NIF) Construction** Cumulative percentage of construction completed on the 192-laser beam NIF (Long-term Output) FY 2008 target: 98%

2008 Results

Commentary:	Met	Achieved the cumulative target of 98% (increase of 4%) of construction completed of the NIF. This result is important because it measures progress towards the construction of the NIF that is required to demonstrate ignition.
Future Plans / Explanation of Shortfalls:	The annual target will be increased to 100% in FY 2009.	
Supporting Documentation:	1. Project schedule and milestones are detailed in Project Plan 2. Project monthly reports 3. DOE PARS database/status 4. On-site observation of the ongoing work by the HQ Program Manager/staff 5. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of construction completed on the 192-laser beam NIF (Long-term Output) (2.1.29.02)FY 2007 target: 94%
FY 2006:	Met	Complete cumulative 87 percent of the construction of the 192-laser beam National Ignition Facility (NIF) (NA GG 1.30.02)
FY 2005:	Met	Complete cumulative 81 percent of construction on the 192-laser beam National Ignition Facility (NIF) (NA GG 1.30.02)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001046.2003.html
Program Office:	http://www.nnsa.doe.gov/defense.htm#1	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration	
Program:	Inertial Confinement Fusion Ignition & High Yield Campaign (2.1.29)	
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent	
Measure:	**National Ignition Facility (NIF) Equipment Fabricated** Cumulative percentage of equipment fabricated to support ignition experiments at National Ignition Facility (NIF) (Long-term Output) FY 2008 target: 82%	

2008 Results

Commentary:	Met	Achieved the cumulative target of 82% (increase of 19%) of the equipment required to support ignition experiments at the NIF; projected increase of 15.2%. Three milestones support this effort; two on the critical path are complete, but funding reduction prevents completion of the third (not on critical path). However, the project has been re-baselined and the program is now working towards the new baseline. This result is important because user optics and cryogenic target systems are required for ignition experiments, and ignition diagnostics are required to obtain ignition experimental data for the Stockpile Stewardship Program.
Future Plans / Explanation of Shortfalls:	The completion date for the milestone has been moved to FY 2009, based on BCP 08-003. The annual target will be increased to 95%.	
Supporting Documentation:	1. Program schedule and supporting milestones are in program plans 2. Monthly NIC/program reports 3. Lehman Reviews, 2005 & 2006 4. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of equipment fabricated to support ignition experiments at NIF (Long-term Output) (2.1.29.03) FY 2007 target: 63%
FY 2006:	Met	Complete cumulative 45 percent of the equipment fabrication to support ignition experiments at National Ignition Facility (NIF) (NA GG 1.30.03)
FY 2005:	Improved Over PY	Complete cumulative 26 percent of equipment fabrication to support ignition experiments at National Ignition Facility (NIF) (NA GG 1.30.04)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001046.2003.html
Program Office:	http://www.nnsa.doe.gov/defense.htm#1	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Inertial Confinement Fusion Ignition & High Yield Campaign (2.1.29)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Demonstrate Ignition at National Ignition Facility** Cumulative percentage of progress towards demonstrating ignition (simulating fusion conditions in a nuclear explosion) at the National Ignition Facility (NIF) to increase confidence in modeling weapons performance (Long-term Outcome) FY 2008 target: 86%

2008 Results

Commentary:	Met	Achieved the cumulative target of 86% (increase of 6%) of progress towards demonstrating ignition at the NIF. This result is important because demonstrating ignition will increase confidence in the ability to certify weapons performance through computational models without weapon testing.

Future Plans / Explanation of Shortfalls: The annual target will be increased to 93% in FY 2009.

Supporting Documentation:
1. Program and Project schedule and milestones are detailed in Program & Project plans
2. Program & Project monthly reports
3. DOE PARS database/status
4. JASON Review, 2006
5. On-site observation of the ongoing work by the HQ Program Manager/staff
6. Lehman Reviews, 2005 & 2006
7. NA-10 Milestone Reporting Tool (MRT) status reports

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of progress towards demonstrating ignition (simulating fusion conditions in a nuclear explosion) at the National Ignition Facility (NIF) to increase confidence in modeling weapons performance (Long-term Outcome) (2.1.29.01) FY 2007 target: 80%
FY 2006:	Not Met	Complete cumulative 73 percent 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)
FY 2005:	Not Met	Complete cumulative 67 percent of progress towards demonstrating ignition (simulating fusion conditions in a nuclear explosion) at the National Ignition Facility (NIF) (NA GG 1.30.02)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001046.2003.html
Program Office:	http://www.nnsa.doe.gov/defense.htm#1	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Inertial Confinement Fusion Ignition & High Yield Campaign (2.1.29)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Stockpile Stewardship Experiments at ICF Facilities** Annual number of days available to conduct stockpile stewardship experiments totaled for all ICF facilities (Annual Output) FY 2008 target: 240

2008 Results

Commentary:	Exceeded	Exceeded the annual target of 240 experiment days. The actual number is 558 days. This result is important because the NNSA Science, ASC, and Engineering Campaigns use the ICF facilities for experiments to obtain required stockpile stewardship data.
Future Plans / Explanation of Shortfalls:	The annual target will be reduced to 200 days in FY 2009.	
Supporting Documentation:	1. Program schedule and supporting milestones are in program plans 2. e-mail reports from site facilities supported by experimental logs 3. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Met	Annual number of days available to conduct stockpile stewardship experiments, totaled for all ICF facilities (Annual Output) (2.1.29.04) FY 2007 target: 270
FY 2006:	Met	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)
FY 2005:	Met	Provide 500 days to conduct stockpile stewardship experiments (totaled for all Inertial Confinement Fusion facilities) (NA GG 1.30.05)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001046.2003.html
Program Office:	http://www.nnsa.doe.gov/defense.htm#1	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Inertial Confinement Fusion Ignition & High Yield Campaign (2.1.29)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Z Facility Experiments** Annual average hours per experiment required by the operational crew to prepare the Z facility for an experiment (EFFICIENCY MEASURE) FY 2008 target: 11

2008 Results

Commentary:	Exceeded	Exceeded the annual target of 11 average hours per experiment. The actual number is 10.59 hours per experiment. This result is important because a reduction in Z experimental preparation time may allow 2 shots per day, making it possible to obtain required additional and/or earlier data at reduced cost.
Future Plans / Explanation of Shortfalls:	The annual target will be reduced to 9 hours in FY 2009.	
Supporting Documentation:	1. Program schedule and supporting milestones are in program plans 2. e-mail reports from site facilities supported by experimental logs 3. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Not Met	Annual average hours per experiment required by the operational crew to prepare the Z facility for an experiment (EFFICIENCY MEASURE). (2.1.29.5)FY 2007 target: 11
FY 2006:	Met	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)
FY 2005:	Not Met	Achieve an average of 9 hours per experiment required by the operational crew to prepare the Z facility for an experiment (NA GG 1.30.06)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001046.2003.html
Program Office:	http://www.nnsa.doe.gov/defense.htm#1	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Advanced Simulation and Computing Campaign (2.1.30)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Adoption of ASC Modern Codes** The cumulative percentage of simulation runs that utilize modern ASC-developed codes on ASC computing platforms, as measured against the total of legacy and ASC codes used for stockpile stewardship activities (Long-term Outcome) FY 2008 target: 72%

2008 Results

Commentary:	Met	Achieved the cumulative percentage of 72% (increase of 9%) of simulation runs that utilize modern ASC-developed codes This result is important because it demonstrates the adoption of the modern codes for improved assessment and certification of the nuclear stockpile.
Future Plans / Explanation of Shortfalls:	The annual target will increase to 80% in FY 2009.	
Supporting Documentation:	1. Periodic reports to HQ Program Manager from responsible site concerning specific deliverables	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000076.2007.html
Program Office:	http://nnsa.energy.gov/defense_programs/asc.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Advanced Simulation and Computing Campaign (2.1.30)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Reduced Reliance on Calibration** The cumulative percentage reduction in the use of calibration "knobs" to successfully simulate the nuclear weapons performance (Long-term Outcome) FY 2008 target: 16%

2008 Results

Commentary:	Met	Achieved the cumulative percentage of 16% (increase of 8%) of reduction in the use of calibration "knobs." This result is important because it continues the maturation of the modern codes provided to users to support stockpile certification.
Future Plans / Explanation of Shortfalls:	The annual target will increase to 25% in FY 2009.	
Supporting Documentation:	1. Laboratory Reports to HQ Program Manager 2. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000076.2007.html
Program Office:	http://nnsa.energy.gov/defense_programs/asc.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Advanced Simulation and Computing Campaign (2.1.30)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**ASC Impact on SFI Closure** The cumulative percentage of Nuclear Weapon Significant Finding Investigations (SFIs) resolved through the use of modern (non-legacy) ASC codes, measured against all codes used for SFI resolution (Long-term Outcome) FY 2008 target: 37%

2008 Results

Commentary:	Met	Achieved the cumulative percentage of 37% (increase of 12%) of nuclear weapon SFIs resolved through the use of modern ASC codes. This result is important because it demonstrates the impact of the modern codes for improved assessment and certification of the nuclear weapons stockpile.
Future Plans / Explanation of Shortfalls:	The annual target will increase to 50% in FY 2009.	
Supporting Documentation:	Laboratory reports to HQ Program Manager	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000076.2007.html
Program Office:	http://nnsa.energy.gov/defense_programs/asc.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Advanced Simulation and Computing Campaign (2.1.30)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Code Efficiency** The cumulative percentage of simulation turnaround time reduced while using modern ASC codes (EFFICIENCY MEASURE) FY 2008 target: 13%

2008 Results

Commentary:	Met	Achieved the cumulative percentage of 13% (increase of 6%) of simulation turnaround time reduced. This result is important because it demonstrates the impact of investment in computer science on the efficiency of the modern codes performance.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant at 13% in FY 2009.	
Supporting Documentation:	1. Laboratory reports to HQ Program Manager	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000076.2007.html
Program Office:	http://nnsa.energy.gov/defense_programs/asc.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Pit Manufacturing & Certification Campaign (2.1.31)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Pit Manufacturing Capability** Cumulative percentage of major milestones completed toward restoration of the capability to manufacture all pit types in the enduring stockpile (Long-term Output) FY 2008 target: 75%

2008 Results

Commentary:	Met	Achieved the cumulative target of 75% (increase of 20%). This result is important because restoring a manufacturing capability for pit types other than the W88 is needed to support the long-term nuclear weapons stockpile.
Future Plans / Explanation of Shortfalls:		Overall program schedule and scope will be baselined for completion in FY 2009. Pit Manufacturing and Certification Campaign ends FY 2008 and elements will be absorbed within DSW and Science Campaign.
Supporting Documentation:		1. Determination of progress percentage computation from the Pit Manufacturing and Certification Campaign Implementation Plan and earned value management reporting 2. Site Reports on accomplishment of pit manufacturing schedule 3. Site Visits by Program Staff 4. NA-10 Milestone Reporting Tool (MRT) status reports

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of major milestones completed toward restoration of the capability to manufacture all pit types in the enduring stockpile (Long-term Output) (2.1.31.04) FY 2007 target: 55%
FY 2006:	Met	Achieve cumulative 35% percent of 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)
FY 2005:	Met	Achieve cumulative 20% percent of 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)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003237.2006.html
Program Office:		http://nnsa.energy.gov/defense_programs/plutonium_pits.htm

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Pit Manufacturing & Certification Campaign (2.1.31)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Pit Manufacturing Capability Annual Cost** Annual cost, in millions of dollars, per pit capacity to maintain a pit manufacturing capability (EFFICIENCY MEASURE) FY 2008 target: $12M

2008 Results

Commentary:	Met	Achieved the target of the annual cost of $12M per pit capacity. This result is important because continuing to improve upon the efficiency of pit manufacturing is required for increasing the manufacturing capacity. Future years will continue to reduce costs per pit as infrastructure improvements are made.
Future Plans / Explanation of Shortfalls:	Future Plans: Pit Manufacturing and Certification Campaign ends FY 2008 and elements will be absorbed within DSW and Science Campaign. This measure will not be continued.	
Supporting Documentation:	1. Current execution year appropriation for pit manufacturing 2. Site Reports on accomplishment of pit manufacturing schedule 3. Site Visits by Program Staff 4. Determination of progress percentage computation from the Pit Manufacturing and Certification Campaign Implementation Plan and earned value management reporting	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003237.2006.html
Program Office:	http://nnsa.energy.gov/defense_programs/plutonium_pits.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Pit Manufacturing & Certification Campaign (2.1.31)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Pit Manufacturing Capacity** Cumulative percentage of major milestones for enhancing the capacity of pit manufacturing of 10 pits per year to 30-50 pits per year (Long-term Output) FY 2008 target: 5%

2008 Results

Commentary:	Met	Achieved the target of a cumulative percentage of 5% of major milestones completed for enhancing the capacity of pit manufacturing to 30-50 pits per year. However, because of the lengthy continuing resolution process, reduction in final appropriation and issuance of a new capacity requirement within the preferred alternative to the Supplemental Programmatic Environmental Impact Statement for Complex Transformation, the requirement for this measure is being reviewed for possible change and rebaselining. This result is important because of the need to have the capacity to support the stockpile, long-term.
Future Plans / Explanation of Shortfalls:		Pit Manufacturing and Certification Campaign ends FY 2008 and elements will be absorbed within DSW and Science Campaign. This measure will not be continued.
Supporting Documentation:		1. Determination of progress percentage computation from the Pit Manufacturing and Certification Campaign Implementation Plan and earned value management reporting 2. Site Reports on accomplishment of pit manufacturing schedule 3. Site Visits by Program Staff 4. NA-10 Milestone Reporting Tool (MRT) status reports

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003237.2006.html
Program Office:		http://nnsa.energy.gov/defense_programs/plutonium_pits.htm

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Pit Manufacturing & Certification Campaign (2.1.31)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Certified LANL W-88 Pits** Annual number of certified W88 pits manufactured at LANL [certified means the pit is approved for use within the nuclear weapons stockpile based on quality assurance of the product and evaluation of performance through non-nuclear testing] (Annual Output) FY 2008 target: 10

2008 Results

Commentary:	Not Met	Did not achieve the target for pit manufacturing with 10 pits produced and certified; projected 6 pits were manufactured and accepted for use as required in support of the W88 program and stockpile. This result is important because the pit surveillance requirements are necessary for continued certification of the W88 warhead. The annual target was missed because of lengthy continuing resolution process, reduction in final appropriation, and facility stand-down for criticality reviews. Because this target was missed the replacement of W88 pits will be extended a minimum of one year, depending upon FY 2009 appropriation.
Future Plans / Explanation of Shortfalls:	Pit Manufacturing and Certification Campaign ends FY 2008 and elements will be absorbed within DSW and Science Campaign.	
Supporting Documentation:	1. Determination of progress percentage computation from the Pit Manufacturing and Certification Campaign Implementation Plan and earned value management reporting 2. Site Reports on accomplishment of pit manufacturing schedule 3. Site Visits by Program Staff 4. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Met	Annual number of certified W-88 pits manufactured at LANL (certified means the pit is approved for use within the nuclear weapons stockpile based on quality assurance of the product and evaluation of performance through non-nuclear testing) (Annual Output) FY 2007 target: 10
FY 2006:	N/A	
FY 2005:	N/A	

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003237.2006.html
Program Office:	http://nnsa.energy.gov/defense_programs/plutonium_pits.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Readiness Campaign (2.1.32)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Critical Capabilities Deployed** Cumulative number of critical immediate and urgent capabilities deployed to support our Directed Stockpile Work (DSW) customer's nuclear weapon refurbishment needs derived from the Production Readiness Assessment Plan (Long-term Output) FY 2008 target: 22

2008 Results

Commentary:	Met	Achieved the annual target of a cumulative total of 22 critical capabilities at the end of FY 2008. This is an increase of 2. This result is important because it is required to support immediate and urgent nuclear weapon refurbishment needs.
Future Plans / Explanation of Shortfalls:	The annual target will be increased to a cumulative total of 24 in FY 2009, the cumulative number of deployed capabilities increases annually.	
Supporting Documentation:	1. Milestones supporting the performance measure are documented in the Campaign's plans 2. Site acceptance reports or other appropriate documentation (if classified, cover pages submitted including applicable document record numbers and information on how to obtain a copy of the report) 3. Weekly/monthly site status calls with the Federal Program Manager 4. Submittal of copies of Qualification Engineering Releases (QERs) 5. Federal Program Manager/staff confirm completion during site visits and Program Reviews by observation of the capability in use 6. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative number of critical immediate and urgent capabilities deployed to support our Directed Stockpile Work (DSW) customer's nuclear weapon refurbishment needs derived from the Production Readiness Assessment Plan. (Long-term Output) (2.1.32.01) FY 2007 target: 20
FY 2006:	Met	Deploy cumulative 15 critical capabilities 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)
FY 2005:	N/A	

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003406.2005.html
Program Office:	http://nnsa.doe.gov/defense_programs/production_technology.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Readiness Campaign (2.1.32)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Tritium Production** Cumulative number of Tritium-Producing Burnable Absorber Rods (TPBARs) irradiated in Tennessee Valley Authority reactors to provide the capability of collecting new tritium to replace inventory for the nuclear weapons stockpile (Long-term Output) FY 2008 target: 720

2008 Results

Commentary:	Met	Achieved the cumulative target of 720 TPBARs irradiated in FY 2008, an increase of 240 TPBARs. This result is important because irradiation of Tritium Producing Burnable Absorber Rods is essential for the establishment of an assured domestic source of tritium to meet the continuing needs of the nuclear weapons stockpile.

Future Plans / Explanation of Shortfalls: The annual target will be increased by 240 TPBARs, for a FY 2009 cumulative total of 960.

