**U.S. Department of Energy**

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**Fiscal Year 2013**

**Federal Program Inventory**

**May 2013**

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**U.S. Department of Energy**

**Federal Program Inventory**

**Fiscal Year 2013**

# Approach

The Department of Energy’s Government Performance and Results Act (GPRA) Unit list started when the Office of Management and Budget (OMB) established the Program Assessment Rating Tool (PART) program in 2002-2003. DOE’s Office of Performance Analysis and Evaluation worked with OMB staff to organize the Department into manageable units to develop performance metrics that could be tracked as a “program” in the PART process. The initial list was developed based on the DOE organization chart. Every top line program was given a GPRA Unit number. When organizations were too large to manage as a single GPRA Unit, such as the Energy Efficiency and Renewable Energy programs, we agreed to smaller programs. This organization was based on various technology areas; e.g., Fossil Energy components echo their main functions: Fossil Energy R&D and Petroleum Reserves. GPRA Units for the Office of Science reflect their main lines of business. The National Nuclear Security Administration (NNSA) is disaggregated by Congressional Control points. In the following Inventory, GPRA Units generally appear as “Programs” for each DOE office.

This list of GRPA Units is updated annually during the budget formulation process. There have been several changes to the list over time, and new organizations such as Advanced Research Programs Agency-Energy and Loan Programs, have been added. There is also a change control process for GPRA Units that affect NNSA, as these changes have a direct correlation to their budget.

The Budget Authority identified for FY 2013 in the FPI pertains to the Continuing Resolution (CR) and is and consistent with the numbers listed in DOE’s FY 2014 Congressional Request.  These are the annualized numbers under the 2013 short-term CR (P.L. 112-175) and not the 2013 Enacted appropriations, and they do not include the impacts of sequestration.  The Budget Authorities indicated for each fiscal year are summed by DOE Office and are generally provided at the appropriations account level.  While the FPI provides a comprehensive listing of programs, some accounts, such as those pertaining to receipts, are omitted herein but are included and described in greater detail in the Congressional budget request.

The performance hierarchy contained in the FPI is consistent with the contents of DOE's other GPRA documents to include the current Strategic Plan, the FY 2014 Congressional Budget, the FY 2012-14 Annual Performance Plan and Report, and the FY 2012 Annual Financial Report. Because program mission and performance can support multiple Strategic Objectives, the program-to-Strategic Objective one-to-one mapping used to allocate resources in other DOE GPRA documents is somewhat restrictive in creating the FPI. DOE is likely to explore this consideration more fully during the development of the next Strategic Plan.

# DOE Organization

In response to changing needs and an extended energy crisis, the Congress passed the Department of Energy Organization Act in 1977, creating the [Department of Energy](http://www.energy.gov/index.htm) (DOE). That legislation brought together for the first time, not only most of the government’s energy programs, but also science and technology programs and defense responsibilities that included the design, construction, and testing of nuclear weapons. The Department provided the framework for a comprehensive and balanced national energy plan by coordinating and administering multiple energy-related functions of the federal government. The Department undertook responsibility for long-term, high-risk research and development of energy technology, federal power marketing, some energy conservation activities, the nuclear weapons programs, some energy regulatory programs, and a central energy data collection and analysis program.

Currently, DOE is organized under and managed by Under Secretaries (Nuclear Security, Energy, and Science), the Energy Information Administration, the Advanced Research Projects Agency-Energy, the Loans Program Office, 4 Power Marketing Administrations, 13 staff and support offices, 22 operations and area offices, and 24 research laboratories and facilities.

The FY 2012 workforce was comprised of approximately 15,671 federal and 92,419 contractor employees (estimated). The large number of contractors is attributable primarily to the contractor management and operation model for DOE’s 17 national laboratories. The Department’s organizational chart is located at: <http://energy.gov/about-us/organization-chart>

# Strategic Framework

DOE last released its Strategic Plan in May 2011, a document that outlines the broad, cross-cutting, and collaborative goals that stretch across the complex. This document serves as a blueprint for how DOE addresses the nation’s energy, environmental, and nuclear challenges through transformative science and technology solutions. The plan is available at: <http://energy.gov/sites/prod/files/2011_DOE_Strategic_Plan_.pdf>

The Strategic Plan and this report are organized by the following four strategic goals:

1. Catalyze the timely, material, and efficient transformation of the nation’s energy system and secure U.S. leadership in clean energy technologies;
2. Maintain a vibrant U.S. effort in science and engineering as a cornerstone of our economic prosperity with clear leadership in strategic areas;
3. Enhance nuclear security through defense, nonproliferation, and environmental efforts; and
4. Establish an operational and adaptable framework that combines the best wisdom of all Department stakeholders to maximize mission success.