Supporting Documentation:
1. Milestones supporting the performance measure are documented in the Campaign's plans
2. Site acceptance reports or other appropriate documentation (if classified, cover pages submitted including applicable document record numbers and information on how to obtain a copy of the report)
3. Weekly project status calls with the Federal Program Manager
4. End of cycle reports submitted by the Tennessee Valley Authority (TVA)
5. Quarterly Project Reviews (attended by TVA)
6. NA-10 Milestone Reporting Tool (MRT) status reports

Associated Performance in Prior Years

FY 2007:	Met	Cumulative number of Tritium-Producing Burnable Absorber Rods irradiated in Tennessee Valley Authority reactors to provide the capability of collecting new tritium to replace inventory for the nuclear weapons stockpile. (Long-term Output) (2.1.32.03) FY 2007 target: 480
FY 2006:	Met	Irradiate cumulative 240 Tritium-Producing Burnable Absorber Rods 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)
FY 2005:	Met	Irradiate cumulative 240 Tritium-Producing Burnable Absorber Rods in Watts Bar reactor. (NA GG 1.33.03)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003406.2005.html
Program Office:		http://nnsa.doe.gov/defense_programs/production_technology.htm

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Readiness Campaign (2.1.32)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Reduce Cycle Times** The number of capabilities deployed every other year to stockpile programs that will reduce cycle times at least by 35% (against baselined agility and efficiency) (Annual Outcome) FY 2008 target: 0

2008 Results

Commentary:	Met	Achieved the annual target of milestones completed in working towards deploying one capability in FY 2009 that will reduce cycle times at least by at least 35%. This result is important because it is required to support immediate and urgent nuclear weapon refurbishment needs.
Future Plans / Explanation of Shortfalls:		The annual target will increase in FY 2009 to 1 capability deployed to pursue 35% reduction in cycle time by emphasizing complex wide capability investments to optimize investment benefits in NWC design to manufacturing activities.
Supporting Documentation:		1. Milestones supporting the performance measure are documented in the Campaign's plans 2. Site acceptance reports or other appropriate documentation (if classified, cover pages submitted including applicable document record numbers and information on how to obtain a copy of the report) 3. Weekly/monthly site status calls with the Federal Program Manager 4. Submittal of copies of Qualification Engineering Releases (QERs) 5. Federal Program Manager/staff confirm completion during site visits and Program Reviews by observation of the capability in use 6. NA-10 Milestone Reporting Tool (MRT) status reports

Associated Performance in Prior Years

FY 2007:	Met	The number of capabilities deployed every other year to stockpile programs that will reduce cycle times at least by 35% (against baselined agility and efficiency) (Annual Outcome) (2.1.32.2) FY 2007 target: 1
FY 2006:	N/A	
FY 2005:	N/A	

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003406.2005.html
Program Office:		http://nnsa.doe.gov/defense_programs/production_technology.htm

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Readiness in Technical Base & Facilities (Operations) (2.1.33)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Facility Condition Index (FCI) for Mission Critical Facilities** Annual NNSA complex-wide aggregate Facility Condition Index (FCI), as measured by deferred maintenance costs per replacement plant value, for all mission-critical facilities and infrastructure (Annual Outcome) FY 2008 target: 5%

2008 Results

Commentary:	Exceeded	Exceeded the annual target by reducing the aggregate Facility Condition Index (FCI) for all mission critical facilities and infrastructure to 4.26% (target was 5%). This result is important because it demonstrates progress in improved facilities conditions and increased operational effectiveness and efficiency.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant at 5% in FY 2009.	
Supporting Documentation:	1. Milestones supporting the performance measure are documented in the program and site RTBF plans 2. Ten Year Planning Guidance and Ten Year Site Plans 3. DOE Facility Information Management System (FIMS) database 4. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Met	Annual NNSA complex-wide aggregate Facility Condition Index (FCI), as measured by deferred maintenance per replacement plant value, for all mission-essential facilities and infrastructure (the industry standard is below 5%) (EFFICIENCY MEASURE) (2.1.33.03) FY 2007 target: 6.8%
FY 2006:	Met	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)
FY 2005:	Met	Achieve an annual NNSA complex-wide aggregate Facility Condition Index (FCI) of less than 9 percent, as measured by deferred maintenance per replacement plant value, for all mission essential facilities and infrastructure (NA GG 1.34.03)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001047.2007.html
Program Office:	http://nnsa.energy.gov/defense_programs/facilities_operations.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Readiness in Technical Base & Facilities (Operations) (2.1.33)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Major Construction Projects** Execute construction projects within approved costs and schedules, as measured by the total percentage of projects with total estimated cost (TEC) greater than $20 million with a schedule performance index (ratio of actual cost of work performed to scheduled work) and a cost performance index (ratio of actual cost of work performed to budgeted cost of work) between 0.9-1.15 (EFFICIENCY MEASURE) FY 2008 target: 85%

2008 Results

Commentary:	Not Met	Did not achieve the annual target of 85%. Only 6 of 9 (67%) construction projects earned value data fall within the specified band. This result is important because it demonstrates effective program management over multiple projects and improved efficiencies. The annual target was missed because three projects do not meet the criteria due to late receipt of final FY 08 funding, cost increases, delay in the LANL site-wide EIS, and other factors. Because this target was missed other projects will have to be rebaselined.
Future Plans / Explanation of Shortfalls:		Action Plan: The Los Alamos site-wide EIS was issued in late September 2008. Two construction projects at that site will be rebaselined in FY 2009. One other large project at that site was working to recover its schedule and may attain the standard in FY 2009. The annual target will be increased to 90% in FY 2009.
Supporting Documentation:		1. Baselined schedules and major decision points for projects are in individual project plans 2. Monthly project progress reports that include Earned Value Management (EVM) data (provides project cumulative percentage completed information) 3. DOE PARS reports providing official project status to the DOE Deputy Secretary and NNSA Administrator 4. NA-10 Milestone Reporting Tool (MRT) status reports

Associated Performance in Prior Years

FY 2007:	Met	Annual percentage of baselined construction projects with total estimated cost (TEC) greater than $20M with actual schedule performance index (SPI) of 0.9-1.15 and cost performance index (CPI) of 0.9-1.15, as measured against approved baseline definitions (Annual Output) (2.1.33.04) FY 2007 target: 80%
FY 2006:	Met	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)
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001047.2007.html
Program Office:	http://nnsa.energy.gov/defense_programs/facilities_operations.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Readiness in Technical Base & Facilities (Operations) (2.1.33)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Mission-Essential Facilities** Enable NNSA missions by providing operational facilities to support nuclear weapon dismantlement, life extension, surveillance, and research and development activities, as measured by percent of scheduled versus planned days mission-critical and mission-dependent facilities are available without missing key deliverables (Annual Outcome) FY 2008 target: 95%

2008 Results

Commentary:	Exceeded	Exceeded the annual target of 95% facility availability of mission-critical and mission-dependent facilities, based on available data; current availability is 98%. This result is important because mission essential facilities are needed to support critical nuclear weapons stockpile work.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant at 95% for FY 2009.	
Supporting Documentation:	1. Milestones supporting the performance measure are documented in the program and site RTBF plans 2. Quarterly reports from M&O Contractors 3. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Met	Annual percentage of scheduled days that mission-essential facilities are available (Annual Output) (2.1.33.01) FY 2007 target: 90%
FY 2006:	Met	Mission-essential facilities are available 90 percent of the scheduled days (NA GG 1.34.01)
FY 2005:	Met	Assure that mission-essential facilities are available on 90 percent of scheduled days (NA GG 1.34.01)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001047.2007.html
Program Office:	http://nnsa.energy.gov/defense_programs/facilities_operations.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Readiness in Technical Base & Facilities (Operations) (2.1.33)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Facility Condition Index (FCI) for Mission Dependent Not Critical Facilities** Annual NNSA complex-wide aggregate Facility Condition Index (FCI), as measured by deferred maintenance per replacement plant value, for all mission-dependent, not critical facilities and infrastructure (Annual Outcome) FY 2008 target: 8.25%

2008 Results

Commentary:	Met	Achieved 93% of the annual target by reducing the aggregate Facility Condition Index (FCI) for all mission dependent, not critical facilities and infrastructure to 8.92% (target was 8.25%). This result is important because it demonstrates progress in improved facilities conditions and increased operational effectiveness and efficiency.
Future Plans / Explanation of Shortfalls:	The annual target will increase to 8.75% in FY 2009 to more accurately reflect the current status of the complex based on changes to the Facilities Information Management System (FIMS) database in FY 2008.	
Supporting Documentation:	1. Milestones supporting the performance measure are documented in the program and site RTBF plans 2. Ten Year Planning Guidance and Ten Year Site Plans 3. DOE Facility Information Management System (FIMS) database 4. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001047.2007.html
Program Office:	http://nnsa.energy.gov/defense_programs/facilities_operations.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Secure Transportation Asset (2.1.34)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Convoy Costs** Annual cost per convoy expressed in terms of millions of dollars (EFFICIENCY MEASURE) FY 2008 target: $1.79M

2008 Results

Commentary:	Exceeded	Exceeded the annual target for cost per convoy ($1.73 vs. $1.79M) by the efficient utilization of Federal Agents and convoy support systems. This metric is directly related to the number of convoys completed. This result is important because it represents cost efficiencies and a decrease in cost from a baseline of $2.65M in FY 2002.
Future Plans / Explanation of Shortfalls:	The performance measure will be replaced in FY 2009 with a new measure because the target has been consistently met and the new measure is more representative of current program goals.	
Supporting Documentation:	1. Milestones supporting the performance measure are documented in the program's plans 2. FY 2007 Appropriations/DOE I-MANAGE/STARS 3. NA-15 Convoy computation (2.1.34.03) NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Met	Annual cost per convoy expressed in terms of millions of dollars. (EFFICIENCY MEASURE) (2.1.34.02)FY 2007 target: $1.80M
FY 2006:	Not Met	Keep the cost per convoy to less than $1.80 million (NA GG 1.36.02)
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002134.2004.html
Program Office:	http://nnsa.doe.gov/defense_programs/secure_transportation.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Secure Transportation Asset (2.1.34)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Federal Agents/Couriers** Cumulative number of Federal Agents at the end of each year (Long-term Output) FY 2008 target: 385

2008 Results

Commentary:	Met	Achieved 97% of the cumulative target, resulting in 373 Agents at the end of FY 2008. This result is important because it is a key milestone in reaching agent strength of 420 by FY 2009 to support material consolidation and Complex Transformation initiatives.
Future Plans / Explanation of Shortfalls:	The annual target will be increased in FY 2009 by 15 Federal Agents, for a cumulative target of 420.	
Supporting Documentation:	1. Milestones supporting the performance measure are documented in the program's plans. 2. Federal Personnel database/reports 3. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Not Met	Cumulative number of Federal Agents at the end of each year (Long-term Output) (2.1.34.05) FY 2007 target: 335
FY 2006:	Not Met	End the year with 355 Federal Agents (NA GG 1.36.05)
FY 2005:	Not Met	Maintain 335 Federal Agents at the end of the year (NA GG 1.36.04)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002134.2004.html
Program Office:	http://nnsa.doe.gov/defense_programs/secure_transportation.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Secure Transportation Asset (2.1.34)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Secure Shipments** Annual percentage of shipments completed safely and securely without compromise/loss of nuclear weapons/components or a release of radioactive material (Annual Outcome) FY 2008 target: 100%

2008 Results

Commentary:	Met	Achieved the annual target of completing 100% of shipments safely and securely. This result is important because it indicates mission accomplishment, especially in light of the increased risks and threats to the Nuclear Security Enterprise.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant at 100% in FY 2009.	
Supporting Documentation:	1. Milestones supporting the performance measure are documented in the program's plans 2. Completed DOE NRC Forms 741 3. Completed DOE Forms 60 or DoD Forms 1911 4. AL Forms 5600 A/B 5. DOE ORPS reports 6. NA-10 Milestone Reporting Tool (MRT) status reports 7. Certification Statement from the Manager, Program Office for Mission Operations	

Associated Performance in Prior Years

FY 2007:	Met	Annual percentage of shipments completed safely and securely without compromise/loss of nuclear weapons/components or a release of radioactive material (Annual Outcome) (2.1.34.01) FY 2007 target: 100%
FY 2006:	Met	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)
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002134.2004.html
Program Office:	http://nnsa.doe.gov/defense_programs/secure_transportation.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Secure Transportation Asset (2.1.34)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Safeguard Transporters (SGTs)** Cumulative number of Safeguard Transporters (SGTs) in operation (Long-term Output) FY 2008 target: 42

2008 Results

Commentary:	Met	Achieved the cumulative target of 42 SGTs in operation. This result is important because an increase in the SGT capability directly supports the increase of STA mission capacity.
Future Plans / Explanation of Shortfalls:	The annual target will be increased in FY 2009 by 3 SGTs, for a cumulative target of 45.	
Supporting Documentation:	1. Milestones supporting the performance measure are documented in the program's plans. 2. KCP Production Certification 3. NA-15 Delivery Acceptance Documentation NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative number of Safeguard Transporters (SGTs) in operation (Long-term Output) (2.1.34.4) FY 2007 target: 38
FY 2006:	Met	Have a cumulative 36 Safeguard Transporters (SGTs) in operation (NA GG 1.36.04)
FY 2005:	Met	Achieve 33 Safeguard Transporters (SGTs) in operation (NA GG 1.36.03)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002134.2004.html
Program Office:	http://nnsa.doe.gov/defense_programs/secure_transportation.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Secure Transportation Asset (2.1.34)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Secure Convoys Completed** Annual number of secure convoys completed (Annual Output) FY 2008 target: 118

2008 Results

Commentary:	Met	Achieved 92% of the annual target, for a total of 109 convoys. This result is important because it shows an increase in mission capacity from the FY 2002 baseline of 60 convoys.
Future Plans / Explanation of Shortfalls:	The performance measure will be replaced in FY 2009 with a new measure more representative of current program goals.	
Supporting Documentation:	1. Milestones supporting the performance measure are documented in the program's plans. 2. NA-15 Mission Folders 3. TRIPS database/reports 4. NA-10 Milestone Reporting Tool (MRT) status reports	

Associated Performance in Prior Years

FY 2007:	Not Met	Annual number of secure convoys completed (Annual Output) (2.1.34.03) FY 2007 target: 115
FY 2006:	Met	Complete 115 secure convoys (NA GG 1.36.03)
FY 2005:	Met	Complete 105 secure convoys (NA GG 1.36.01)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002134.2004.html
Program Office:	http://nnsa.doe.gov/defense_programs/secure_transportation.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration	
Program:	Nuclear Weapons Incident Response (2.1.35)	
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent	
Measure:	**Emergency Operations Readiness Index** Emergency Operations Readiness 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--the first three quarters will be expressed as the readiness at those given points in time where as the year end will be expressed as the average readiness for the year's four quarters) (EFFICIENCY MEASURE) FY 2008 target: 91	

2008 Results

Commentary:	Met	Achieved the annual target of an Emergency Operations Readiness Index of 91 out of 100 (4Q index of 91). This result is important because it assesses emergency response readiness and helps program managers identify and fix deficiencies within key elements of the program.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant at 91 out of 100 in FY 2009 and beyond, while enhancements to subprogram measures are identified and implemented.	
Supporting Documentation:	ARMS Reports; Weekly Meetings; Daily situational reports; Daily Infrastructure reports; ARMS website; https://arms.orau.gov/; After action reports – evaluators; After action reports - controllers State, local, & federal reports validating our response efforts; Task Orders/Work Authorizations	

Associated Performance in Prior Years

FY 2007:	Met	Emergency Operations Readiness 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--the first three quarters will be expressed as the readiness at those given points in time where as the year end will be expressed as the average readiness for the year's four quarters). (EFFICIENCY MEASURE). (2.1.35.1) FY 2007 target: 91
FY 2006:	Not Met	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)
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003240.2006.html
Program Office:	http://www.nnsa.energy.gov/emergency_ops/index.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Facilities & Infrastructure Recapitalization Program (2.1.36)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Deferred Maintenance** Annual dollar value and cumulative percentage of FY 2003 deferred maintenance baseline of $900 million, funded for elimination by FY 2013 (Long-term Output) FY 2008 target: $80M (64%)

2008 Results

Commentary:	Exceeded	Exceeded the annual target by funding the elimination of $93M with a cumulative result of 73% based on a revised deferred maintenance baseline of $900M (target was $80M). This result is important because it demonstrates progress in improving nuclear weapons complex facilities conditions by reducing the deferred maintenance backlog.
Future Plans / Explanation of Shortfalls:	The annual target will decrease in FY 2009 to $68M (81%) based on current CR funding ($163M). The target will be revised when a final appropriation is received.	
Supporting Documentation:	FIRP Work Authorizations Site Program Reviews	

Associated Performance in Prior Years

FY 2007:	Met	Annual dollar value and cumulative percentage of FY 2003 deferred maintenance baseline of $1.2 billion, funded for elimination by FY 2013. (Long-term Output). (2.1.36.1) FY 2007 target: $60M (38%)
FY 2006:	Met	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)
FY 2005:	Met	Issue authorizations to start work to achieve a reduction in NNSA's deferred maintenance of $154.75 million, and stabilize deferred maintenance by the e nd of FY 2005. (NA GG 1.38.01)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000088.2002.html
Program Office:	http://www.nnsa.doe.gov/infrastructure.htm#1	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Facilities & Infrastructure Recapitalization Program (2.1.36)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Facilities Space Eliminated** Annual gross square feet (gsf) of NNSA excess facilities space funded for elimination and cumulative percentage of FY 2002-FY 2009 total goal of three million gsf eliminated (Long-term Output) FY 2008 target: 225,000 (100%)

2008 Results

Commentary:	Exceeded	Exceeded the annual target by funding the elimination of 292,000 gross square feet (cumulative result is 106%) of the 3 million gsf goal (target was 225,000). This result is important because it demonstrates progress in improving nuclear weapons complex facilities cost-effectiveness by eliminating excess facility space.
Future Plans / Explanation of Shortfalls:		The annual target will be deleted, since the goal of 3 million gsf has been achieved one year earlier than the FY 2009 strategic goal. FIRP is a finite program and funding will end in FY 2013; thus, FIRP cannot extend its performance measures beyond FY 2013. Additionally, the scope of the program is bounded by the mission to buydown deferred maintenance and reduce gsf. FIRP cannot add scope of work unless concurred by OMB and directed by Congress. Thus, FIRP is not adding a new performance measure and will not fund program activities outside of the approved scope of the program as established by OMB and directed by Congress.
Supporting Documentation:		FIRP Work Authorizations Site Program Reviews

Associated Performance in Prior Years

FY 2007:	Met	Annual gross square feet (gsf) of NNSA excess facilities space funded for elimination and cumulative percentage of FY2002-FY2009 total goal of three million gsf eliminated. (Long-term Output). (2.1.36.2) FY 2007 target: 225,000 (92%)
FY 2006:	Met	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)
FY 2005:	Met	Issue authorizations to start work to achieve a 350,000 gsf reduction to the NNSA footprint. (NA GG 1.38.02)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000088.2002.html
Program Office:	http://www.nnsa.doe.gov/infrastructure.htm#1	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Facilities & Infrastructure Recapitalization Program (2.1.36)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Facility Condition Index (FCI) for Mission Critical Facilities** Annual NNSA complex-wide aggregate Facility Condition Index (FCI), as measured by deferred maintenance costs per replacement plant value, for all mission-critical facilities and infrastructure (EFFICIENCY MEASURE) FY 2008 target: 5%

2008 Results

Commentary:	Exceeded	Exceeded the annual target by reducing the aggregate Facility Condition Index (FCI) for all mission critical facilities and infrastructure to 4.26% (target was 5%). This result is important because it demonstrates progress in improved facilities conditions and increased operational effectiveness and efficiency.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant at 5% in FY 2009.	
Supporting Documentation:	Facilities Information Management System (FIMS) FIMS Site Validations	

Associated Performance in Prior Years

FY 2007:	Met	Annual NNSA complex-wide aggregate Facility Condition Index (FCI), as measured by deferred maintenance per replacement plant value, for all mission-essential facilities and infrastructure (the industry standard is below 5%). (EFFICIENCY MEASURE). (2.1.36.3) FY 2007 target: 6.8%
FY 2006:	Met	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)
FY 2005:	Met	Achieve an annual NNSA complex-wide aggregate Facility Condition Index (FCI) of 9 percent, as measured by deferred maintenance per replacement plant value, for all mission-essential facilities and infrastructure. (NA GG 1.38.04)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000088.2002.html
Program Office:	http://www.nnsa.doe.gov/infrastructure.htm#1	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Facilities & Infrastructure Recapitalization Program (2.1.36)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Facility Condition Index (FCI) for Mission Dependent Not Critical Facilities** Annual NNSA complex-wide aggregate Facility Index (FCI), as measured by deferred maintenance per replacement plant value, for all mission dependent, not critical facilities and infrastructure (EFFICIENCY MEASURE) FY 2008 target: 8.25%

2008 Results

Commentary:	Met	Achieved 93% of the annual target by reducing the aggregate Facility Condition Index (FCI) for all mission dependent, not critical facilities and infrastructure to 8.92% (target was 8.25%). This result is important because it demonstrates progress in improved facilities conditions and increased operational effectiveness and efficiency.
Future Plans / Explanation of Shortfalls:	The annual target will increase to 8.75% in FY 2009 to more accurately reflect the current status of the complex based on changes to the Facilities Information Management System (FIMS) database in FY 2008.	
Supporting Documentation:	Facilities Information Management System (FIMS) FIMS Site Validations	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000088.2002.html
Program Office:	http://www.nnsa.doe.gov/infrastructure.htm#1	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Defense Nuclear Security (2.1.57)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Physical Security Reviews** Cumulative percentage of Physical Security reviews conducted by the Office of Independent Oversight and Performance Assurance (OIO) and annual security surveys conducted by Federal Site Offices at NNSA sites that resulted in the rating of "effective" (based on reviews conducted in the past 12 months) (Long-term Output) FY 2008 target: 80%

2008 Results

Commentary:	Exceeded	Exceeded the annual target of 80% with an 88% effectiveness rating. This result is important because it identifies independent review ratings, which allows the program to take corrective action at sites that receive ratings of less than effective.
Future Plans / Explanation of Shortfalls:	The performance measure will be deleted in FY 2009 as this measure has consistently met or exceeded the target. New measures for DNS have been developed and reporting will begin in FY 2009.	
Supporting Documentation:	The Office of Independent Oversight Reports NNSA Site Office Surveys	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	N/A
Program Office:	http://www.nnsa.doe.gov/security.htm

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Defense Nuclear Security (2.1.57)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Design Basis Threat** Cumulative percentage of progress, measured in milestones completed towards implementation of all Design Basis Threat (DBT) policies at NNSA sites (Long-term Output) FY 2008 target: 100%

2008 Results

Commentary:	Met	Achieved the cumulative target of 100% of the relevant milestones identified for the Pantex site. These milestones were completed prior to the suspension of the 2005 DBT implementation effort, which was superseded by the DOE Graded Security Protection (GSP) policy. This result is important to successfully implement security improvements that will keep the NNSA sites among the best defended and secure facilities in the world.
Future Plans / Explanation of Shortfalls:	The performance measure will be deleted in FY 2009 because the 2005 DBT implementation effort was superseded by the DOE Graded Security Protection (GSP) policy. New measures for DNS have been developed and reporting will begin in FY 2009.	
Supporting Documentation:	Quarterly status reports	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	N/A
Program Office:	http://www.nnsa.doe.gov/security.htm

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Environmental Projects & Operations (2.1.38)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Environmental Monitoring and Remediation** Annual percentage of environmental monitoring and remediation deliverables that are required by regulatory agreements to be conducted at NNSA sites that are executed on schedule and in compliance with all acceptance criteria (Annual Output) FY 2008 target: 95%

2008 Results

Commentary:	Exceeded	Exceeded the annual target by submitting 100% of required environmental and monitoring remediation deliverables on schedule and in compliance with requirements. This result is important because it prevents notices of violation, fines, and loss of confidence by the regulators often associated with late and insufficient deliverables.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant at 95% in FY 2009.	
Supporting Documentation:	KCP RCRA Permit; LLNL Federal Facility Agreement; SNL Status and Monitoring Report to the New Mexico Environment Department (NMED)	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	N/A
Program Office:	http://www.nnsa.doe.gov/security.htm

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Environmental Projects & Operations (2.1.38)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**NNSA Long Term Stewardship Program** Cumulative cost savings totaling 10% over five years for the NNSA Long Term Stewardship program demonstrated by comparison of the actual annual costs of performing the Stewardship activities at a site as compared to the budgeted annual costs of performing these same activities using Earned Value Management (EVM) principles with a target savings of 2% per year (EFFICIENCY MEASURE) FY 2008 target: 2%

2008 Results

Commentary:	Met	Achieved the annual target of reducing the cost of performing Long-Term Stewardship activities versus the budgeted annual costs of performing these same activities by 2. This result is important because it challenges the NNSA sites performing LTS activities to perform the same amount of work for these activities at a reduced cost.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant at 2% in FY 2009.	
Supporting Documentation:	Site specific contractor budget tracking systems	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	N/A
Program Office:	http://www.nnsa.doe.gov/security.htm

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Cyber Security (2.1.58)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Cyber Security Reviews** Annual average percentage of Cyber Security reviews conducted by the Office of Health, Safety and Security (HSS) at NNSA sites that resulted in the rating of "effective" (based on the last HSS review at each site over 2 Cyber Security topical areas) (Long-term Output) FY 2008 target: 100%

2008 Results

Commentary:	Met	Achieved the annual target of receiving an HSS rating of effective on a cumulative 100% of cyber security elements at NNSA sites for the two assessments conducted. Although HSS only completed two of the three planned assessments for cyber security during this reporting period, this decision was made outside of Cyber Security program's control. This result is important because it ensure that the NNSA systems and network have met their certification and accreditation requirements as outlined in DOE, NNSA and Federal policies.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant at 100% in FY 2009.	
Supporting Documentation:	HSS Final Assessment Report	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of Cyber Security reviews conducted by the Office of Independent Oversight and Performance Assurance (OA) at NNSA sites that resulted in the rating of "effective" (based on last OA review at each site over 2 Cyber Security topical areas). (Long-term Output). (2.1.37.3) FY 2007 target: 57%
FY 2006:	Not Met	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)
FY 2005:	Not Met	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). (NA GG 1.39.03)

Additional Information

PART:	N/A
Program Office:	http://www.nnsa.doe.gov/security.htm

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Cyber Security (2.1.58)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Cyber Security Site Assessment (SAV)** Cumulative percentage of planned Cyber Security Site Assessment Visit (SAV) conducted by the Office of the Chief Information Officer (OCIO) Cyber Security Program Manager (CSPM) at NNSA sites that resulted in a rating of "effective." (Long-term Output) FY 2008 target: 100%

2008 Results

Commentary:	Not Met	Largely achieved the annual target by achieving a cumulative percentage of 85% on the SAVs conducted by the OCIO. This result is important because it ensures that the NNSA systems and network have met their certification and accreditation requirements as outlined in DOE, NNSA and Federal policies. The annual target was missed because the NNSA assessment process has been completely rewritten to meet new and changing requirements. The OCIO was not able to complete the scheduled assessment within during FY08.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant at 100% in FY 2009.	
Supporting Documentation:	1. OCIO Site Assessment Visit Report 2. Cyber Security Check List	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	N/A
Program Office:	http://www.nnsa.doe.gov/security.htm

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Cyber Security (2.1.58)
Strategic Goal(s) Supported:	Goal 2.1 Nuclear Deterrent
Measure:	**Cyber Certification and Accreditation** Annual number of NNSA information assets reviewed for certification and accreditation (EFFICIENCY MEASURE) FY 2008 target: 30

2008 Results

Commentary:	Exceeded	Exceeded the annual target of 30 Cerification and Accreditations by completing 42 packages by September 30, 2008. These accreditations will provide the OCIO with a tool to measure the effective and efficiency of the cyber security program as it relates to certification and accreditation. The OCIO certification team has completed its quarterly requirement. This result is important because it provides a measure for the accuracy of the cyber security program.
Future Plans / Explanation of Shortfalls:	The annual target will increase to 45 in FY 2009.	
Supporting Documentation:	Certification and Accreditation Plans	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	N/A
Program Office:	http://www.nnsa.doe.gov/security.htm

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Nonproliferation & Verification R&D (2.2.39)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Merit Reviewed Journals/Forums** Annual number of articles published in merit reviewed professional journals/forums representing leadership in advancing science and technology knowledge (Annual Output) FY 2008 target: 200

2008 Results

Commentary:	Exceeded	Exceeded the annual target of 200 merit-reviewed publications by publishing 235 articles. This result is important because it demonstrates the program is a leader in advancing nonproliferation science and technology knowledge.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant at 200 articles published in FY 2009.	
Supporting Documentation:	Quarterly reports/papers Annual peer-review publications Other forums reports	

Associated Performance in Prior Years

FY 2007:	Met	Annual number of articles published in merit reviewed professional journals/ forums representing leadership in advancing science and technology knowledge (Annual Output) (2.2.39.6) FY 2007 target: 200
FY 2006:	Met	Publish 200 articles in peer reviewed professional journals/ forums representing leadership in advancing science and technology knowledge. (NA GG 2.40.06)
FY 2005:	Met	Present 200 professional papers/exchanges, each representing Science and Technology knowledge and U.S. leadership in program areas. (NA GG 2.40.04)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003408.2005.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/na22_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Nonproliferation & Verification R&D (2.2.39)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Plutonium Production Detection** Cumulative percentage of progress toward demonstrating the next generation of technologies and methods to detect Plutonium Production activities. (Progress is measured against the baseline criteria and milestones published in the "FY 2006 R&D Requirements Document") (Long-term Outcome) FY 2008 target: 25%

2008 Results

Commentary:	Met	Achieved the annual target of 25% cumulative progress towards demonstrating the next generation of technologies to detect plutonium production activities. This result is important because it increases the U.S. capability to detect clandestine nuclear weapons production activities.
Future Plans / Explanation of Shortfalls:	The annual target will increase to 30% in FY 2009.	
Supporting Documentation:	1. Program Plan/Roadmap document 2. Memorandum for Record (unclassified, located in the R&D office, certified by the ADA)	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of progress toward demonstrating the next generation of technologies and methods to detect Plutonium production activities. (Progress is measured against the baseline criteria and milestones published in the "FY 2006 R&D Requirements Document") (Long-term Outcome) (2.2.39.2) FY 2007 target: 20%
FY 2006:	Met	Progress 10 percent (cumulative) toward demonstrating the next generation of technologies and methods to detect Plutonium Reprocessing activities. (NA GG 2.40.02)
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003408.2005.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/na22_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Nonproliferation & Verification R&D (2.2.39)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Independent Merit Review** Cumulative percentage of active research projects for which an independent R&D merit review 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) (EFFICIENCY MEASURE) FY 2008 target: 100%

2008 Results

Commentary:	Met	Achieved the annual target of 100% of active research projects receiving independent merit reviews. This result is important to verify scientific quality and mission relevance of each research project.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant at 100% in FY 2009.	
Supporting Documentation:	Quarterly reports Annual independent review status reports	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of active research projects for which an independent R&D merit 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) (EFFICIENCY MEASURE). (2.2.39.5) FY 2007 target: 100%
FY 2006:	Met	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)
FY 2005:	Met	Complete 70 percent of research projects for which an independent R&D merit assessment has been completed during the second year of effort, and again within each subsequent three year period to assess scientific quality and mission relevance. (NA GG 2.40.03)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003408.2005.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/na22_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Nonproliferation & Verification R&D (2.2.39)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Special Nuclear Material Detection** Cumulative percentage of progress toward demonstrating the next generation of technologies and methods to detect Special Nuclear Material movement. (Progress is measured against the baseline criteria and milestones published in the "FY 2006 R&D Requirements Document") (Long-term Outcome) FY 2008 target: 27%

2008 Results

Commentary:	Met	Achieved the annual target of 27% cumulative progress towards demonstrating the next generation of technologies to detect Special Nuclear Material movement. This result is important because it improves U.S. capability to detect the illicit transport and diversion of special nuclear material (SNM).
Future Plans / Explanation of Shortfalls:	The annual target will increase to 33% in FY 2009.	
Supporting Documentation:	1. Program Plan/Roadmap document 2. Memorandum for Record (unclassified, located in R&D office, certified by ADA)	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of progress toward demonstrating the next generation of technologies and methods to detect Special Nuclear Material movement. (Progress is measured against the baseline criteria and milestones published in the "FY 2006 R&D Requirements Document") (Long-term Outcome) FY 2007 target: 20%
FY 2006:	Met	Cumulative percentage of progress toward demonstrating the next generation of technologies and methods to detect Special Nuclear Material movement. (Progress is measured against the baseline criteria and milestones published in the "FY 2006 R&D Requirements Document") (Long-term Outcome) FY 2006 target: 10%
FY 2005:	Met	Cumulative percentage of progress toward demonstrating the next generation of technologies and methods to detect Special Nuclear Material movement. (Progress is measured against the baseline criteria and milestones published in the "FY 2006 R&D Requirements Document") (Long-term Outcome) FY 2005 target: 5%

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003408.2005.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/na22_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Nonproliferation & Verification R&D (2.2.39)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Uranium-235 Production Detection** Cumulative percentage of progress toward demonstrating the next generation of technologies and methods to detect Uranium-235 Production activities. (Progress is measured against the baseline criteria and milestones published in the "FY 2006 R&D Requirements Document") (Long-term Outcome) FY 2008 target: 20%

2008 Results

Commentary:	Met	Achieved the annual target of 20% cumulative progress towards demonstrating the next generation of technologies to detect uranium production activities. This result is important because it increases the U.S. capability to detect clandestine nuclear weapons production activities.
Future Plans / Explanation of Shortfalls:	The annual target will increase to 25% in FY 2009.	
Supporting Documentation:	1. Program Plan/Roadmap document 2. Memorandum for Record (unclassified, located in R&D office, certified by ADA)	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of progress toward demonstrating the next generation of technologies and methods to detect Uranium-235 production activities. (Progress is measured against the baseline criteria and milestones published in the "FY 2006 R&D Requirements Document") (Long-term Outcome) (2.2.39.1) FY 2007 target: 15%
FY 2006:	Met	Progress 10 percent (cumulative) toward demonstrating the next generation of technologies and methods to detect Uranium-235 Enrichment activities. (NA GG 2.40.01)
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003408.2005.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/na22_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Nonproliferation & Verification R&D (2.2.39)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Research and Development Detonation Detection** Annual index that summarizes the status of all NNSA nuclear detonation detection R&D deliveries that improve the nation's ability to detect nuclear explosions (Annual Output) FY 2008 target: 90%

2008 Results

Commentary:	Met	Exceeded the annual target of Nuclear Detonation Detection (NDD) deliveries. Although slow funding start at the beginning of the fiscal year limited production efforts and placed several deliveries behind schedule, the restoration of funds and work reprioritization, elimination of some testing and incurring increased risk enabled recovery of key deliverable schedule by end-of-year. This result is important because it tracks timeliness for delivery of NDD products within customer timelines/schedules, and identifies potential impacts on the nation's ability to detect nuclear detonations.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant at 90% in FY 2009.	
Supporting Documentation:	1. Quarterly reports 2. Final delivery transmittal letters to user agencies for satellite payloads ('Consent to Ship' letters) 3. Integrated Research Product Releases	

Associated Performance in Prior Years

FY 2007:	Met	Annual index that summarizes the status of all NNSA nuclear explosion monitoring R&D deliveries that improve the nation's ability to detect nuclear explosions (Annual Output). (2.2.39.4) FY 2007 target: 90%
FY 2006:	Met	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)
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003408.2005.html
Program Office:	http://www.nnsa.doe.gov/defense_programs/science.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Elimination of Weapons-Grade Plutonium Production (2.2.40)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Constructing Zheleznogorsk Fossil Plant** Cumulative percentage of progress towards constructing a fossil plant in Zheleznogorsk, facilitating the shut down of one weapons-grade plutonium production reactor (Long-term Output) FY 2008 target: 62.6%

2008 Results

Commentary:	Not Met	Did not achieve the annual target of 62.6% completion (completed 46% of the fossil plant). This result is important because completion of the fossil fuel plant will replace energy capacity from one of the three remaining Russian plutonium production reactors allowing it to be shutdown and the production of weapons-grade plutonium to be eliminated. The annual target was missed because of delays in design, procurement, and construction. Because this target was missed, the ADE-2 reactor may not be shut down in 2010 producing as much as 0.4 metric tons of plutonium in 2011. This additional 0.4 metric tons of plutonium, however, will be offset by the early shutdown of the two Seversk reactors.
Future Plans / Explanation of Shortfalls:	The Zheleznogorsk project has de-scoped electric power generation and plans to re-baseline the project in the first quarter of FY 2009. The annual target will be decreased to 70% from 96.4% in FY 2009 to reflect re-baselining of the project.	
Supporting Documentation:	Zheleznorgorsk Monthly Progress and Cost Performance Report	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of progress towards constructing a fossil plant in Zheleznogorsk shutting down one weapons-grade plutonium production reactor (Long-term Output) (2.2.40.3) FY 2007 target: 33.6%
FY 2006:	Met	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)
FY 2005:	Met	Achieve 4.8 percent progress (cumulative) towards constructing a fossil plant in Zheleznogorsk, facilitating shut down of one weapons -grade plutonium production reactor. (NA GG 2.42.02)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001044.2005.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/ewgpp.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Elimination of Weapons-Grade Plutonium Production (2.2.40)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Cost Performance Index (CPI) for Seversk Construction** 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 (EFFICIENCY MEASURE) FY 2008 target: 1.0

2008 Results

Commentary:	Met	Achieved 100% of the annual target of a standard EVMS cost performance index of 1.0 indicating the project is within budget. This result is important because it represents efficiency in constructing the Seversk fossil plant.
Future Plans / Explanation of Shortfalls:	The performance measure will be deleted in FY 2009, because the fossil plant in Seversk will be completed during that year. A new efficiency measure will be developed pertaining to the fossil plant in Zheleznogorsk.	
Supporting Documentation:	Seversk Monthly Progress and Cost Performance Report	

Associated Performance in Prior Years

FY 2007:	Met	Annual Cost Performance Index (CPI) for Seversk construction as measured by the ratio of budgeted cost of work performed to actual cost of work performed (EFFICIENCY MEASURE). (2.2.40.2) FY 2007 target: 1.0
FY 2006:	Met	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)
FY 2005:	Met	Achieve 1.0 against the Seversk Cost Performance Index (cumulative actual costs per budgeted cost of work performed at Seversk). (NA GG 2.42.05)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001044.2005.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/ewgpp.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Elimination of Weapons-Grade Plutonium Production (2.2.40)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Refurbishing Seversk Fossil Plant** Cumulative percentage of progress towards refurbishing a fossil plant in Seversk, shutting down two weapons-grade plutonium production reactors (Long-term Output) FY 2008 target: 90%

2008 Results

Commentary:	Met	Achieved 96% of the annual target by completing 87% of the refurbished fossil plant. This result is important because completion of the fossil plant will replace energy capacity from two of the three Russian plutonium production reactors allowing them to be shutdown.
Future Plans / Explanation of Shortfalls:	The annual target will increase to 100% in FY 2009.	
Supporting Documentation:	Seversk Monthly Progress and Cost Performance Report	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of progress towards refurbishing a fossil plant in Seversk shutting down two weapons-grade plutonium production reactors. (Long-term Output). (2.2.40.1) FY 2007 target: 72%
FY 2006:	Not Met	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)
FY 2005:	Not Met	Achieve 32 percent progress (cumulative) towards refurbishing a fossil plant in Seversk, facilitating shut down of two weapons -grade plutonium production reactors. (NA GG 2.42.01)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10001044.2005.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/ewgpp.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Nonproliferation & International Security (2.2.41)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Global Initiatives to Prevent Proliferation (GIPP) Scientist Redirection** 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 (and cumulative number who are employed in long-term private sector jobs resulting from NIS grants) (Long-term Outcome) FY 2008 target: 12,400 (4,700)