In February 2012 in accordance with the GPRA-Modernization Act of 2010, the Department released an addendum to its Strategic Plan that recognizes the new agency priority goals and updates the status on several targeted outcomes within the plan. This addendum is available at:

<http://energy.gov/sites/prod/files/DOE%20Strategic%20Plan_2012%20GPRA%20Addendum.PDF>

# Program Inventory

The following sections present an inventory of programs for each DOE Office, ordered by strategic goal. The relationship between the DOE strategic goals, objectives, funding levels, and program missions and activities is provided.

# Energy Efficiency and Renewable Energy (EERE)

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars) | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| 1,780.5 | 1,820.7 | 2,775.7 |

The mission of EERE is to invest in clean energy technologies that strengthen the economy, protect the environment, and reduce dependence on oil. This office is comprised of the following programs: Advanced Manufacturing, Building Technologies, Federal Energy Management Program, Vehicle Technologies, Weatherization and Intergovernmental Programs, Bioenergy Technologies, Geothermal Technology, Hydrogen and Fuel Cell Technologies, Solar Energy, Water Power, and Wind Energy. (EERE website: <http://www.eere.energy.gov/>)

## Advanced Manufacturing Office (formerly Industrial Technologies)

The mission of AMO is to reduce the energy intensity and life-cycle energy consumption of manufactured products by researching, developing, and demonstrating energy-efficient manufacturing processes and materials and to promote continuous improvement in energy efficiency among existing facilities and manufacturers. Its goal is to reduce energy consumption of manufactured goods across targeted product life-cycles by 50 percent over 10 years.

## Building Technologies

The mission of BTP is to develop and promote efficient, environmentally friendly, and affordable technologies, systems, and practices for our Nation’s residential and commercial buildings that will lower greenhouse gas (GHG) emissions, foster economic prosperity and increase National energy security while providing the energy-related services and performance expected from our buildings.

## Vehicle Technologies

The mission of the Vehicle Technologies Program (VTP) is to develop and promote energy-efficient and environmentally friendly transportation technologies that will enable America to use significantly less petroleum and reduce greenhouse gas (GHG) emissions while meeting or exceeding drivers' performance expectations and environmental requirements.

## Weatherization and Intergovernmental Programs

The mission of the Weatherization and Intergovernmental Activities Program (WIP) is to significantly accelerate, in partnership with State and local organizations, the deployment of energy efficiency and renewable energy technologies and practices by a wide range of government, community, and business stakeholders.

## Bioenergy Technologies (formerly Biomass and Biorefinery R&D)

The overall mission of the Bioenergy Technologies Program is to facilitate the intersection of science and technology with demonstration and commercialization, bringing new innovations to a technical readiness that will encourage creation of a new industry, grounded in sustainable, domestic biomass resources used to produce clean, secure, renewable biofuels, bioproducts, and biopower that will reduce dependence on oil, reduce greenhouse gas (GHG) emissions, and create jobs.

## Geothermal Technology

The mission of the Geothermal Technologies Program is to accelerate the development and deployment of clean, domestic energy from geothermal resources that will promote a stronger, more productive economy and support a cleaner environment.

## Hydrogen and Fuel Cell Technologies

The mission of the Hydrogen and Fuel Cell Technologies Program is to enable the widespread commercialization of hydrogen and fuel cell technologies, which would reduce petroleum use, greenhouse gas (GHG) emissions, and criteria air pollutants and contribute to a more diverse energy supply and more efficient use of energy.

## Solar Energy

The Solar Energy Technologies Program supports the SunShot Initiative’s mission to develop solar energy technologies through a collaborative national push to make solar photovoltaic (PV) and concentrated solar power (CSP) energy technologies cost-competitive with fossil fuel based energy by reducing the cost of solar energy systems by 75 percent before 2020, from 2010 levels.

## Water Power

The mission of the Water Power Program is to research, develop, test, demonstrate, and facilitate the deployment of innovative technologies capable of generating renewable, environmentally responsible, and cost-effective electricity from U.S. water resources at an accelerated pace.

## Wind Energy

The mission of the Wind Energy Program is to accelerate widespread United States deployment of clean, affordable, reliable, and domestic wind power to promote economic growth and environmental quality.

## Federal Energy Management Program

Federal Energy Management Program’s (FEMP) mission is to provide the services, tools, and expertise to Federal agencies to help them achieve their energy and sustainability goals established by law and executive order. These are delivered through agency investment and performance contracting support, technical assistance, and communications and training. By increasing its use of energy efficiency and renewable energy, the Federal sector leads by example, saves money, meets more of its energy requirements from clean technologies and secure sources, and spurs innovation and commercialization of clean energy technologies.

**EERE Supported Strategic Goal and Objectives**

|  |  |  |
| --- | --- | --- |
| **Goal** | **Objective** | **Programs** |
| **1. Transform Our Energy Systems:** Catalyze the timely, material, and efficient transformation of the Nation’s energy system and secure U.S. leadership in clean energy technologies | **1A. Deploy the Technologies We Have** | Advanced Manufacturing |
| Building Technologies |
| Vehicle Technologies |
| Weatherization and Intergovernmental Activities |
| **1B. Discover the New Solutions We Need** | Bioenergy Technologies |
| Geothermal Technology |
| Hydrogen and Fuel Cell Technologies |
| Solar Energy |
| Water Power |
| Wind Energy |
| **1C. Lead the National Conversation on Energy** | Federal Energy Management Program |

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# Fossil Energy (FE)

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars) | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| 554.8 | 714.0 | 638.0 |

The mission of the Office of Fossil Energy (FE) is to advance technologies related to the reliable, efficient, affordable, and environmentally sound use of fossil fuels as well as manage the Petroleum Reserves to provide strategic and economic security against disruptions in U.S. oil supplies. (FE website: <http://www.fossil.energy.gov/>)

## Petroleum Reserves

The Strategic Petroleum Reserve (SPR) protects the U.S. from future disruptions in critical petroleum supplies and meets the U.S. obligations under the International Energy Program (Energy Policy and Conservation Act, P.L. 94-163, as amended, Section 151). SPR also includes Defense Department crude oil, stored for national defense purposes.

## Fossil Energy R&D

The Fossil Energy R&D Program will ensure the availability of near-zero atmospheric emissions, abundant, affordable, domestic energy to fuel economic prosperity, strengthen energy security, and enhance environmental quality.

|  |  |  |
| --- | --- | --- |
| **Strategic Goal** | **Strategic Objective** | **Programs** |
| **1. Transform Our Energy Systems:** Catalyze the timely, material, and efficient transformation of the Nation’s energy system and secure U.S. leadership in clean energy technologies | **1A. Deploy the Technologies We Have** | Petroleum Reserves |
| **1B. Discover the New Solutions We Need** | Fossil Energy R&D |

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# Nuclear Energy (NE)

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars)\* | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| 760.5 | 770.1 | 735.5 |

\*These funding levels are not fully comparable year-to-year due to budget structure changes.

NE advances nuclear power as a resource capable of meeting the nation's energy, environmental and national security needs by resolving technical barriers through research, development, and demonstration (if deemed appropriate). The following statement applies to the validation and verification of all NE milestone-based measures: annual measures and quarterly milestones are compiled by NE programs, approved by Office Directors, and then approved by Deputy Assistant Secretaries; this occurs every October for the new fiscal year’s set of measures. (NE website: <http://www.ne.doe.gov/>)

|  |  |  |
| --- | --- | --- |
| **Strategic Goal** | **Strategic Objective** | **Programs** |
| **1. Transform Our Energy Systems:** Catalyze the timely, material, and efficient transformation of the Nation’s energy system and secure U.S. leadership in clean energy technologies | **1B. Discover the New Solutions We Need** | Nuclear Energy |

# Electricity Delivery and Energy Reliability (OE)

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars) | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| 136.2 | 140.0 | 169.0 |