2008 Results

Commentary:	Exceeded	Exceeded the cumulative target of 12,400 displaced Russian and FSU WMD experts who are currently employed in GIPP grants or long-term private sector jobs by 4,000 for a total of 16,400 (and exceeded 4,700 who are employed in long-term private sector jobs resulting from NIS grants by 700 for a total of 5,400). This result is important because it prevents the migration of weapons of mass destruction expertise, to terrorists or states of concern, by redirecting displaced scientist and personnel to peaceful, sustainable civilian work.
Future Plans / Explanation of Shortfalls:	The performance measure will be replaced in FY 2009 with a new measure more representative of current program goals.	
Supporting Documentation:	1. DOE National Lab Survey 2. Annual USIC Survey of members 3. Info. from FSU plant management	

Associated Performance in Prior Years

FY 2007:	Met	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 (and cumulative number who are employed in long-term private sector jobs resulting from NIS grants). (Long-term Outcome). (2.2.41.2) FY 2007 target: 12,100 (4,400)
FY 2006:	Met	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)
FY 2005:	Not Met	Annual percentage of non-USG funding contributions obtained.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002132.2004.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/na24_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Nonproliferation & International Security (2.2.41)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Global Initiatives to Prevent Proliferation (GIPP) Non-USG Project Funding** Cumulative percentage of non-USG (private sector and foreign government) project funding contributions obtained relative to cumulative USG GIPP funding contributions (EFFICIENCY MEASURE) FY 2008 target: 78%

2008 Results

Commentary:	Exceeded	Exceeded the cumulative target of 78% project funding contributions obtained relative to cumulative USG GIPP funding contributions by 2% for a total of 80%. This result is important because it sustains the economic development of the closed cities and prevents the migration of weapons of mass destruction scientist and personnel to terrorists or states of concern.
Future Plans / Explanation of Shortfalls:	The cumulative target will be increased to 80% in FY 2009.	
Supporting Documentation:	1. Data in project management database (entered by National Labs) 2. Annual USIC survey of members	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of non-USG (private sector and foreign government) project funding contributions obtained relative to cumulative USG GIPP funding contributions. (EFFICIENCY MEASURE). (2.2.41.3) FY 2007 target: 75%
FY 2006:	Met	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)
FY 2005:	Met	Annual number of former Soviet weapons scientists, engineers, and technicians engaged.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002132.2004.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/na24_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Nonproliferation & International Security (2.2.41)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Nonproliferation Experts Trained** Annual number of international and domestic experts (e.g., IAEA inspectors, export control officers, physical protection personnel) trained in nonproliferation to fulfill the President's policy delineated on 11 February 2004 and implements the U.S.-sponsored UN Security Council Resolution 1540 criminalizing proliferation (Annual Output) FY 2008 target: 2,500

2008 Results

Commentary:	Exceeded	Exceeded the annual target of 2,500 by 110 for a total of 2,660 international and domestic experts trained in nonproliferation. 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.
Future Plans / Explanation of Shortfalls:	The performance measure will be replaced in FY 2009 with a new measure more representative of current program goals.	
Supporting Documentation:	Lists of attendees, sign-in sheets	

Associated Performance in Prior Years

FY 2007:	Met	Annual number of international and domestic experts (e.g., IAEA inspectors, export control officers, physical protection personnel) trained in nonproliferation to fulfill the President's policy delineated on 11 February 2004 and implement the U.S.-sponsored UN Security Council Resolution 1540 criminalizing proliferation. (Annual Output). (2.2.41.5) FY 2007 target: 1,330
FY 2006:	Met	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)
FY 2005:	Met	Train 5,500 (cumulative) international and domestic experts in nuclear nonproliferation since 9/11/01 (e.g. International Atomic Energy Agency inspectors, export control officers, etc.). (NA GG 2.44.02)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002132.2004.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/na24_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Nonproliferation & International Security (2.2.41)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Russian Weapons-Usable Highly Enriched Uranium (HEU) Eliminated** Cumulative metric tons of Russian weapons-usable HEU that U.S. experts have confirmed as permanently eliminated from the Russian stockpile under the HEU Purchase Agreement (Long-term Outcome) FY 2008 target: 342

2008 Results

Commentary:	Exceeded	Exceeded the cumulative target by confirming the elimination of 345 metric tons (MT) of HEU in FY 2008 (target was 342 MT). This result is important because it provides assurance that weapons-grade material is being eliminated from Russia's stockpile, and is no longer available for use in the nuclear weapons program.
Future Plans / Explanation of Shortfalls:	The cumulative target will be increased to 372 MT in FY 2009 in support of the long-term target of 500 MT by FY 2013.	
Supporting Documentation:	1. Status Report on U.S.-Russian Megatons to Megawatts Program (www.usec.com). 2. Russian HEU to LEU Contract Summary of Shipments, Amounts, Value, Payments, and Schedule (provided by USEC). 3. Russian HEU to LEU Contract Summary based on Fiscal Year (provided by SAIC). 4. Monitoring visit trip reports, process declarations, and mass flow reports.	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative metric tons of Russian weapons-usable HEU that U.S. experts have confirmed as permanently eliminated from the Russian stockpile under the HEU Purchase Agreement. (Long-term Outcome). (2.2.41.1) FY 2007: 312
FY 2006:	Met	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)
FY 2005:	N/A	

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002132.2004.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/na24_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Nonproliferation & International Security (2.2.41)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Technologies Transferred to Counter Proliferation** Annual number of technologies transferred to international regimes and other countries to prevent and counter WMD proliferation and nuclear-related terrorism (Annual Output) FY 2008 target: 4

2008 Results

Commentary:	Met	Achieved the annual target of 4 technologies transferred to international regimes and other countries to prevent and counter WMD proliferation and nuclear-related terrorism. This result is important because it provides policy and technical support to the International Atomic Energy Agency (IAEA) on verification technologies and international safeguards concerning countries suspected of having clandestine nuclear weapons programs.

Future Plans / Explanation of Shortfalls:	The performance measure will be replaced in FY 2009 with a new measure more representative of current program goals.
Supporting Documentation:	1. Action Sheets 2. Monthly Reports from Laboratories 3. Minutes from Permanent Coordinating Group meetings 4. Shipping documents 5. Technical documents (e.g. laboratory-generated reports)

Associated Performance in Prior Years

FY 2007:	Met	Annual number of technologies transferred to international regimes and other countries to prevent and counter WMD proliferation and nuclear-related terrorism. (Annual Output). (2.2.41.4) FY 2007 target: 5
FY 2006:	Met	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)
FY 2005:	Met	Cumulative number of technologies commercialized or businesses created.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10002132.2004.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/na24_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	International Nuclear Materials Protection & Cooperation (2.2.42)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Highly Enriched Uranium (HEU) conversion to Low Enriched Uranium (LEU)** Cumulative metric tons of HEU converted to LEU (Long-term Outcome) FY 2008 target: 11.0

2008 Results

Commentary:	Met	Achieved 97% of the annual target by blending down a cumulative total of 10.7 metric tons (MTs) of HEU to LEU. This result is important because it prevents the theft/diversion of excess HEU.
Future Plans / Explanation of Shortfalls:	The cumulative target will be increased to 12.4 metric tons converted in FY 2009.	
Supporting Documentation:	Monthly U.S. monitoring visits to the downblending sites to validate process results Contract deliverable downblending and monthly status reports	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative metric tons of HEU converted to LEU. (Long-term Outcome). (2.2.42.3) FY 2007 target: 9.5
FY 2006:	Not Met	Convert 8.6 metric tons (cumulative) of highly enriched uranium (HEU) to low enriched uranium (LEU). (NA GG 2.46.03)
FY 2005:	Not Met	Convert 7.5 (cumulative) metric tons of Highly Enriched Uranium to Low Enriched Uranium. (NA GG 2.46.04)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000108.2007.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	International Nuclear Materials Protection & Cooperation (2.2.42)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Material Protection, Control, and Accounting (MPC&A) Upgrades** Cumulative number of warhead sites with completed MPC&A upgrades (Long-term Output) FY 2008 target: 64

2008 Results

Commentary:	Exceeded	Exceeded the annual target of securing 64 warhead sites by one site for a total of 65 sites. This result is important because it prevents the theft/diversion of vulnerable nuclear weapons for use by terrorists.
Future Plans / Explanation of Shortfalls:	The cumulative target will be increased to 73 warhead sites completed in FY 2009.	
Supporting Documentation:	1. Monthly progress reports 2. Assurance site visits 3. Contract deliverables and in-progress reviews	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative number of warhead sites with completed MPC&A upgrades. (Long-term Output). (2.2.42.2) FY 2007 target: 58
FY 2006:	Met	Complete 53 security upgrades at warhead sites. (NA GG 2.46.02)
FY 2005:	N/A	

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000108.2007.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	International Nuclear Materials Protection & Cooperation (2.2.42)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Second Line of Defense (SLD) Sites** Cumulative number of Second Line of Defense (SLD) sites with nuclear detection equipment installed (Cumulative number of Megaports completed) (Long-term Output) FY 2008 target: 224 (23)

2008 Results

Commentary:	Exceeded	Exceeded the annual target by completing installations of radiation detection equipment at a cumulative total of 232 sites (including 19 Megaports). This result is important because it provides host governments with the technical means to detect, deter and interdict illicit trafficking of nuclear and other radioactive materials.
Future Plans / Explanation of Shortfalls:	The cumulative target will be increased to 291 border crossing sites (29 Megaports) in FY 2009.	
Supporting Documentation:	Schedules, trip reports, acceptance testing documentation	

Associated Performance in Prior Years

FY 2007:	Not Met	Cumulative number of Second Line of Defense (SLD) sites with nuclear detection equipment installed. (Cumulative number of Megaports completed) (Long-term Output). (2.2.42.4) FY 2007 target: 173 (12)
FY 2006:	Not Met	Install 114 (cumulative) Second Line of Defense (SLD) sites with nuclear detection equipment installed. (Complete a cumulative 10 Megaports.) (NA GG 2.46.04)
FY 2005:	Not Met	Achieve 98 (cumulative) Second Line of Defense (SLD) sites with nuclear detection equipment installed, along with 5 (cumulative) Megaports completed. (NA GG 2.46.06)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000108.2007.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	International Nuclear Materials Protection & Cooperation (2.2.42)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Material Protection, Control and Accounting (MPC&A) Upgrades - Buildings** Cumulative number of buildings containing weapons-usable material with completed MPC&A upgrades (Long-term Output) FY 2008 target: 191

2008 Results

Commentary:	Met	Achieved 96% of the annual target by completing MPC&A upgrades at a cumulative total of 181 buildings. This result is important because it prevents the theft/diversion of vulnerable nuclear weapons for use by terrorists.
Future Plans / Explanation of Shortfalls:	The cumulative target will be increased to 214 buildings upgraded in FY 2009.	
Supporting Documentation:	1. Statements of Work and Contracts for Security Upgrade Construction and System Installation 2. Progress Reports from Contractors and Russian Sites 3. Assurance Visit Reports 4. Monthly Reports by Project 5. Quarterly Reports by Project 6. Annual Close-Out Reports by Project	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative number of buildings with weapons-usable material secured. (EFFICIENCY MEASURE). (2.2.42.1) FY 2007 target: 190
FY 2006:	Met	Secure 175 (cumulative) buildings with weapons-usable material. (NA GG 2.46.01)
FY 2005:	N/A	

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000108.2007.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	International Nuclear Materials Protection & Cooperation (2.2.42)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Megaports with Host Country Cost Sharing** Cumulative number of Megaports with host country cost sharing, resulting in decreased costs to the US program (estimated cost sharing value) (EFFICIENCY MEASURE) FY 2008 target: 5 ($24M)

2008 Results

Commentary:	Not Met	Did not achieve the annual target of completing five Megaports under a cost-sharing arrangement. Completed three cost-sharing Megaports with estimated cost-savings to the US Government of $14M (target was 5 ports with a total estimated cost-savings of $24M). This result is important because these cost sharing agreements result in reduced costs for the U.S. Second Line of Defense Program. The annual target was missed because of schedule delays at the port of Zeebrugge in Belgium and at the port of Veracruz in Mexico. Because this target was missed the decreased costs to the US program will not be achieved until early 2009.
Future Plans / Explanation of Shortfalls:	Host country design approvals have been completed and contracting issues have been resolved at both ports. Both ports are on track to be completed in early 2009. The cumulative target will be increased to 8 Megaports under a cost-sharing agreement, with estimated cost savings to the US Government of $13M.	
Supporting Documentation:	Schedules, trip reports, acceptance testing documentation	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000108.2007.html
Program Office:	http://www.nnsa.doe.gov/na%2D20/	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Fissile Materials Disposition (2.2.43)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Pit Disassembly and Conversion Facility (PDCF)** Cumulative percentage of the design, construction, and cold start-up activities completed for the Pit Disassembly and Conversion Facility (PDCF) (Long-term Output) FY 2008 target: 19%

2008 Results

Commentary:	Data Not Available	This project was transferred to the Directed Stockpile Work (DSW) Office of Defense Programs on March 28, 2008. There is currently no performance measure within NA-10 DSW to track this.
Future Plans / Explanation of Shortfalls:		This project was transferred to the NA-10 Directed Stockpile Work (DSW) Office of Defense Programs on March 28, 2008. There is currently no reportable performance measure within the DSW program to track the PDCF project's progress.
Supporting Documentation:		EVMS and cost data from the PDCF consolidated monthly status reports

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of the design, construction, and cold start-up activities completed for the Pit Disassembly and Conversion Facility (PDCF) Facility (Long-term Output). (2.2.43.2) FY 2007 target: 18%
FY 2006:	Met	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)
FY 2005:	Not Met	Complete 100 percent (cumulative) of the detailed design, and 25 percent (cumulative) of site preparation for the Pit Disassembly and Conversion Facility (PDCF). (NA GG 2.47.01)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003238.2006.html
Program Office:	http://www.nnsa.doe.gov/nuclear nonrpoliferation/1977.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Fissile Materials Disposition (2.2.43)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Mixed Oxide (MOX) Fuel Fabrication Facility** Cumulative percentage of the design, construction, and cold start-up activities completed for the Mixed Oxide (MOX) Fuel Fabrication Facility (Long-term Output) FY 2008 target: 30%

2008 Results

Commentary:	Met	Achieved the cumulative target of 30% of the facility and equipment design, construction, and cold start-up activities for the MOX facility. The initial estimated impact from the 2008 appropriation reduction has been mitigated for FY 2008 activities, however postponing efforts into the outyears has resulted in a request to change the project's cost and schedule baseline. This result is important because it demonstrates progress toward the Department's goal of disposing of at least 34 metric tons of surplus U.S. weapons-grade plutonium.
Future Plans / Explanation of Shortfalls:	The annual target will increase to 39% in FY 2009 in support of the goal to complete the design, construction and cold start-up activities for the MOX facility in 2016.	
Supporting Documentation:	Earned Value Management System (EVMS) data from MOX FFF Monthly Status Report	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of the design, construction, and cold start-up activities completed for the Mixed Oxide (MOX) Fuel Fabrication Facility (Long-term Output) (2.2.43.1) FY 2007 target: 24%
FY 2006:	Met	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)
FY 2005:	Not Met	Complete 100 percent (cumulative) of the detailed design, and begin site preparation and procurement for the mixed oxide (MOX) Fuel Fabrication Facility. (NA GG 2.47.02)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003238.2006.html
Program Office:	http://www.nnsa.doe.gov/nuclear nonrpoliferation/1977.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Fissile Materials Disposition (2.2.43)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**U.S. Highly Enriched Uranium (HEU) Downblended** Cumulative amount of surplus U.S. highly enriched uranium (HEU) down-blended or shipped for down-blending (EFFICIENCY MEASURE) FY 2008 target: 112MT

2008 Results

Commentary:	Exceeded	Exceeded the annual target by down-blending or shipping for down-blending 14 metric tons (MT) of surplus U.S. HEU in FY 2008, for a cumulative amount of 117 MT. The target was 112 MT and shipments were accelerated due to DOT certification expiring on certain existing shipping containers. This result is important because it is contributing to the Department's goal of disposing of surplus U.S. HEU.
Future Plans / Explanation of Shortfalls:	The annual target will increase to 125 MT in FY 2009 in support of the goal to complete disposition of the 217 MT of surplus HEU by 2050.	
Supporting Documentation:	BWXT Y-12 monthly program status documents	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative amount of surplus U.S. highly enriched uranium (HEU) down-blended or shipped for down-blending (EFFICIENCY MEASURE). (2.2.43.3) FY 2007 target: 103MT
FY 2006:	Met	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)
FY 2005:	Met	Downblend, or ship for downblending, 82 MT (cumulative) of surplus U.S. HEU. (NA GG 2.47.03)

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003238.2006.html
Program Office:	http://www.nnsa.doe.gov/nuclear nonrpoliferation/1977.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Global Threat Reduction Initiative (2.2.44)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Highly Enriched Uranium (HEU) Reactors Shutdown** Cumulative HEU reactors converted or shut down (Long-term Outcome) FY 2008 target: 62

2008 Results

Commentary:	Met	Achieved the annual target by converting or verifying the shutdown of a cumulative 62 HEU reactors. The annual target reflects approved revisions due to FY2008 funds and the Continuing Resolution. This result is important because to date conversion of these reactors has reduced the amount of civil commerce in HEU by 300/kg per year.
Future Plans / Explanation of Shortfalls:	The target will increase to the cumulative number of 68 HEU reactors converted or cerified as shutdown prior to conversion in FY 2009.	
Supporting Documentation:	1. GTRI Scorecard 2. Written Notification of conversion 3. Conversion Report	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative HEU reactors converted or verified as shutdown (Long-term Outcome). (2.2.44.1) FY 2007 target: 53
FY 2006:	Not Met	Convert 46 (cumulative) targeted research/test reactors from highly enriched uranium (HEU) to low enriched uranium fuel (LEU). (NA GG 2.64.01)
FY 2005:	Not Met	Convert 44 (cumulative) targeted research/test reactors from HEU to LEU fuel. (NA GG 2.64.01)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003239.2006.html
Program Office:	http://www.nnsa.doe.gov/Na-20/na21_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Global Threat Reduction Initiative (2.2.44)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Nuclear Material Removed** Cumulative kilograms of nuclear material (HEU and plutonium) removed or disposed (Long-term Outcome) FY 2008 target: 2,133

2008 Results

Commentary:	Met	Achieved 91% of the annual target of removing a cumulative total of 2,133 kilograms of HEU and plutonium, resulting in the removal of 1,948 kilograms of HEU. The annual target reflects approved revisions due to FY2008 funds and the Continuing Resolution. This result is important because this effort will minimize the amount of weapons-usable material around the world.
Future Plans / Explanation of Shortfalls:	The target will increase to the cumulative number of 2,371 kilograms of nuclear material (HEU and plutonium) removed or disposed in FY 2009.	
Supporting Documentation:	1. GTRI Scorecard 2. Notification of removal 3. Remove Report	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative kilograms of nuclear material (HEU and plutonium) removed or disposed (Long-term Outcome). (2.2.44.2) FY 2007 target: 1,671
FY 2006:	Not Met	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)
FY 2005:	Not Met	Repatriate 175 kilograms (cumulative) of HEU fresh and/or spent fuel from Soviet-supplied research reactors to Russia. (NA GG 2.64.02)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003239.2006.html
Program Office:	http://www.nnsa.doe.gov/Na-20/na21_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Global Threat Reduction Initiative (2.2.44)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Radiological Sites Protected** Cumulative high priority international radiological sites protected (Long-term Outcome) FY 2008 target: 730