The mission of the OE is to lead national efforts to modernize the electric grid, enhance security and reliability of energy infrastructure, and facilitate recovery from disruptions to the energy supply. (OE website: <http://energy.gov/oe/office-electricity-delivery-and-energy-reliability>)

|  |  |  |
| --- | --- | --- |
| **Strategic Goal** | **Strategic Objective** | **Programs** |
| **1. Transform Our Energy Systems:** Catalyze the timely, material, and efficient transformation of the Nation’s energy system and secure U.S. leadership in clean energy technologies | **1A. Deploy the Technologies We Have** | Electricity Delivery and Energy Reliability |

# Bonneville Power Administration (BPA)

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars) | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| ─ | 945.0 | 1,027.0 |

The mission of BPA is to provide reliable and adequate cost-based power, transmission and other related services throughout the Pacific Northwest and to mitigate impacts of the Federal Columbia River Power System on fish and wildlife. (BPA website: <http://www.bpa.gov/corporate/>)

|  |  |  |
| --- | --- | --- |
| **Strategic Goal** | **Strategic Objective** | **Programs** |
| **1. Transform Our Energy Systems:** Catalyze the timely, material, and efficient transformation of the Nation’s energy system and secure U.S. leadership in clean energy technologies | **1A. Deploy the Technologies We Have** | Bonneville Power Administration |

# Southeastern Power Administration (SEPA)

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars) | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| ─ | **─** | **─** |

The mission of SEPA is to market and deliver reliable, cost-based Federal hydroelectric power and provide related services throughout the southeastern United States. (SEPA website: <http://www.sepa.doe.gov/>)

|  |  |  |
| --- | --- | --- |
| **Strategic Goal** | **Strategic Objective** | **Programs** |
| **1. Transform Our Energy Systems:** Catalyze the timely, material, and efficient transformation of the Nation’s energy system and secure U.S. leadership in clean energy technologies | **1A. Deploy the Technologies We Have** | Southeastern Power Administration |

# Southwestern Power Administration (SWPA)

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars) | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| 11.9 | 12.0 | 11.9 |

The mission of SWPA is to market and deliver reliable, cost-based Federal hydroelectric power and provide related services throughout the southwestern United States. (SWPA website: <http://www.swpa.gov/>)

|  |  |  |
| --- | --- | --- |
| **Strategic Goal** | **Strategic Objective** | **Programs** |
| **1. Transform Our Energy Systems:** Catalyze the timely, material, and efficient transformation of the Nation’s energy system and secure U.S. leadership in clean energy technologies | **1A. Deploy the Technologies We Have** | Southwestern Power Administration |

# Western Area Power Administration (WAPA)

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars) | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| 96.0 | 96.6 | 95.9 |

The mission of WAPA is to market and deliver reliable, cost-based Federal hydroelectric power and provide related services throughout the central and western United States. (WAPA website: <http://ww2.wapa.gov/sites/western/Pages/default.aspx>)

|  |  |  |
| --- | --- | --- |
| **Strategic Goal** | **Strategic Objective** | **Programs** |
| **1. Transform Our Energy Systems:** Catalyze the timely, material, and efficient transformation of the Nation’s energy system and secure U.S. leadership in clean energy technologies | **1A. Deploy the Technologies We Have** | Western Area Power Administration |

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# Loan Programs (LP)

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars) | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| 6.0 | **6.0** | **6.0** |

The mission of LP is to accelerate the domestic commercial deployment of innovative and advanced clean energy technologies at a scale sufficient to contribute meaningfully to the achievement of national clean energy objectives. (LP website: <http://www.lgprogram.energy.gov/>)

|  |  |  |
| --- | --- | --- |
| **Strategic Goal** | **Strategic Objective** | **Programs** |
| **1. Transform Our Energy Systems:** Catalyze the timely, material, and efficient transformation of the Nation’s energy system and secure U.S. leadership in clean energy technologies | **1A. Deploy the Technologies We Have** | Loan Programs |

# Advanced Research Projects Agency-Energy (ARPA-E)

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars) | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| 275.0 | 276.7 | 379.0 |