2008 Results

Commentary:	Exceeded	Exceeded the annual target of protecting a cumulative total of 730 vulnerable, high-priority international radiological sites, for a cumulative total of 755 sites protected. The annual target reflects approved revisions due to FY2008 funds and the Continuing Resolution. This result is important because it reduces the risk posed by radioactive materials worldwide that could be used in radiological dispersal devices. The cumulative target calculation methodology has changed for FY 2009; the recalculated FY 2008 target is 516.
Future Plans / Explanation of Shortfalls:	The target, based on the revised calculation metholology, will increase to the cumulative number of 694 buildings with high-priority nuclear and radiological materials secured in FY 2009.	
Supporting Documentation:	1. GTRI Scorecard 2. Monthly notification of protection 3. Work team reports 4. Global Threat Reduction Initiative Programmatic Guidelines for Site 5. Prioritization and Protection Implementation	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative high priority radiological sites protected (Long-term Outcome). (2.2.44.4) FY 2007 target: 590
FY 2006:	Met	Secure 498 (cumulative) high priority sites with vulnerable radiological material. (NA GG 2.64.05)
FY 2005:	Met	Secure 174 high priority sites (cumulative) with vulnerable radiological material. (NA GG 2.64.05)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003239.2006.html
Program Office:	http://www.nnsa.doe.gov/Na-20/na21_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Global Threat Reduction Initiative (2.2.44)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Radiological Sources Removed** Cumulative U.S. radiological sources removed or disposed (Long-term Outcome) FY 2008 target: 17,500

2008 Results

Commentary:	Exceeded	Exceeded the annual target by removing a cumulative total of 18,656 excess domestic radiological sources. The annual target reflects approved revisions due to FY2008 funds and the Continuing Resolution. This result is important because this effort will minimize the amount of excess and unwanted radioactive material that could be used in radiological dispersal devices.
Future Plans / Explanation of Shortfalls:	The target will increase to a cumulative number of 23,550 excess domestic radiological sources removed in FY 2009.	
Supporting Documentation:	1. GTRI Scorecard 2. Monthly notification of removals 3. Work team reports 4. Radiological recovery life cycle plan 5. GTRI website http://osrp.lanl.gov/	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative U.S. radiological sources removed or disposed (Long-term Outcome). (2.2.44.3) FY 2007 target: 15,455
FY 2006:	Met	7,115 (cumulative) fuel assemblies containing U.S.-origin spent fuel returned from foreign research reactors. (NA GG 2.64.03)
FY 2005:	Met	Return 6,693 fuel assemblies (cumulative) containing U.S.-origin spent fuel from foreign research reactors. (NA GG 2.64.03)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003239.2006.html
Program Office:	http://www.nnsa.doe.gov/Na-20/na21_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Global Threat Reduction Initiative (2.2.44)
Strategic Goal(s) Supported:	Goal 2.2 Weapons of Mass Destruction
Measure:	**Contracted Funds with the Private Sector** Cumulative funds contracted directly with the private sector (EFFICIENCY MEASURE) FY 2008 target: $1.3M

2008 Results

Commentary:	Exceeded	Exceeded the annual target by contracting a cumulative $2.9M funds with the private sector. The annual target reflects approved revisions due to FY2008 funds and the Continuing Resolution. This result is important because it reduces the overall cost necessary to remove or protect nuclear and radiological materials worldwide than would otherwise occur through funding through government laboratories.
Future Plans / Explanation of Shortfalls:		The performance measure will be replaced in FY 2009 with a new measure more representative of current program goals.
Supporting Documentation:		1. GTRI Scorecard 2. Task Order Tracking List 3. Task Orders

Associated Performance in Prior Years

FY 2007:	Not Met	Cumulative funds contracted directly with the private sector (EFFICIENCY MEASURE). (2.2.44.5) FY 2007 target: $1M
FY 2006:	N/A	
FY 2005:	N/A	

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003239.2006.html
Program Office:	http://www.nnsa.doe.gov/Na-20/na21_index.shtml	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Naval Reactors (2.3.45)
Strategic Goal(s) Supported:	Goal 2.3 Nuclear Propulsion Plants
Measure:	**Naval Reactors Facility Condition Index (FCI)** Annual Naval Reactors complex-wide aggregate Facility Condition Index, as measured by deferred maintenance per replacement plant value for all program facilities and infrastructure (Annual Output) FY 2008 target: 5%

2008 Results

Commentary:	Exceeded	Exceeded the annual target by achieving a Facility Condition Index (FCI) of less than 4%. This result is important because it assesses the operational condition of program facilities to ensure program infrastructure is maintained in order to accomplish mission activities in the safest, most reliable, most effective, and most efficient manner.
Future Plans / Explanation of Shortfalls:	The annual target will be decreased in FY 2009 to achieving a FCI of less than 4%.	
Supporting Documentation:	Deferred maintenance and plant replacement value reported in FIMS	

Associated Performance in Prior Years

FY 2007:	Met	Annual Naval Reactors complex-wide aggregate Facility Condition Index, as measured by deferred maintenance per replacement plant value for all program facilities and infrastructure. (Annual Output). (2.3.45.7) FY 2007 target: 5%
FY 2006:	Met	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 infrastructur e. (NA GG 3.49.06)
FY 2005:	N/A	

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003404.2005.html
Program Office:	http://www.nnsa.doe.gov/navalreactors.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Naval Reactors (2.3.45)
Strategic Goal(s) Supported:	Goal 2.3 Nuclear Propulsion Plants
Measure:	**Fleet Reactor Plant Operations** Cumulative miles steamed, in millions, of safe, reliable, militarily effective nuclear propulsion plant operation supporting National security requirements (Long-term Outcome) FY 2008 target: 140

2008 Results

Commentary:	Met	Achieved the annual target by completing 140 million cumulative miles safely steamed. This result is important because it measures the safety and reliability of operating nuclear propulsion plants.
Future Plans / Explanation of Shortfalls:	The annual target will be increased to 142 million miles in FY 2009 in support of the long-term target of 154 million miles safely steamed by 2015.	
Supporting Documentation:	Commissioned Ship Operating Reports	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative miles steamed, in millions, of safe, reliable, militarily effective nuclear propulsion plant operation supporting National security requirements (Long-term Outcome). (2.3.45.1) FY 2007 target: 138
FY 2006:	Met	Achieve 134 million miles (cumulative) of safe, reliable, militarily effective nuclear propulsion plant operation supporting National security requirements. (NA GG 3.49.01)
FY 2005:	Met	Achieve 132 million cumulative miles of safe reactor plant operation supporting National security requirements (NA GG 3.49.01)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003404.2005.html
Program Office:	http://www.nnsa.doe.gov/navalreactors.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Naval Reactors (2.3.45)
Strategic Goal(s) Supported:	Goal 2.3 Nuclear Propulsion Plants
Measure:	**Program Operations** Annual percentage of Program operations that have no adverse impact on human health or the quality of the environment (Annual Outcome) FY 2008 target: 100%

2008 Results

Commentary:	Met	Achieved the annual target by ensuring that 100% of program operations have no adverse impact on human health or the quality of the environment. This result is important because it assesses human heath and environmental risks associated with program operations.
Future Plans / Explanation of Shortfalls:	The annual target will remain constant in FY 2009 at ensuring 100% of program operations have no adverse impact on human health or the quality of the environment.	
Supporting Documentation:	Annual Monitoring Report	

Associated Performance in Prior Years

FY 2007:	Met	Annual percentage of Program operations that have no adverse impact on human health or the quality of the environment (Annual Outcome) (2.3.45.5) FY 2007 target: 100%
FY 2006:	Met	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)
FY 2005:	Met	Achieve 100 percent of annual program operations with no adverse impact on human health or the quality of the environment. (NA GG 3.49.07)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003404.2005.html
Program Office:	http://www.nnsa.doe.gov/navalreactors.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Naval Reactors (2.3.45)
Strategic Goal(s) Supported:	Goal 2.3 Nuclear Propulsion Plants
Measure:	**A1B Reactor Plant Design** Cumulative percentage of completion on the next-generation aircraft carrier reactor plant design (Long-term Outcome) FY 2008 target: 85%

2008 Results

Commentary:	Met	Achieved the annual target by completing a cumulative 85% of the next-generation aircraft carrier reactor plant design. This result is important because it provides the Navy with next-generation aircraft carrier propulsion plant technology that increases core energy, provides nearly three times the electric plant generating capability and will require half of the reactor department sailor's needed as compared to today's CVNs.
Future Plans / Explanation of Shortfalls:	The annual target will be increased to 88% in FY 2009 in support of the long-term target of completing 100% of the next-generation aircraft carrier reactor plant design by 2015.	
Supporting Documentation:	CVN 21 Propulsion Plant Planning Estimate & Actual Reporting	

Associated Performance in Prior Years

FY 2007:	Met	Cumulative percentage of completion on the next-generation aircraft carrier reactor plant design (Long-term Outcome). (2.3.45.3) FY 2007 target: 80%
FY 2006:	Met	Complete 75 percent of the next-generation aircraft carrier reactor plant design. (NA GG 3.49.03)
FY 2005:	Met	Complete 70 percent (cumulative) of the next-generation aircraft carrier reactor plant design. (NA GG 3.49.04)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003404.2005.html
Program Office:	http://www.nnsa.doe.gov/navalreactors.htm	

FY 2008 Performance Measures

Office:	National Nuclear Security Administration
Program:	Naval Reactors (2.3.45)
Strategic Goal(s) Supported:	Goal 2.3 Nuclear Propulsion Plants
Measure:	**Utilization of Test Reactor Plants** Annual utilization factor for operation of test reactor plants (EFFICIENCY MEASURE) FY 2008 target: 90%

2008 Results

Commentary:	Exceeded	Exceeded the annual target by achieving a utilization rate of 92%. This result is important because it represents a cost-effective way of training Naval nuclear plant operators.
Future Plans / Explanation of Shortfalls:		The annual target will remain constant in FY 2009 at achieving a minimum utilization rate of 90% for the operation of test reactor plants.
Supporting Documentation:		Prototype Annual Activity Schedule & Actual Reporting

Associated Performance in Prior Years

FY 2007:	Met	Annual utilization factor for operation of test reactor plants (EFFICIENCY MEASURE). (2.3.45.6) FY 2007 target: 90%
FY 2006:	Met	Achieve a 90 percent utilization factor for operation of test reactor plants. (NA GG 3.49.05)
FY 2005:	Met	Achieve 90 percent annual utilization factor for operation of test reactor plants. (NA GG 3.49.02)

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10003404.2005.html
Program Office:	http://www.nnsa.doe.gov/navalreactors.htm	

FY 2008 Performance Measures

THEME 3 - SCIENTIFIC DISCOVERY AND INNOVATION

Office:	Office of Science
Program:	High Energy Physics (3.1/2.46)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Const/MIE Cost and Schedule** Achieve less than 10% for both the cost-weighted mean percentage variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects.

2008 Results

Commentary:	Met	Cost weighted average variances for Daya Bay Reactor Neutrino Experiment and Dark Energy Survey is 1.04 for cost and 0.95 for schedule.
Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.	
Supporting Documentation:	Derived from Quarterly Project Reports for the following projects, once they have approved performance baselines (CD-2): 1. NOvA; 2. Reactor Neutrino Detector; 3. Dark Energy Survey. 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), and a web site is under development.	

Associated Performance in Prior Years

FY 2007:	Met	Achieve less than 10% for both the cost-weighted mean percentage variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects. FY 2007 actual: Cost variance for ATLAS is +0.8%. Cost variance for CMS is +1.1%. Total project cost-weighted average is +1.0%. Schedule variance for both ATLAS and CMS is less than 0.1%. Therefore, the total project cost-weighted average is less than 0.1%.
FY 2006:	Met	Maintained cost and schedule milestones for major items of equipment and new construction projects within 10% of baseline estimates.
FY 2005:	Met	Maintained cost and schedule milestones for upgrades and new major construction projects within 10% of baseline estimates.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000104.2003.html
Program Office:	http://www.sc.doe.gov/	

FY 2008 Performance Measures

Office:	Office of Science
Program:	High Energy Physics (3.1/2.46)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Facility Ops** Achieve greater than 80% 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.

2008 Results

Commentary:	Met	Fermi had 15.6% and SLAC had 14.6% unscheduled downtime for the year. The weighted average is 15.4%.
Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.	
	Derived from letters from Lab Directors or designee. Fermi data are reported at same website as for SC CDF/D-Zero Detector (http://www-bdnew.fnal.gov/operations/lum/supertable.html); SLAC data at same website as for BABAR Detector (http://www.slac.stanford.edu/grp/ad/PEPII_Run_Time_Statistics/PEP%20FY2003-5%20totals%20for%20DOE.pdf.)	
Supporting Documentation:	The scientific user facilities and scheduled hours: - the Fermilab Tevatron, 5040. - the Stanford Linear Accelerator (SLAC) B-factory, 5720 for a total of 10760 hours (8608 hours is 80%). Unscheduled downtime reported by each facility is averaged, weighted by the Facility Operations cost. Facility Operations costs are defined in the Facilities Summary section of the HEP FY08 budget submission.	

Associated Performance in Prior Years

FY 2007:	Met	Achieve greater than 80% 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. FY 2007 actual: Fermi operation time was 83% in FY07 and SLAC operation time was 81%. Overall HEP average is 82%.
FY 2006:	Not Met	Maintained and operated HEP facilities such that unscheduled downtime was on average less than 20% of the total scheduled operating time.
FY 2005:	Not Met	Maintained and operated HEP facilities such that unscheduled downtime was on average less than 20% of the total scheduled operating time.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000104.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	High Energy Physics (3.1/2.46)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**BABAR Detector** Deliver within 20% of baseline estimate a total integrated amount of data (in inverse femtobarns [fb^{-1}]) delivered to the BABAR detector at the Stanford Linear Accelerator (SLAC) B-factory. The FY08 baseline is 25 fb^{-1}, so within 20% of baseline is 20 fb^{-1}.

2008 Results

Commentary:	Met	B-factory delivered 49 fb^{-1} to BABAR. The immediate reaction to the FY 2008 appropriation was to cease operations of the B-factory, and the goal was set using this assumption. After further consideration, a programmatic decision was made to fund two additional months of running.
Future Plans / Explanation of Shortfalls:	BABAR detector operations are terminated. Target will not be continued in FY09.	
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.	

Associated Performance in Prior Years

FY 2007:	Not Met	Deliver within 20% of baseline estimate a total integrated amount of data (in inverse femtobarns [fb^{-1}]) delivered to the BABAR detector at the Stanford Linear Accelerator (SLAC) B-factory. The FY 2007 baseline is 130 fb^{-1}, so within 20% of baseline is 104 fb^{-1}. FY 2007 actual: B-factory delivered 90 fb^{-1} to the BABAR detector in FY07.
FY 2006:	Met	Delivered data as planned within 20% of the baseline estimate (100 fb^{-1}) to the BaBar detector at the SLAC B-factory.
FY 2005:	Met	Delivered data as planned within 20% of baseline estimate (50 fb^{-1}) to the BaBar detector at the SLAC B-factory.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000104.2003.html
Program Office:	http://www.sc.doe.gov/	

FY 2008 Performance Measures

Office:	Office of Science
Program:	High Energy Physics (3.1/2.46)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**CDF/D-Zero Detector** Deliver within 20% of baseline estimate a total integrated amount of data (in inverse picobarns, [pb^{-1}]) to the CDF and D-Zero detectors at the Tevatron . The FY08 baseline is 1000 pb^{-1}, so within 20% of baseline is 800 pb^{-1}.

2008 Results

Commentary:	Met	Tevatron delivered 1786 pb^{-1} for the year. Performance for the year was high for several reasons. The planned 10 week maintenance shutdown was delayed until FY 2009 to maximize delivered luminosity before the start of operations of the LHC. Performance of the Tevatron was also somewhat higher than expected as the laboratory has learned new ways to exploit the upgrades to the complex that were completed in FY 2006.
Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.	
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. Target performance is determined from the average integated luminosity (average of CDF and D-Zero). "	

Associated Performance in Prior Years

FY 2007:	Met	Deliver within 20% of baseline estimate a total integrated amount of data (in inverse picobarns, [pb^{-1}]) to the CDF and D-Zero detectors at the Tevatron . The FY 2007 baseline is 800 pb^{-1}, so within 20% of baseline is 640 pb^{-1}. FY 2007 actual: Tevatron delivered 1311 pb^{-1} to CDF and D-Zero.
FY 2006:	Met	Delivered data as planned within 20% of the baseline estimate (675 pb^{-1}) to CDF and D-Zero detectors at the Tevatron.
FY 2005:	Met	Delivered data as planned within 20% of the baseline estimate (390 pb^{-1}) to CDF and D-Zero detectors at the Tevatron.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000104.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	High Energy Physics (3.1/2.46)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**MINOS Detector** Measure within 20% of the total integrated amount of data (in photons-on-target) delivered to the MINOS detector using the NuMI facility. The FY08 baseline is 2.0 x 10^{20} photons-on-target, so within 20% of baseline is 1.6 x 10^{20} photons-on-target.

2008 Results

Commentary:	Met	Total photons on the NuMI target was 1.97 x 10^{20} for the year.
Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.	
Supporting Documentation:	http://www-bdnew.fnal.gov/operations/lum/supertable.html. This page, "Quarterly Performance Numbers," lists the number of photons-on-target for each quarter.	

Associated Performance in Prior Years

FY 2007:	Met	Measure within 20% of the total integrated amount of data (in photons-on-target) delivered to the MINOS detector using the NuMI facility. The FY 2007 baseline is 1.5 x 10^{20} photons-on-target, so within 20% of baseline is 1.2 x 10^{20} photons-on-target. FY 2007 actual: NuMI delivered 1.9 x 10^20 protons-on-target.
FY 2006:	Met	Delivered data as planned within 20% of the baseline estimate (1x10^{20} photons on target) for the MINOS experiment using the NuMI facility.
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000104.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Nuclear Physics (3.1/2.47)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Heavy-Ion Collision Events** Weighted average number (within 30% of baseline estimate) of millions of heavy-ion collision events sampled by the PHENIX and recorded by the STAR detectors, respectively, at the Relativistic Heavy Ion Collider (RHIC). FY08 Baseline: PHENIX sample= 200,000; STAR recorded=65. Within 30% of baseline: PHENIX sample >= 140,000; STAR recorded >= 45.5.

2008 Results

Commentary:	Met	PHENIX sampled 159,000 million heavy-ion collision events and STAR recorded 67.2 million events.
Future Plans / Explanation of Shortfalls:	Target will be continued with a revised goal based on appropriated funding for FY09.	
Supporting Documentation:	Official letter from BNL management to NP Office reporting and certifying accuracy of heavy-ion collision events sampled by the PHENIX and recorded by the STAR detectors at RHIC. (An email and official letter from Steve Vigdor submitted to SC-26.)	

Associated Performance in Prior Years

FY 2007:	Met	Weighted average number (within 30% of baseline estimate) of millions of heavy-ion collision events sampled by the PHENIX and recorded by the STAR detectors, respectively, at the Relativistic Heavy Ion Collider. FY07 Baseline: PHENIX sample= 6500; STAR recorded=60. FY07 within 30% of baseline: PHENIX sample >= 4500; STAR recorded >= 42. FY 2007 actual: Sampled 5,100 million events in PHENIX and STAR recorded 86.6 million events.
FY 2006:	N/A	No Target. (The Relativistic Heavy Ion Collider did not operate in heavy ion mode during FY 2006)
FY 2005:	Met	Weighted average number (within 30% of baseline estimate of millions of events sampled by the PHENIX (900) and recorded by the STAR (40) detectors, respectively, at the Relativistic Heavy Ion Collider.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000114.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Nuclear Physics (3.1/2.47)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**ATLAS - HRIBF Detectors** Weighted average number (within 20% of baseline estimate) of billions of events recorded by experiments at the Argonne Tandem Linac Accelerator System (ATLAS) and Holifield Radioactive Ion Beam facilities (HRIBF), respectively. FY08 Baseline: 20, 2.4; within 20% of baseline 16, 1.9.