The mission of ARPA-E is to is to support energy technology innovations that will enhance the economic and energy security of the United States through the development of transformational technologies that reduce America’s dependence on energy imports; reduce U.S. energy related emissions; improve energy efficiency across all sectors of the U.S. economy; and ensure the U.S. maintains a technological lead in the development and deployment of advanced energy technologies. (ARPA-E website: <http://arpa-e.energy.gov/>)

|  |  |  |
| --- | --- | --- |
| **Strategic Goal** | **Strategic Objective** | **Programs** |
| **1. Transform Our Energy Systems:** Catalyze the timely, material, and efficient transformation of the Nation’s energy system and secure U.S. leadership in clean energy technologies | **1B. Discover the New Solutions We Need** | Advanced Research Projects Agency – Energy |

# Energy Information Administration (EIA)

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars) | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| 105.0 | 105.6 | 117.0 |

The mission of EIA is to collect, analyze, and disseminate independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment. (EIA website: <http://www.eia.gov/>)

|  |  |  |
| --- | --- | --- |
| **Strategic Goal** | **Strategic Objective** | **Programs** |
| **1. Transform Our Energy Systems:** Catalyze the timely, material, and efficient transformation of the Nation’s energy system and secure U.S. leadership in clean energy technologies | **1C. Lead the National Conversation on Energy** | Energy Information Administration |

# Science (SC)

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars) | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| 4,935.0 | 4,903.5 | 5,152.8 |

The Office of Science mission is to deliver the scientific discoveries and major scientific tools that transform our understanding of nature and advance the energy, economic, and national security of the United States. This office is comprised of the following programs: Advanced Scientific Computing Research, Basic Energy Sciences, Biological and Environmental Research, Fusion Energy Sciences, High Energy Physics, Nuclear Physics, and Workforce Development for Teachers and Scientists. (SC website: <http://science.energy.gov/>)

## Advanced Scientific Computing Research

Support research to discover, develop, and deploy the computational and networking capabilities to analyze, model, simulate, and predict complex phenomena important to DOE

## Basic Energy Sciences

Support fundamental research to understand, predict, and ultimately control matter and energy at the electronic, atomic, and molecular levels in order to provide the foundations for new energy technologies and to support the DOE mission in energy, environment, and national security

## Biological and Environmental Research

Support fundamental research to address diverse and critical global challenges, from the sustainable and affordable production of renewable biofuels to understanding and predicting climate change and greenhouse gas emissions relevant to energy production and technology use

## Fusion Energy Sciences

Support research to expand the fundamental understanding of matter at very high temperatures and densities and to build the scientific foundation of fusion energy

## High Energy Physics

Support research toward understanding how the universe works at its most fundamental level by discovering the most elementary constituents of matter and energy, probing the interactions among them, and exploring the basic nature of space and time itself

## Nuclear Physics

Support research to discover, explore, and understand all forms of nuclear matter, supporting experimental and theoretical research to create, detect, and describe the different forms and complexities of nuclear matter that can exist in the universe, including those that are no longer found naturally

## Workforce Development for Teachers and Scientists

Help ensure that DOE and the nation have a sustained pipeline of skilled and diverse science, technology, engineering, and mathematics (STEM) workers

|  |  |  |
| --- | --- | --- |
| **Strategic Goal** | **Strategic Objective** | **Programs** |
| **2. The Science and Engineering Enterprise:** Maintain a vibrant U.S. effort in science and engineering as a cornerstone of our economic prosperity, with clear leadership in strategic areas | **2A. Extend Our Knowledge of the Natural World** | Basic Energy Sciences |
| Biological and Environmental Research |
| High Energy Physics |
| Nuclear Physics |
| **2B. Deliver New Technologies to Advance Our Mission** | Advanced Scientific Computing Research |
| Basic Energy Sciences |
| Biological and Environmental Research |
| Fusion Energy Sciences |
| **2C. Sustain a World-Leading Technical Workforce** | Workforce Development for Teachers and Scientists |

# National Nuclear Security Administration (NNSA)

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars) | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| 11,005.8 | 11,466.4 | 11,652.5 |

NNSA is responsible for the management and security of the nation’s nuclear weapons, nuclear nonproliferation, and naval reactor programs. It also responds to nuclear and radiological emergencies in the United States and abroad. Additionally, NNSA federal agents provide safe and secure transportation of nuclear weapons and components and special nuclear materials along with other missions supporting national security. (NNSA website: <http://www.nnsa.energy.gov/>)

## Directed Stockpile Work

Maintain the U.S. nuclear weapons stockpile and dismantle excess nuclear weapons to meet national nuclear security requirements as assigned by the President through the Nuclear Posture Review.

## Science Campaign

The Science Campaign develops our nation’s scientific capabilities and experimental infrastructure used to assess the safety, security, reliability, and performance of the nuclear explosives package (NEP) without reliance on further underground testing. The Science Campaign supports this evaluation by developing certification and assessment tools and the experimental platforms to inform, validate, and provide confidence in our essential predictive capabilities. Its science-based approach provides the fundamental knowledge needed to: (1) provide a quantitative measure of confidence in weapons performance; (2) address and reduce uncertainties in our predictive capabilities; (3) predict the performance of the NEP as components age; (4) inform decisions for Stockpile Stewardship Programs; and (5) exercise readiness capabilities through experiments and assessments.

## Engineering Campaign

The Engineering Campaign provides the modern tools and capabilities needed to ensure the safety, security, reliability and effectiveness of the United States nuclear weapons stockpile. It provides the fundamental and sustained engineering basis for stockpile certification and assessments that are needed throughout the entire lifecycle of each weapon. The Engineering Campaign funds activities that assess and improve fielded nuclear and non-nuclear engineering components without further underground testing. Additionally, this Campaign increases the ability of the National Nuclear Security Administration (NNSA) to predict the response of weapon components and subsystems to harsh environments and to the effects of aging. In accordance with the 2010 Nuclear Posture Review Report, the Engineering Campaign directly supports “strengthening the science, technology, and engineering (ST&E) base needed for conducting weapon system LEPs, maturing advanced technologies to increase weapons surety, qualification of weapon components and certifying weapons without nuclear testing, and providing annual stockpile assessments through weapons surveillance.

## Inertial Confinement Fusion Ignition and High Yield Campaign

The Inertial Confinement Fusion (ICF) Ignition and High Yield Campaign provides the experimental capabilities and scientific understanding in high-energy density physics necessary to maintain a safe, secure, and reliable nuclear weapons stockpile without underground testing. Science-based weapons assessments and certification requires advanced experimental capabilities that can create and study matter under extreme conditions that approach the high energy density (HED) environments found in a nuclear explosion. The ICF Campaign provides this capability through the development and use of advanced experimental tools and techniques, including state-of-the-art laser and pulsed power facilities. The development of thermonuclear ignition and its applications in the laboratory will provide important information to support assessment and certification of the stockpile. It is the most important component of the ICF Campaign and a major goal for the National Nuclear Security Administration (NNSA) and the U.S. Department of Energy (DOE).

## Advanced Simulation and Computing Campaign

The Advanced Simulation and Computing (ASC) Campaign provides leading edge, high-end simulation capabilities to meet the requirements of weapons assessment and certification, including weapon codes, weapons science, computing platforms, and supporting infrastructure. The ASC Campaign serves as the computational surrogate for nuclear testing to determine weapon behavior. The ASC Campaign underpins the Annual Assessment of the stockpile, and is an integrating element of the Predictive Capability Framework.

## Readiness Campaign

The Readiness Campaign operates the capability for producing tritium to maintain the national inventory needed for the nuclear weapons stockpile and selects and matures production processes and technologies that are required for manufacturing components to meet Directed Stockpile Work production requirements.

## Nuclear Programs

Nuclear Programs supports the Weapons Activities of the National Nuclear Security Administration (NNSA) by performing mission-essential functions with a focus on capability investments, Special Nuclear Material (SNM) processing, and SNM inventory management. Nuclear Programs accomplishes its mission by achieving the following goals: develop and execute SNM strategies for Defense Programs (DP) operations; develop and operate SNM processing technology improvements and functionality; manage capability investments and line-item construction projects, supply required quantities of program nuclear materials for immediate production use and reserve use in strategic inventories; recycle, recover, and store nuclear and select non-nuclear program materials; and sustain program skills through personnel training and development.

## Secure Transportation Asset

As a departmental asset, the Secure Transportation Asset (STA) program safely and securely transports nuclear weapons, weapons components, and special nuclear materials to meet projected Department of Energy (DOE), Department of Defense (DoD), and other customer requirements.