2008 Results

Commentary:	Met	Recorded 43.7 billion events at ATLAS and 17 billion events at HRIBF. At HRIBF a technological advance in one experiment resulted in most of the reported events above the stated goal along with a 17% increase in the run schedule. They deployed a newly designed special target that allowed a 3-fold increase in beam current along with a change in trigger which resulted in a significant increase in events per unit time recorded. The factor of two excess for the ATLAS performance is largely due to a change in the detector setup used for most of the experiments which resulted in doubling the event rate.
Future Plans / Explanation of Shortfalls:		Target will be continued with a revised goal based on appropriated funding for FY09.
Supporting Documentation:		Official letters from ANL and ORNL 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.

Associated Performance in Prior Years

FY 2007:	Met	Weighted average number (within 20% of baseline estimate) of billions of events recorded by experiments at the Argonne Tandem Linac Accelerator System (ATLAS) and Holifield Radioactive Ion Beam facilities (HRIBF), respectively. FY 2007 Baseline: ATLAS-22, HRIFB-1.8; FY 07 within 20% of baseline ATLAS-17.6, HRIFB-1.4. FY 2007 actual: Achieved 27.6 billion events at ATLAS and 7.1 billion events at HRIBF.
FY 2006:	Met	Weighted average number (within 20% of baseline estimate of billions of events recorded by experiments at the Argonne Tandem Linac Accelerator System (24.6) and Holifield Radioactive Ion Beam (7.1) facilities, respectively.
FY 2005:	Met	Weighted average number (within 20% of baseline estimate of billions of events recorded by experiments at the Argonne Tandem Linac Accelerator System (28.1) and Holifield Radioactive Ion Beam (3.76) facilities, respectively.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000114.2003.html
Program Office:	http://www.sc.doe.gov/	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Nuclear Physics (3.1/2.47)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**CEBAF Detector** Weighted average number (within 20% of baseline estimate) of billions of events recorded by experiments in Hall A, Hall B, and Hall C at the Continuous Electron Beam Accelerator facility (CEBAF). FY 2008 Baseline: Hall A: 2.9, Hall B: 14.9, and Hall C: 3.2; within 20% of baseline Hall A: 2.3, Hall B: 11.9, and Hall C: 2.5.

2008 Results

Commentary:	Met	Recorded 3.2 billion events in Hall A; 13.7 billion events in Hall B; and 3.26 billion events in Hall C. (CEBAF ran the 1st through 3rd Quarters, achieving the annual target at the end of the 3rd Quarter).
Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.	
Supporting Documentation:	Official letter from Thomas Jefferson National Accelerator Facility 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.	

Associated Performance in Prior Years

FY 2007:	Met	Weighted average number (within 20% of baseline estimate) of billions of events recorded by experiments in Hall A, Hall B, and Hall C at the Continuous Beam Accelerator facility. FY 2007 Baseline: Hall A 2.2, Hall B 11.6, and Hall C 2.6; FY 07 within 20% of baseline Hall A 1.76, Hall B 9.28, and Hall C 2.08. FY 2007 actual: Hall A=2.49; Hall B=12.42; Hall C=3.01.
FY 2006:	Met	Weighted average number (within 20% of baseline estimate) of billions of events recorded by experiments in Hall A (1.77), Hall B (9.9), and Hall C (1.9), respectively, at the Continuous Electron Beam Accelerator Facility.
FY 2005:	Met	Weighted average number (within 20% of baseline estimate) of billions of events recorded by experiments in Hall A (2.83), Hall B (8.06), and Hall C (2.11), respectively, at the Continuous Electron Beam Accelerator Facility.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000114.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science	
Program:	Nuclear Physics (3.1/2.47)	
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science	
Measure:	**Facility Ops** Achieve at least 80% average operation time of the scientific user facilities as a percentage of the total scheduled annual operating time.	

2008 Results

Commentary:	Met	NP user facilities (ATLAS, HRIBF, RHIC and CEBAF) achieved 88% reliability of the uptime/scheduled time.
Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.	
Supporting Documentation:	Official letters from ANL (ATLAS), BNL (RHIC), ORNL (HRIBF), and TJNAF (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. This target, a measure of the reliability of NP facilities, is met when the average of the calculated percentages is greater than 80%.	

Associated Performance in Prior Years

FY 2007:	Met	Achieve at least 80% average operation time of the scientific user facilities as a percentage of the total scheduled annual operating time. FY 2007 actual: NP user facilities (ATLAS, HRIBF, RHIC and CEBAF) achieved an average of 91% reliability of the uptime/scheduled time for the year.
FY 2006:	Met	Maintained and operated Nuclear Physics scientific user facilities so the unscheduled operational downtime was 6%, on average, of scheduled operating time.
FY 2005:	Met	Maintained and operated Nuclear Physics scientific user facilities so the unscheduled operational downtime was 13%, on average, of total scheduled operating time.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000114.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Nuclear Physics (3.1/2.47)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Const/MIE Cost & Schedule** Achieve within 10% for both the cost-weighted mean percentage variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects.

2008 Results

Commentary:	Met	The 12 GeV project is within 10% of the cost and schedule variance. Achieved a value of 1.02% schedule variance and .98% cost variance based on the August 2008 monthly report.
Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.	
Supporting Documentation:	Derived from the Monthly Report preceding the end of the quarter for the following projects: - 12 GeV CEBAF Upgrade. 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 ONP (SC-26).	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000114.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Biological & Environmental Research (3.1/2.48)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Climate Facility Ops** The achieved operation time of the (climate change) scientific user facility as a percentage of the total scheduled annual operating time is greater than 98%. ARM Climate Research Facilities - 7884 total hours annually, so 98% is greater than 7726 hours.

2008 Results

Commentary:	Met	The ARM facility operated for 8320 hours, and thus exceeded the annual goal by 594 hours.
Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.	
Supporting Documentation:	Emails reporting the results and data availability (per documented control process). The e-mails reside at: http://www.arm.gov/acrf/opsstats.stm.	

Associated Performance in Prior Years

FY 2007:	Met	The achieved operation time of the (climate change) scientific user facility as a percentage of the total scheduled annual operating time in FY 2007 is greater than 98%. FY 2007 actual: Achieved an average of 104%.
FY 2006:	Met	Maintain and operate BER Climate Change research facilities such that achieved operation time is on average greater than 98% of the total scheduled annual operation time for each group of facilities.
FY 2005:	Met	Maintain and operate BER Climate Change research facilities such that achieved operation time is on average greater than 90% of the total scheduled annual operation time for each group of facilities.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000080.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science	
Program:	Biological & Environmental Research (3.1/2.48)	
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science	
Measure:	**Artificial Retina** Advance blind patient sight: Optimize the 200+ Artificial Retina Using Data from Clinical Results.	

2008 Results

Commentary:	Met	A new electronic package was developed which increased the number of microelectrodes from 60 to 200 while keeping the package the same size. The package was then tested on various test beds for robustness, accuracy and that various electronic chips function properly and safely in manner that meets FDA standards. The results of these tests were used to adjust the package to ensure that the microcircuitry of each electrode could handle the large volume of data that needs to be transmitted to the retina in an error free uniform manner and be of a size and material that is patient compatible. http://artificialretina.energy.gov/gpra2008.shtml.
Future Plans / Explanation of Shortfalls:	Target will be continued with a revised goal based on appropriated funding for FY09.	
Supporting Documentation:	Emails reporting the results and publication/availability of the results (per documented control process). The e-mails reside at http://artificialretina.energy.gov/gpra2008.shtml	

Associated Performance in Prior Years

FY 2007:	Met	Advance blind patient sight: complete design and construction of final 256 electrode array. Begin in vitro testing and non-stimulating testing in animals. FY 2007 actual: The design and construction of two 256 electrode arrays was completed, and in vitro and animal non-stimulating tests were initiated.
FY 2006:	Met	Advance blind patient sight: Begin testing of prototypes for 256 microelectrode array artificial retina.
FY 2005:	Not Met	Advance blind patient sight: Complete fabrication of 60 microelectrode array for use as an artificial retina and insert prototype device into blind patient.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000080.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Biological & Environmental Research (3.1/2.48)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Determine Scalability of Laboratory Results in Field Experiments** Determine the dominant processes controlling the fate and transport of contaminants in subsurface environments and develop quantitative numerical models to describe contaminant mobility at the field scale. For FY08: Identify the critical redox reactions and metabolic pathways involved in the transformation/ sequestration of at least one key DOE contaminant in a field environment.

2008 Results

Commentary:	Met	Identified the critical redox reactions and metabolic pathways involved in the transformation/ sequestration of at least one key DOE contaminant, uranium, in a field environment. Field studies at a uranium-contaminated site have shown that stimulating metal-reducing conditions in the subsurface results in decreased uranium concentrations in groundwater. The injection of acetate to the subsurface promotes the activity of metal-reducing bacteria capable of enzymatically reducing soluble uranium to an insoluble form. The activity of metal-reducing bacteria correlates with increased gene expression patterns for acetate uptake, growth, nutrient acquisition, and metal reduction genes within the subsurface microbial population. This information is being used to develop quantitative models of microbial metabolism to better understand and control this process as a potential uranium bioremediation strategy. See the reports available on http://www.lbl.gov/ERSP/generalinfo/milestones/ersd_data08.html.
Future Plans / Explanation of Shortfalls:		Target will be continued with a revised goal based on appropriated funding for FY09.
Supporting Documentation:		Emails reporting the results and publication/availability of the results (per documented control process). The e-mails reside at http://www.lbl.gov/ERSP/generalinfo/milestones.html and/or http://esd.lbl.gov/research/projects/ersp/generalinfo/milestones.html

Associated Performance in Prior Years

FY 2007:	Met	Implement a field-oriented, integrated experimental research program to quantify coupled processes that control reactive transport of at least one key DOE contaminant. FY 2007 actual: Implementation Plan progress report from the Oak Ridge Integrated Field Challenge (IFC) project announced.
FY 2006:	Met	Develop predictive model for contaminant transport that incorporates complex biology, hydrology, and chemistry of the subsurface. Validate model through field tests.
FY 2005:	Met	Determine scalability of laboratory results in field experiments - Conduct two sets of field experiments to evaluate biological reduction of chromium and uranium by microorganisms and compare the results to laboratory studies to understand the long term fate and transport of these elements in field settings.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000080.2003.html
Program Office:		http://www.sc.doe.gov/

FY 2008 Performance Measures

Office:	Office of Science
Program:	Biological & Environmental Research (3.1/2.48)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Improve Climate Models** Report results of decade-long control simulation using geodesic grid coupled climate model and produce new continuous time series of retrieved cloud, aerosol, and dust properties, based on results from the ARM mobile facility deployment in Niger, Africa.

2008 Results

Commentary:	Met	Progress is reported in Atmospheric Properties from the 2006 Niamey Deployment and Climate Simulation with a Geodesic Grid Coupled Climate Model. A decade-long control simulation using geodesic grid coupled climate model at a resolution ~ 250 km was completed and compared with observations. The coupled model maintains a fairly realistic state after 10 simulated years. A single data file includes the time-series of aerosol and dust properties for the 2006 Niamey deployment. The report was written by the scientists who were responsible for executing the activity and summarized the scientific approach and results. DOE reviewed the document for scientific merit and to ensure that progress achieved the metric. The report is publically available at http://www.arm.gov/science/metrics.stm. The data and documentation are publically available from the ARM Climate Research Facility Archive (http://www.archive.arm.gov/nimdust).
Future Plans / Explanation of Shortfalls:	FUTURE:	Target will be continued with a revised goal based on appropriated funding for FY09.
Supporting Documentation:	Emails reporting the results and publication/availability of the results (per documented control process). Report is available at http://www.arm.gov/science/metrics.stm.	

Associated Performance in Prior Years

FY 2007:	Met	Provide new mixed-phase cloud parameterization for incorporation in atmospheric GCMs and evaluate extent of agreement between climate model simulations and observations for cloud properties in the arctic. FY 2007 actual: The predicted ice water content in the CAM3 with the new scheme is in better agreement with the ARM observation at the SGP site for the mixed-phase clouds and with the Aura MLS data than that in the standard CAM3.
FY 2006:	Met	Improve climate models: Produce a new continuous time series of retrieved cloud properties at each 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.
FY 2005:	Met	Improve climate models: Implement three separate component submodels (an interactive carbon cycle submodel, a secondary sulfur aerosol submodel, and an interactive terrestrial biosphere submodel) within a climate model and conduct 3-4 year duration climate simulation using the fully coupled model.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000080.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Biological & Environmental Research (3.1/2.48)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Increase the rate and decrease the cost of DNA sequencing** Increase by 10% the number (in billions) of high quality (less than one error in 10,000) bases of DNA from microbial and model organism genomes sequenced the previous year, and decrease by 10% the cost (base pair (bp)/dollar) to produce these base pairs from the previous year's actual results. FY08: 42.8 billion bp and 785 bp/$1 (based on FY07 actual: 38.95 Billion bp, and achieving 714 bp/$1.)

2008 Results

Commentary:	Met	Sequenced 125.51 billion base pairs at a rate 2350 bp/$1. In the third quarter of FY 2008, the JGI began reporting the sequencing from the new llumina instruments that generate a significant amount of sequence per run compared to the 454 and the Sanger instruments. This has led to the JGI far exceeding the original FY 2008 target.

Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.
Supporting Documentation:	Emails reporting the results and data availability (per documented control process). The number of base pairs will be divided by the total funding to the Production Genomics Facility to calculate the cost of DNA sequencing. See http://www.jgi.doe.gov/sequencing/statistics.html.

Associated Performance in Prior Years

FY 2007:	Not Met	Increase the rate and decrease the cost of DNA sequencing - Number (in billions) of high quality (less than one error in 10,000 bases) of DNA microbial and model organisms' genome sequenced annually, and the cost (base pairs per dollar) to produce these base pairs. FY 2007 actual: 38.95 Billion bases (97% of goal) achieved.
FY 2006:	Met	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.
FY 2005:	Met	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. FY 2005 at least 28 billion base pairs will be sequenced.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000080.2003.html
Program Office:	https://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science	
Program:	Biological & Environmental Research (3.1/2.48)	
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science	
Measure:	**Environmental Facility** The achieved operation time of the (environment) scientific user facility as a percentage of the total scheduled annual operating time is greater than 98%. Environmental Molecular Sciences Laboratory – 4365 total hours annually, so 98% is greater than 4277 hours.	

2008 Results

Commentary:	Met	For the year to date, EMSL achieved 4340 operational hours and has met the annual goal of >98% of 4365 total scheduled operational hours.
Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.	
Supporting Documentation:	Emails reporting the results and data availability (per documented control process). The e-mails will reside at: http://www.emsl.pnl.gov/homes/hours.shtml. Hours are logged at: http://www.emsl.pnl.gov/about/reports/	

Associated Performance in Prior Years

FY 2007:	Met	The achieved operation time of the (environment) scientific user facility as a percentage of the total scheduled annual operating time is greater than 98%. FY 2007 actual: Achieved an average of 99.9%.
FY 2006:	Met	Maintain and operate BER Environmental Remediation facilities such that achieved operation time is on average greater than 95% of the total scheduled annual operation time for each group of facilities.
FY 2005:	Met	Maintain and operate BER Environmental Remediation facilities such that achieved operation time is on average greater than 90% of the total scheduled annual operation time for each group of facilities.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000080.2003.html
Program Office:	https://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Biological & Environmental Research (3.1/2.48)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Life Science Facility Ops** The achieved operation time of the life sciences scientific user facility as a percentage of the total scheduled annual operating time is greater than 98%. Production Genomics Facility (PGF) – 8400 total hours annually, so 98% is greater than 8232 hours.

2008 Results

Commentary:	Not Met JGI operating hours were 7704 or 94% of goal (8232).
Future Plans / Explanation of Shortfalls:	SHORTFALL: JGI was shutdown in December 07- January 08 due to an ergonomic safety issue. The safety issue was corrected. However, by the time JGI re-started, it could not makeup the operating time. FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.
Supporting Documentation:	Emails reporting the results and data availability (per documented control process). The e-mails will reside at: http://www.jgi.doe.gov/sequencing/statistics.html

Associated Performance in Prior Years

FY 2007:	Met	The achieved operation time of the (life sciences) scientific user facility as a percentage of the total scheduled annual operating time is greater than 98%. FY 2007 actual: Achieved an average of 102%.
FY 2006:	Met	Maintain and operate BER Life Science facilities such that achieved operation time is on average greater than 98% of the total scheduled annual operation time for each group of facilities.
FY 2005:	Met	Maintain and operate BER Life Science facilities such that achieved operation time is on average greater than 90% of the total scheduled annual operation time for each group of facilities.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000080.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science	
Program:	Fusion Energy Sciences (3.1/2.49)	
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science	
	Const/MIE Cost & Schedule	
Measure:	Cost-weighted mean percent variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects in FY08 of less than 10% each.	
	2008 Results	
Commentary:	Not Met	The National Compact Stellarator Experiment (NCSX) canceled due to irresolvable cost and schedule overruns. OFES/Princeton Site Office management recognized the potential for cost and schedule overruns to exceed the approved baseline for the National Compact Stellarator Experiment (NCSX) project in 2006, and requested a bottoms-up Estimate at Completion (EAC) in July 2006. The June 2007 EAC for the total Project Cost (TPC) was $148.9M, and the estimated completion date (ECD) was April 2012, which exceeded the approved baseline ($102M TPC and ECD of July 2009). Several additional cost, management, and scientific reviews were held during the fall of FY 2007 and the spring of 2008 to consider either re-baselining or cancelling the project. The Office of Science decided to cancel the NCSX project in May 2008, and this annual target was closed out.
Future Plans / Explanation of Shortfalls:	FUTURE: Target is not planned to be continued for FY09.	
Supporting Documentation:	http://ncsx.pppl.gov/CPR/CPR.html The website provides monthly progress reports and documentation of achievement for this annual target. The results will be updated on a timely basis. The relevant project is the National Compact Stellarator Experiment (NCSX). "Cost-weighted mean" in reference to cost variance is ((budgeted cost for work performed) - (actual cost of work performed)) / ((budgeted cost for work performed) * (number of projects) * 100). "Cost-weighted mean" in reference to schedule variance is ((budgeted cost for work performed) - (budgeted cost for work scheduled)) / ((budgeted cost for work scheduled) * (number of projects) * 100). Definitions are standard, from OMB Circular No. A-11 (2004), Part 7, Section 300-30, at http://www.whitehouse.gov/omb/circulars/a11/current_year/s300.pdf	
	Associated Performance in Prior Years	
FY 2007:	Not Met	Cost-weighted mean percent variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects in FY 2007 of less than 10% each. FY 2007 actual: NCSX is assessed as "red" because it was unable to meet the currently approved baseline.
FY 2006:	Met	Cost-weighted mean percent variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects kept to less than 10%.
FY 2005:	Met	Cost-weighted mean percent variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects kept to less than 10%.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000080.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Fusion Energy Sciences (3.1/2.49)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Facility Based Experiments** 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 2008, FES will evaluate the generation of plasma rotation and momentum transport, and assess the impact of plasma rotation on stability and confinement. Alcator-Mod will investigate rotation without external momentum input, NSTX will examine very high rotation speeds, and DIII-D will vary rotation speeds with neutral beams. The results achieved at the major facilities will provide important new data for estimating the magnitude of and assessing the impact of rotation on ITER plasmas.

2008 Results

Commentary:	Met	Good progress was made in all areas of rotation physics as a result of the experiments on NSTX, DIII-D, and C-Mod. Completely new phenomena were discovered (two completely new rotation control phenomena due to methods utilizing RF heating of the plasma), and indications from former experiments were confirmed and extended. Common underlying physics elements controlling the rotation dynamics and momentum transport were identified in the three experiments. Greater coupling with theory was also accomplished, giving increased confidence in extrapolation to ITER and burning plasmas in general. The final report summarized the data and analysis contributing to estimating the magnitude, and assessing the impact, of rotation on ITER. (Final report at http://www.science.doe.gov/ofes/2008_JOULE%20Milestone%202.pdf).
Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.	
Supporting Documentation:	The V&V website is: http://www.science.doe.gov/ofes/performancetargets.shtml. This site provides quarterly progress reports and documentation of achievement for this annual target.	

Associated Performance in Prior Years

FY 2007:	Met	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 2007, FES will measure and identify magnetic modes on NSTX that are driven by energetic ions traveling faster than the speed of magnetic perturbations (Alfvén speed); such modes are expected in burning plasmas such as ITER. FY 2007 actual: Completed a series of energetic particle-related experiments and identified three Alfven Eigenmodes. Carried out a comprehensive analysis of the behavior of the modes and their effect on the confinement of fast particles, and compared the results with published theoretical models.
FY 2006:	Met	Conduct experiments on the major fusion facilities (DIII-D, Alcator C-Mod, and NSTX) leading toward the predictive capability for burning plasmas and configuration optimization. In FY 2006, FES injected 2 MW of neutral power in the counter direction on DIII-D and began physics experiments.
FY 2005:	Met	Conduct experiments on the major fusion facilities (DIII-D, Alcator C-Mod and NSTX) leading toward the predictive capability for burning plasmas and configuration optimization. In FY 2005, FES measured plasma behavior in Alcator CMod with high-Z antenna guards and input power greater than 3.5 MW.b

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000080.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Fusion Energy Sciences (3.1/2.49)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Facility Operations** 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 FY08 of greater than 90%.

2008 Results

Commentary:	Met	DIII-D completed 19 weeks of experiments on August 13. NSTX completed 16.6 weeks of experiments on July 14. C-Mod completed 15.7 weeks of experiments on May 23. A total of 51.3 weeks of operations exceeded the target of 51 weeks.
Future Plans / Explanation of Shortfalls:		FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.
		http://www.science.doe.gov/ofes/performancetargets.shtml This site provides quarterly progress reports and documentation of achievement for this annual target. The results will be updated on a timely basis.
Supporting Documentation:		FES's major national fusion facilities are: - the DIII-D Tokamak at General Atomics in San Diego, California; - the Alcator C-Mod Tokamak at the Massachusetts Institute of Technology; - the National Spherical Torus Experiment at the Princeton Plasma Physics Laboratory. 51 weeks total (baseline) are expected for FY08.

Associated Performance in Prior Years

FY 2007:	Met	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 FY 2007 of greater than 90%. FY 2007 actual: A total of 40.1 weeks of operations exceeded the target of 35 weeks; 114.6% > 90%.
FY 2006:	Met	Average achieved operational time of major national fusion facilities as a percentage of total planned operational time is greater than 90%.
FY 2005:	Met	Average achieved operational time of major national fusion facilities as a percentage of total planned operational time is greater than 90%.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000080.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Fusion Energy Sciences (3.1/2.49)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Simulation Resolution** 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 2008, improve the simulation resolution of ITER-relevant modeling of lower hybrid current drive experiments on Alcator C-Mod by increasing the number of poloidal modes used to 2,000 and the number of radial elements used to 1,000 using the Office of Science's high performance computing resources.

2008 Results

Commentary:	Met	The simulations of ITER-relevant modeling of lower hybrid current drive experiments on Alcator C-Mod were done with 2047 poloidal modes and 980 radial elements. These new results were published in "Communications in Computer Physics" in 2008.
Future Plans / Explanation of Shortfalls:	FUTURE:	Target will be continued with a revised goal based on appropriated funding for FY09.
Supporting Documentation:	The V&V website is: http://www.science.doe.gov/ofes/performancetargets.shtml This site provides quarterly progress reports and documentation of achievement for this annual target.	

Associated Performance in Prior Years

FY 2007:	Met	Plasma Phenomena - 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 2007, improve the simulation resolution of linear stability properties of Toroidal Alfvén Eigenmodes driven by energetic particles and neutral beams in ITER by increasing the number of toroidal modes used to 15. FY 2007 actual: Prepared a comprehensive review of the TAE energetic particle stability of ITER discharges in three operating regimes.
FY 2006:	Met	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 simulated nonlinear plasma edge phenomena using extended MHD codes with a resolution of 40 toroidal modes.
FY 2005:	Met	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 2005, FES simulated nonlinear plasma edge phenomena using extended MHD codes with a resolution of 20 toroidal modes.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000080.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Basic Energy Science (3.1/2.50)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Const/MIE Cost & Schedule** Cost-weighted mean percent variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects. In FY08, it is at least 10% and 10%, respectively.

2008 Results

Commentary:	Met	2.0% (cost variance) and -2.2% (schedule variance).

Future Plans / Explanation of Shortfalls:	Target will be continued with a revised goal based on appropriated funding for FY09.
Supporting Documentation:	BES Projects include those that have an approved performance baseline at the start of FY 2008, which are LCLS, CFN, SING-I, ALS User Support Building, and TEAM. Other projects are expected to obtain an initial performance baseline (CD-2) during FY08, such as SING-II, LUSI, PULSE, and NSLS-II. Supporting data reside in the DOE Office of Engineering and Construction Management's (OECM, ME-90) Project Assessment and Reporting System (PARS) and with Basic Energy Science's Division of Scientific User Facilities (SC-22.3).

Associated Performance in Prior Years

FY 2007:	Not Met	Cost-weighted mean percent variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects. In FY 2007, it is at least 10% and 10%, respectively. FY 2007 actual: -5.8% (cost variance) and -11.0% (schedule variance).
FY 2006:	Met	Cost and timetables were maintained within 10% of the baselines given in the construction project datasheets for all construction projects ongoing during the year (Results: -1.7% cost variance and -3.2% schedule variance).
FY 2005:	Met	Cost and timetables were maintained within 10% of the baselines given in the construction project datasheets for all construction projects ongoing during the year (Results: +0.2% cost variance and -2.5% schedule variance).

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000078.2003.html
Program Office:	http://www.sc.doe.gov/	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Basic Energy Science (3.1/2.50)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Facility Ops** Achieve an average operation time of the scientific user facilities as a percentage of the total scheduled annual operating time of greater than 90%.

2008 Results

Commentary:	Met	101.9% (average annual operating time at BES facilities as a percentage of planned scheduled time; i.e., 29,137 actual total hours delivered to users versus 28,580 total planned hours). Achieving this target ensures full use of the seven scientific user facilities and justifies investments in these crucial facilities.
Future Plans / Explanation of Shortfalls:	Target will be continued with a revised goal based on appropriated funding for FY09.	
Supporting Documentation:	Supporting documents consist of the required quarterly and annual reports submitted to BES by all BES user facilities at the completion of each quarter and at the end of the fiscal year. These final reports reside in the files of the Office of Basic Energy Sciences (SC-22).	

Associated Performance in Prior Years

FY 2007:	Met	Achieve an average operation time of the scientific user facilities as a percentage of the total scheduled annual operating time of greater than 90%. FY 2007 actual: 102.1% (27,010 actual total hours delivered to users versus 26,450 total planned hours).
FY 2006:	Met	Scientific user facilities were maintained and operated to achieve an average at least 90% of the total scheduled operating time (Results: 96.7%).
FY 2005:	Met	Scientific user facilities were maintained and operated to achieve an average at least 90% of the total scheduled operating time (Results: 97.7%).

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000078.2003.html
Program Office:	http://www.sc.doe.gov/	

FY 2008 Performance Measures

Office:	Office of Science	
Program:	Basic Energy Science (3.1/2.50)	
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science	
Measure:	**Spatial Resolution** Maintain spatial resolutions for imaging in the hard x-ray region of <100 nm and in the soft x-ray region of <18 nm, and spatial information limit for an electron microscope of 0.08 nm.	

2008 Results

Commentary:	Met	Hard x-ray - 90 nanometers Soft x-ray - 15 nanometers Electron microscope - 0.078 nanometers
Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.	
Supporting Documentation:	No further quantitative improvements are expected in these measures in FY 2008 as compared to the level of achievement for FY 2007. Performance levels for spatial resolution have reached the maximum for the current suite of available instruments. This target is a measure of SC's intent to maintain the maximum level of performance for users of the current SC facilities until the next generation of instruments and facilities becomes available.	

Associated Performance in Prior Years

FY 2007:	Met	Maintain spatial resolutions for imaging in the hard x-ray region of <100 nm and in the soft x-ray region of <18 nm, and spatial information limit for an electron microscope of 0.08 nm. FY 2007 actual: Hard x-ray - 90 nanometers; Soft x-ray - 15 nanometers; Electron microscope - 0.078 nanometers.
FY 2006:	Met	Improve Spatial Resolution: Spatial resolution for imaging in the hard x-ray region was measured at 90 nm and in the soft x-ray region was measured at 15 nm, and spatial information limit for an electron microscope of 0.078 nm was achieved.
FY 2005:	Met	Improve Spatial Resolution: Spatial resolution for imaging in the hard x-ray region was measured at 90 nm and in the soft x-ray region was measured at 15 nm, and spatial information limit for an electron microscope of 0.078 nm was achieved.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000078.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Basic Energy Science (3.1/2.50)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Temporal Resolution** Maintain X-ray pulse of less than 100 femtoseconds in duration and containing more than 100 million photons per pulse (10^8 photons/pulse).

2008 Results

Commentary:	Met	70 femtosecond pulses with 100 million photons per pulse
Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.	
Supporting Documentation:	No further quantitative improvements are expected in these measures in FY 2008 as compared to the level of achievement for FY 2007. Performance levels for temporal resolution have reached the maximum for the current suite of available instruments. This target is a measure of SC's intent to maintain the maximum level of performance for users of the current SC facilities until the next generation of instruments and facilities becomes available.	

Associated Performance in Prior Years

FY 2007:	Met	Demonstrate an X-ray pulse of less than 100 femtoseconds in duration and containing more than 100 million photons per pulse. FY 2007 actual: 70 femtosecond pulses with 100 million photons per pulse.
FY 2006:	Met	Improve temporal resolution: X-ray pulses were measured at 70 femtoseconds in duration with an intensity of 100 million photons per pulse.
FY 2005:	Met	Improve temporal resolution: X-ray pulses were measured at 70 femtoseconds in duration with an intensity of 100 million photons per pulse.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000078.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Advanced Scientific Computing Research (3.1/2.51)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**Improve Computational Science Capabilities** 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. In FY08, the computational effectiveness is greater than 100%.

2008 Results

Commentary:	Met	The Cray XT4 cluster, Jaguar, at Oak Ridge National Laboratory's (ORNL) National Center for Computational Sciences (NCCS) was used for the effort this year to improve performance of the following applications: DCA++; GRYO; and PFLOTRAN. Results indicate all applications improved over 100% against baseline. Due to the increase in speed of the DCA++ application, the 2008 Gordon Bell prize for outstanding achievement in high performance computing with emphasis on scientific applications was awarded to the DCA++ team for attaining the fastest performance ever in a scientific supercomputing applicationt. The team, led by Thomas Schulthess and colleagues Thomas Maier, Michael Summers and Gonzalo Alvarez, all of Oak Ridge National Laboratory, with help from John Levesque and Jeff Larkin of Cray Inc., achieved 1.352 quadrillion calculations a second--or 1.352 petaflops--on Oak Ridge's Cray XT Jaguar supercomputer with a simulation of superconductors, or materials that conduct electricity without resistance. (See http://www.ornl.gov/info/press_releases/get_press_release.cfm?ReleaseNumber=mr20081120-00

Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.
Supporting Documentation:	Reports detailing these evaluations reside in the files of the ASCR Office (SC-21).

Associated Performance in Prior Years

FY 2007:	Met	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 FY07, the computational effectiveness is greater than 100%. FY 2007 actual: Achieved improvement of computational effectiveness of selected codes of > 100%.
FY 2006:	Met	Improved Computational Science Capabilities. Average annual percentage increased 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 SciDAC effort. FY 2006—>50%.
FY 2005:	Met	Improved Computational Science Capabilities. Average annual percentage increased 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 SciDAC effort.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000078.2003.html
Program Office:	http://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Advanced Scientific Computing Research (3.1/2.51)
Strategic Goal(s) Supported:	Goal 3.1 Scientific Breakthroughs and Goal 3.2 Foundations of Science
Measure:	**National Energy Research Scientific Computing Center - Capability Computing** Focus usage of the primary supercomputer at the National Energy Research Scientific Computing Center (NERSC) on capability computing. Thirty percent (30%) of the computing time will be used by computations that require at least 1/8 (2,040 processors) of the NERSC resource. FY08 goal 30%.

2008 Results

Commentary:	Met	54.7% of the year's computing time used at least 1/8 of the NERSC resources.
Future Plans / Explanation of Shortfalls:	FUTURE: Target will be continued with a revised goal based on appropriated funding for FY09.	
Supporting Documentation:	Reports detailing this progress reside in the files of the ASCR Office (SC-21).	

Associated Performance in Prior Years

FY 2007:	Met	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 FY 2007, the time used is at least 40%. FY 2007 actual: Achieved a target of 67.9%.
FY 2006:	Met	Focused usage of the primary supercomputer at the NERSC on capability computing. Percentage of the computing time used that was accounted for by computations that require at least 1/8 of the total resource. FY 2006—40%.
FY 2005:	Met	Focused usage of the primary supercomputer at the NERSC on capability computing. Percentage of the computing time used that was accounted for by computations that require at least 1/8 of the total resource.

Additional Information

PART:	Effective	http://www.whitehouse.gov/omb/expectmore/detail/10000078.2003.html
Program Office:	https://www.sc.doe.gov	

FY 2008 Performance Measures

Office:	Office of Science
Program:	Research Integration
Strategic Goal(s) Supported:	Goal 3.3 Research Integration
Measure:	**Research Integration** Coordinate with SC and applied program managers regarding collaboration status; coordination efforts include: document extent of integration activities; identify and promote best practices, and resolve issues related to integration processes.

2008 Results

Commentary:	Met	Continued to emphasize six areas of collaboration begun in FY07: • Advanced Mathematics for Optimization of Complex Systems, Control Theory, and Risk Assessment • Electrical Energy Storage • Carbon Dioxide Capture and Storage • Characterization of Radioactive Waste • Predicting High Level Waste System Performance over Extreme Time Horizons • High Energy Density Laboratory Plasmas Three new areas for enhanced R&D coordination were identified: • Materials Under Extreme Environments • Catalysis • Cyber Security These three areas were identified in previous portfolio reviews as areas of opportunity for increasing impact on DOE mission areas. All three areas have been the subject of technical workshops over the past two years.
Future Plans / Explanation of Shortfalls:	This target is being discontinued in FY09.	
Supporting Documentation:	Reports and presentations documenting decisions by the Deputy Secretary, Under Secretaries, and the S&T Council which will reside in the files of the Under Secretary for Science (S-4).	

Associated Performance in Prior Years

FY 2007:	Met	Coordinate with SC and applied program managers regarding collaboration status; coordination efforts include: document extent of integration activities; identify and promote best practices, and resolve issues related to integration processes. FY 2007 actual: The working group presented its analysis results to the Science and Technology (S&T) Council (the three Under Secretaries) in June 2007. One conclusion was that R&D integration analysis should be completed prior to the beginning of CPR.
FY 2006:	N/A	
FY 2005:	N/A	

Additional Information

PART:	N/A
Program Office:	http://www.sc.doe.gov

FY 2008 Performance Measures

THEME 4 - ENVIRONMENTAL RESPONSIBILITY

Office:	Environmental Management	
Program:	Environmental Management (4.1.53)	
Strategic Goal(s) Supported:	Goal 4.1 Environmental Cleanup	
Measure:	**Efficiency Measure** Remain within the limits of no greater than a 10% 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.	

2008 Results

Commentary:	Met	After compiling the EM Earned Value Management (EVM) Project information to Date, the current information was calculated: The cost - weighted mean cost performance index 1.02 The cost - weighted mean schedule performance index 0.99
Future Plans / Explanation of Shortfalls:	The Department will continue to strive towards the continued efficiency in its cleanup activities while maintaining the health and safety of its workers and the general public.	
Supporting Documentation:	Earned value data reported monthly by sites into IPABS.	

Associated Performance in Prior Years

FY 2007:	Met	Remain within the limits of no greater than a 10% 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. FY 2007 Results: The cost - weighted mean cost performance index 1.01. The cost - weighted mean schedule performance index 0.99
FY 2006:	Met	Remain within the limits of no greater than a 10 percent negative cost and schedule variance for the over all 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.
FY 2005:	N/A	

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/detail/10001176.2003.html
Program Office:	http://www.em.doe.gov/pages/emhome.aspx	

FY 2008 Performance Measures

Office:	Environmental Management
Program:	Environmental Management (4.1.53)
Strategic Goal(s) Supported:	Goal 4.1 Environmental Cleanup
Measure:	**Enriched Uranium Containers Packaged for Disposition** Package for disposition a cumulative total of 7,278 enriched uranium containers. This is an estimated increase of 318 containers over the planned cumulative total of 6,960 enriched uranium containers packaged for disposition at the end of FY 2007.

2008 Results

Commentary:	Met	The complex was able to accelerate its schedule and exceed its target for FY 2008. By the end of FY 2008 EM packaged for disposition a cumulative total of 7,543 enriched uranium containers. This was due to increased activity at the SRS.
Future Plans / Explanation of Shortfalls:	Future work on this measure will include activities for the sites currently handling this measure, SRS and Idaho. Also, future activities will also include the Portsmouth and Paducah sites.	
Supporting Documentation:	Shipping Manifests and Disposal Records.	

Associated Performance in Prior Years

FY 2007:	Met	Package for disposition a cumulative total of 6,972 enriched uranium containers. This is an estimated increase of 493 containers over the planned cumulative total of 6,479 enriched uranium containers packaged for disposition at the end of FY 2006. FY 2007 Results:
FY 2006:	Met	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.
FY 2005:	Met	Package for disposition a cumulative total of 3,648 enriched uranium containers. This is an estimated increase of 669 containers over the planned cumulative total of 2,979 enriched uranium containers to be packaged for disposition at the end of FY 2004.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/detail/10001176.2003.html
Program Office:	http://www.em.doe.gov/pages/emhome.aspx	

FY 2008 Performance Measures

Office:	Environmental Management
Program:	Environmental Management (4.1.53)
Strategic Goal(s) Supported:	Goal 4.1 Environmental Cleanup
Measure:	**High Level Waste Packaged for Disposition** Package for disposition a cumulative total of 2,835 containers of high level waste. This is an estimated increase of 186 containers over the planned cumulative total of 2,649 containers of high level waste packaged for disposition at the end of FY 2007.

2008 Results

Commentary:	Met	The complex was able to accelerate its schedule and exceed its target for FY 2008, EM packaged for disposition a cumulative total of 2874 containers of high level waste. The positive variance is due to excellent feeding and pouring operations and the increased facility pouring time for the Defense waste processing facility at the SRS.
Future Plans / Explanation of Shortfalls:		Future work on this measure will include ongoing activities at the Defense Waste Processing Facility at the SRS. The Office of River Protection is currently designing and constructing the Waste Treatment Plant to package Hanford high-level waste for final disposition. In addition, the Idaho National Laboratory has already processed tank waste into a powdered calcine form that is currently being stored on-site, but has not yet packaged this high-level waste for final disposition.
Supporting Documentation:		Quality Assurance Inspection Records for waste packaging.

Associated Performance in Prior Years

FY 2007:	Met	Package for disposition a cumulative total of 2,675 containers of high level waste. This is an estimated increase of 186 containers over the planned cumulative total of 2,489 containers of high level waste packaged for disposition at the end of FY 2006. FY 2007 Results:
FY 2006:	Met	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.
FY 2005:	Met	Package for disposition a cumulative total of 2,227 containers of high level waste. This is an estimated increase of 250 containers over the planned cumulative total of 1,977 containers of high level waste to be packaged for disposition at the end of FY 2004.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/detail/10001176.2003.html
Program Office:		http://www.em.doe.gov/pages/emhome.aspx

FY 2008 Performance Measures

Office:	Environmental Management
Program:	Environmental Management (4.1.53)
Strategic Goal(s) Supported:	Goal 4.1 Environmental Cleanup
Measure:	**Radioactive Facilities** Complete a cumulative total of 352 radioactive facilities. This is an estimated increase of 41 radioactive facilities over the cumulative total of 311 radioactive facility completed at the end of FY 2007.

2008 Results

Commentary:	Not Met	The Department completed work at a cumulative total of 347 radioactive facilities. Decontamination and Decommissioning activities at Idaho, and Oak Ridge contributed to this measure as well as evaluation of work done at the West Valley Demonstration Plant in New York as well as Portsmouth, Ohio, and Paducah, Kentucky, contributed to this measure.
Future Plans / Explanation of Shortfalls:	Future work on this measure will include activities dedicated to the decontamination and decommissioning of facilities throughout the complex.	
Supporting Documentation:	Decommissioning Project Final Report. State and federal regulator acceptance of completion report.	

Associated Performance in Prior Years

FY 2007:	N/A
FY 2006:	N/A
FY 2005:	N/A

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/detail/10001176.2003.html
Program Office:	http://www.em.doe.gov/pages/emhome.aspx	

FY 2008 Performance Measures

Office:	Environmental Management
Program:	Environmental Management (4.1.53)
Strategic Goal(s) Supported:	Goal 4.1 Environmental Cleanup
Measure:	**Release Site Remediation Completions** Complete remediation work at a cumulative total of 6,772 release sites. This is an estimated increase of 206 release sites over the planned cumulative total of 6,541 release site remediation completions at the end of FY 2007.

2008 Results

Commentary:	Not Met	The Department completed remediation work at a cumulative total of 6,687 release sites, this is a shortfall of 85 release sites from the original FY 2008 target. This is largely due to delays at Richland, Sandia, and Los Alamos National Laboratory (LANL).
Future Plans / Explanation of Shortfalls:		Much of the work at LANL was physically completed but the site is awaiting final regulatory approval, without this approval the remediation sites cannot be counted as complete. These approvals are expected in the near future. Future work by EM on this measure will include activities aimed at completing the remediation work at Richland, LANL and the remaining sites throughout the complex.
Supporting Documentation:		State and federal regulator acceptance of the Remedial Action Report.

Associated Performance in Prior Years

FY 2007:	Met	Complete remediation work at a cumulative total of 6,463 release sites. This is an estimated increase of 207 release sites over the planned cumulative total of 6,256 release site remediation completions at the end of FY 2006. FY 2007 Results:
FY 2006:	Met	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.
FY 2005:	Met	Complete remediation work at a cumulative total of 5,669 release sites. This is an estimated increase of 283 release sites over the planned cumulative total of 5,386 release site remediation completions at the end of FY 2004.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/detail/10001176.2003.html
Program Office:		http://www.em.doe.gov/pages/emhome.aspx

FY 2008 Performance Measures

Office:	Environmental Management	
Program:	Environmental Management (4.1.53)	
Strategic Goal(s) Supported:	Goal 4.1 Environmental Cleanup	
Measure:	**TRU Waste Disposition** Disposition of a cumulative total of 53,608 cubic meters of transuranic waste consisting of 183 cubic meters of Remote Handled TRU and 53,425 cubic meters of Contact Handled TRU.	

2008 Results

Commentary:	Not Met	Overall, the complex completed FY 2008 behind schedule by 560 cubic meters of TRU waste: consisting of 112 cubic meters of Remote Handled TRU and 448 cubic meters of Contact Handled TRU. This negative variance was due to a variety of reasons: poor weather condition that prevented shipments, and several delays at the Waste Isolation Pilot Plant (WIPP) in FY 2008. During FY 2008, WIPP was shut down for several weeks in order to repair a water main break; WIPP also stopped activities for a self-imposed safety pause.
Future Plans / Explanation of Shortfalls:	The sites across the DOE complex will continue characterizing, packaging, and shipping TRU waste throughout FY 2009, to make up for this shortfall.	
Supporting Documentation:	Shipping Manifests.	

Associated Performance in Prior Years

FY 2007:	Met	Dispose at the Waste Isolation Pilot Plant (WIPP) a cumulative total of 43,701 cubic meters of transuranic (TRU) waste. This is an estimated increase of 6,412 m^3 over the planned cumulative total of 37,289 m^3 of TRU waste disposed at WIPP at the end of FY 2006.
FY 2006:	Not Met	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 m3 over the planned cumulative total of 40,711 m^3 of TRU waste to be disposed at WIPP at the end of FY 2005.
FY 2005:	Not Met	Dispose at the Waste Isolation Pilot Plant (WIPP) a cumulative total of 40,711 m^3 of transuranic (TRU) waste. This is an estimated increase of 13,678 m^3 over the planned cumulative total of 27,033 m^3 of TRU waste to be disposed at WIPP at the end of FY 2004.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/detail/10001176.2003.html
Program Office:	http://www.em.doe.gov/pages/emhome.aspx	

FY 2008 Performance Measures

Office:	Civilian Radioactive Waste Management	
Program:	Nuclear Waste Disposal (4.2.54)	
Strategic Goal(s) Supported:	Goal 4.2 Managing the Legacy	
Measure:	**Draft Rail Alignment Environment Impact Statement (EIS)** Publish Final Rail Alignment Environment Impact Statement (RA EIS).	

2008 Results

Commentary:	Met	The Final Rail Alignment Environmental Impact Statement was approved and published. The Notice of Availability of this National Environmental Policy Act document was published on July 11, 2008.
Future Plans / Explanation of Shortfalls:	This measure has been fully achieved and is now retired.	
Supporting Documentation:	Physical Document	

Associated Performance in Prior Years

FY 2007:	Met	Publish a draft Rail Alignment Environment Impact Statement (RA EIS) for public comment. FY 2007 Results:
FY 2006:	Data Not Available	Issue Revision 4 of the Transportation System Requirements Document.
FY 2005:	Data Not Available	Submit the preliminary draft EIS, prepared by the EIS contractor, for DOE internal review.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10001049.2007.html
Program Office:	http://www.ocrwm.doe.gov/	

FY 2008 Performance Measures

Office:	Civilian Radioactive Waste Management
Program:	Nuclear Waste Disposal (4.2.54)
Strategic Goal(s) Supported:	Goal 4.2 Managing the Legacy
Measure:	**Efficiency Measure** Maintain total administrative overhead costs in relation to total program costs of less than 22%.

2008 Results

Commentary:	Not Met	OCRWM finished the year with administrative overhead costs in relation to total program costs of 23%.
Future Plans / Explanation of Shortfalls:		OCRWM did not achieve the milestone of maintaining administrative overhead costs in relation to total program costs of less than 22%. This occurred because administrative overhead costs remained relatively constant despite receiving an FY 2008 appropriation reduced by $109 million below the request. OCRWM is working with OMB to come up with a more realistic metric, which is not beholden to forces outside of the control of the program.
Supporting Documentation:		Data derived from the Department of Energy's Standard Accounting and Reporting System.

Associated Performance in Prior Years

FY 2007:	Met	Maintain total administrative overhead costs in relation to total program costs of less than 22%.
FY 2006:	Data Not Available	Reduce the ratio of program direction/contractor management program funding to total program funding by 10% from the FY 2005 baseline ratio of 0.274.
FY 2005:	Data Not Available	Project management costs for the OCRWM management and operating contractor will be reduced to15% of the total budget.

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10001049.2007.html
Program Office:	http://www.ocrwm.doe.gov/	

FY 2008 Performance Measures

Office:	Civilian Radioactive Waste Management
Program:	Nuclear Waste Disposal (4.2.54)
Strategic Goal(s) Supported:	Goal 4.2 Managing the Legacy
Measure:	**License Application** Demonstrate progress toward completion of a high-quality License Application (LA) consistent with the established schedule and content requirements.

2008 Results

Commentary:	Met	OCRWM submitted the License Application to the Nuclear Regulatory Commission on June 3, 2008, nearly a month in advance of the stated strategic objective for submission of June 30, 2008.
Future Plans / Explanation of Shortfalls:	This measure has been fully achieved and is now retired.	
Supporting Documentation:	Copy of transmittal letter. OCRWM website announcement, www.ocrwm.doe.gov/ym_repository/license/index.shtml, US Nuclear Regulatory Commission website acknowledgement, www.nrc.gov/waste/hlw-disposal/yucca-lic-app.html	

Associated Performance in Prior Years

FY 2007:	Not Met	Demonstrate progress toward completion of a high-quality License Application consistent with the established schedule and content requirements.
FY 2006:	N/A	
FY 2005:	Not Met	Completed processing of documents and emails (dated January 1, 2005 or earlier) to be ready for LSN. (PARTIALLY MET TARGET)

Additional Information

PART:	Adequate	http://www.whitehouse.gov/omb/expectmore/summary/10001049.2007.html
Program Office:	http://www.ocrwm.doe.gov/	

FY 2008 Performance Measures

Office:	Legacy Management
Program:	Legacy Management (4.2.55)
Strategic Goal(s) Supported:	Goal 4.2 Managing the Legacy
Measure:	**Maintain the Protectiveness of Installed Environmental Remedies** By 2015, demonstrate a reduction in risk at LM sites by employing sound project management, engineering and science-based solutions for long-term surveillance and maintenance.

2008 Results

Commentary:	Met	Inspections were conducted at all sites within LM's responsibility (82 sites in FY 2008). Maintenance was performed as needed to maintain site integrity. Protectiveness of all site remedies was confirmed.
Future Plans / Explanation of Shortfalls:		LM achieved its target in FY 2008 so there were no shortfalls. LM plans to continue site functions into the future. In FY 2009, inspections and other actions will be performed in accordance with individual plans for all sites to ensure continued protectiveness. Additional sites will be added as active remediation is completed and those sites are transferred to LM.
Supporting Documentation:		Support documentation for the site inspections are posted on the internet at http://www.lm.doe.gov/pro_doc/guidance_reports.htm and http://www.lm.doe.gov/land/sites/sitesmap.htm

Associated Performance in Prior Years

FY 2007:	Met	Maintain the protectiveness of installed environmental remedies through inspections and other actions at 100% of sites within LM's responsibility (70 sites for FY 2007).
FY 2006:	Met	Ensure continued effectiveness of cleanup remedies through surveillance and maintenance activities at 64 sites funded under the Energy Supply appropriation in accordance with legal agreements. This target was achieved.
FY 2005:	Met	Ensure continued effectiveness of cleanup remedies through surveillance and maintenance activities at 61 sites funded under the Energy Supply appropriation in accordance with legal agreements. This target was achieved.

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10009032.2007.html
Program Office:	http://www.lm.doe.gov/	

FY 2008 Performance Measures

Office:	Legacy Management
Program:	Legacy Management (4.2.55)
Strategic Goal(s) Supported:	Goal 4.2 Managing the Legacy
Measure:	**Surveillance and Maintenance Cost** Reduce the cost of performing long-term surveillance and monitoring activities while meeting all regulatory requirements to protect human health and the environment. Reduction is measured in percent from the life-cycle baseline. Goal is a 2 percent reduction below the baseline for that year.

2008 Results

Commentary:	Met	Actual cost savings exceeded the 2 percent target.
Future Plans / Explanation of Shortfalls:	LM achieved its target in FY 2008 so there were no shortfalls. During FY 2008, LM's target is a 2% reduction below the PART baseline for long-term surveillance and maintenance. That activity will review site conditions and seek further efficiencies while still achieving the program target of maintaining the protectiveness of installed environmental remedies.	
Supporting Documentation:	Support documentation regarding the LTS&M efficiency measure includes the contract and financial records and reports that are maintained at the LM office in Grand Junction, CO. Financial data is generated from the I-Manage Data Warehouse (IDW) system and compared to the approved PART Baseline data for LTS&M to properly calculate the percentage reductions. Also the quarterly LM Post Competition Accountability Report (PCAR) provides the actual percentage reduction for the Goal 1 PART performance measure.	

Associated Performance in Prior Years

FY 2007:	Met	Reduce the cost of performing required long-term surveillance and maintenance activities by 2% while meeting all regulatory requirements. Base is previous year's costs less inflation rate, costs for additional sites, and one-time actions.
FY 2006:	N/A	
FY 2005:	N/A	

Additional Information

PART:	Moderately Effective	http://www.whitehouse.gov/omb/expectmore/summary/10009032.2007.html
Program Office:	http://www.lm.doe.gov/	

Status of FY 2007 Unmet Measures

Goal	Measure	Status	Description of Performance Target	FY 2007 PAR (Page No.)
Goal 1.1 Energy Diversity	1.1.4.1	MET	20 States with over 100 MW wind installed.	40
Goal 1.4 Energy Productivity	1.4.20.3	MET	Final rules will be issued for 3-5 product categories, consistent with enacted law, to amend appliance standards and test procedures that are economically justified and will result in significant energy savings. This includes final rules for distribution transformers and residential furnaces and boilers.	92
	2.0.25.1	Unmet/Closed	Cumulative average NNSA Program score on the OMB PART assessment indicating progress in budget performance integration and results (EFFICIENCY MEASURE).	102
	Changed the performance measure from the cumulative average NNSA Program score to the annual average NNSA Program score because evaluating the average of annual PART scores is more meaningful than using cumulative historical scores.			
Goal 2.1 Nuclear Deterrent	2.1.26.3	Unmet/Closed	Cumulative percentage of progress in completing Nuclear Weapons Council (NWC)-approved W76-1 Life Extension Program (LEP) activity (Long-term Output).	105
	Unmet portion of target was rolled over to FY 2008 and achieved. Will achieve 44% in FY 2008.			
	2.1.26.5	Unmet/Closed	Cumulative percent reduction in projected W76 warhead production costs per warhead from established validated baseline, as computed and reported annually by the W76 LEP Cost Control Board. (EFFICIENCY MEASURE)	107
	Unmet portion of target was rolled over to FY 2008. Will achieve 78% during FY 2008.			
	2.1.29.5	Unmet/Closed	Annual average hours per experiment required by the operational crew to prepare the Z facility for an experiment (EFFICIENCY MEASURE).	123

Goal	Measure	Status	Description of Performance Target	FY 2007 PAR (Page No.)
	The Z machine was refurbished during FY 2007 causing the target to be unmet. Unmet portion was rolled over to FY 2008. Will achieve 11 average hours per experiment.			
	2.1.34.3	Unmet/Closed	Annual number of secure convoys completed (Annual Output).	143
	Since this is an annual target, the shortfall could not be met. Therefore, an action plan was not developed.			
	2.1.34.5	Unmet/Closed	Cumulative number of Federal Agents at the end of each year (Long-term Output).	145
	The unmet portion of the target was rolled into the FY 2008 cumulative target and completed in FY 2008.			
Goal 2.2 Weapons of Mass Destruction	2.2.42.4	Unmet/Closed	Cumulative number of Second Line of Defense (SLD) sites with nuclear detection equipment installed. (Cumulative number of Megaports completed) (Long-term Output).	170
	As of Sept. 12, 2008, on track to achieve 98% of the annual target by completing installations of radiation detection equipment at a cumulative total of 224 sites (including 19 Megaports).			
	2.2.44.5	Unmet/Closed	Cumulative funds contracted directly with the private sector (EFFICIENCY MEASURE).	178
	The annual target was missed because a post-award protest by a non-awardee prevented the program from issuing task orders until the protest was resolved. In August, the protest was resolved and GTRI held an orientation meeting with the awardees to review the Task Orders anticipated to be made. Given the lateness in the fiscal year, only two Task Orders were able to be processed, resulting in a total of $128,453 being contracted in September. Because this target was missed, planned execution of threat reduction work under these task orders, anticipated for completion in 2007, were delayed into 2008. No agreements or commitments will be missed because of this delay.			
Goal 3.1 Scientific Breakthroughs	3.1/2.46.2	Unmet/Closed	Deliver within 20% of baseline estimate a total integrated amount of data (in inverse femtobarns[fb-1]) delivered to the BABAR detector at the Stanford Linear Accelerator (SLAC) B-factory. The FY 2007 baseline is 130 fb-1, so within 20% of baseline is 104 fb-1.	186

Goal	Measure	Status	Description of Performance Target	FY 2007 PAR (Page No.)
	Target was continued with a revised goal based on appropriated funding for FY08. Improvements to both reduce the probability of unscheduled downs due to vacuum issues and remove one of the main limitations on raising beam currents were completed early in FY08.			
	3.1/2.48.2	Unmet/Closed	Increase the rate and decrease the cost of DNA sequencing – Number (in billions) of high quality (less than one error in 10,000 bases) of DNA microbial and model organisms' genome sequenced annually, and the cost (base pairs per dollar) to produce these base pairs. (FY07: 40, 644).	195
	Target was continued with a revised goal based on appropriated funding for FY08.			
	3.1/2.49.4	Unmet/Closed	Cost-weighted mean percent variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects in FY 2007 of less than 10% each.	204
	Target was continued in FY08 while contractor developed a revised baseline for the National Compact Stellarator Experiment (NCSX) project and an external review of the project was conducted. Based on the review results, NCSX project was cancelled by SC in May 2008 and this annual target closed out for FY08.			
Goal 3.1 Scientific Breakthroughs	3.1/2.50.3	Unmet/Closed	Cost-weighted mean percent variance from established cost and schedule baselines for major construction, upgrade, or equipment procurement projects. In FY 2007, it is at least 10% and 10%, respectively.	208
	Target was continued with a revised goal based on appropriated funding for FY08.			
Goal 4.1 Environmental Cleanup	4.1.53.2	MET	Package for disposition a cumulative total of 2,675 containers of high level waste. This is an estimated increase of 186 containers over the planned cumulative total of 2,489 containers of high level waste packaged for disposition at the end of FY 2006.	215
Goal 4.2 Managing the Legacy	4.2.54.1	MET	Demonstrate progress toward completion of a high-quality License Application consistent with the established schedule and content requirements.	220

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