STA contains two activities – Program Direction, and Operations and Equipment. Program Direction provides primarily for the federal agents and the secure transportation workforce. Operations and Equipment provides for STA’s transportation service infrastructure that is critical in meeting the stockpile refurbishment and modernization initiatives of the nuclear security enterprise.

## Facilities and Infrastructure Recapitalization Program

The Facilities and Infrastructure Recapitalization Program (FIRP) continues its mission to restore, rebuild and revitalize the physical infrastructure of the nuclear security enterprise. The program funding is utilized to address an integrated, prioritized series of repair and infrastructure projects that significantly increase the operational efficiency and effectiveness of the NNSA nuclear security enterprise sites by focusing on elimination of legacy deferred maintenance. FIRP improves safety and is able to readily respond to changing missions, priorities and decisions affecting both sites and their facilities within the nuclear security enterprise through the implementation of its prioritized project list that targets the highest priority facilities and infrastructure deficiencies first.

## Site Stewardship

The goal of Site Stewardship is to ensure the overall health and viability of the NNSA nuclear security enterprise and to support the Department of Energy and other national missions, bringing focus on environmental compliance, sustainability and energy efficiency and nuclear materials disposition. The program goal and objectives of Site Stewardship align with the Department’s Strategic Plan (May 2011) goals and management principles, by ensuring capabilities and resources are available to address a number of environmental, energy, security and management challenges. Site Stewardship consists of Environmental Projects and Operations, Nuclear Materials Integration, Energy Modernization and Investment Program, and Corporate Project Management.

## Defense Nuclear Security

Safeguards and Security (S&S) is comprised of two Government Performance and Results Act (GPRA) Unit Programs. The Defense Nuclear Security (DNS) program, managed by the National Nuclear Security Administration (NNSA) Associate Administrator for Defense Nuclear Security, provides protection for NNSA personnel, facilities, nuclear weapons, and information from a full spectrum of threats, most notably from terrorism, which has become of paramount concern since the September 11, 2001 attacks. The National Nuclear Security Administration (NNSA) Chief Information Officer (CIO) Activities program (formerly Cyber Security), managed by the NNSA Chief Information Officer, provides the requisite guidance needed to ensure that sufficient information management security safeguards are implemented throughout the NNSA enterprise. These program efforts are integrated under NNSA’s Chief of Defense Nuclear Security.

## NNSA CIO Activities

The goal of the National Nuclear Security Administration (NNSA) Chief Information Officer (CIO) Activities program (formerly Cyber Security) is to ensure that sufficient information management security safeguards are implemented throughout the nuclear security enterprise to adequately protect the NNSA information assets and to provide the requisite guidance in compliance with the Department of Energy’s (DOE) Defense-in-Depth Cyber Security strategy and the NNSA Information Management Strategic Plan. The CIO Activities program is a Homeland Security related activity.

## Global Threat Reduction Initiative

The Global Threat Reduction Initiative (GTRI) program reduces and protects vulnerable nuclear and radiological materials located at civilian sites worldwide.

## International Material Protection and Cooperation

The International Material Protection and Cooperation (IMPC) program prevents nuclear terrorism by working in Russia and other regions of concern.

## Fissile Materials Disposition

The program goal is to eliminate surplus Russian weapon-grade plutonium and surplus United States (U.S.) weapon-grade plutonium and highly enriched uranium. NOTE: As appropriate, performance measures will be updated to reflect the slow down for the current plutonium disposition strategy and associated activities beginning in the second half of FY 2013 and the decision resulting from the assessment of a new and affordable plutonium disposition strategy in the out years.

## Nonproliferation and International Security

The Office of Nonproliferation and International Security (NIS) supports National Nuclear Security Administration (NNSA) efforts to prevent and counter the proliferation or use of weapons of mass destruction (WMD), including materials, technology and expertise, by state and non-state actors. NIS focuses on strengthening the nonproliferation regime in order to reduce proliferation and counterterrorist risks by applying its unique expertise to safeguard nuclear material and strengthen its physical security; control the spread of WMD-related material, equipment, technology and expertise; verify nuclear reductions and compliance with nonproliferation treaties and agreements; and develop and implement Department of Energy (DOE)/NNSA nonproliferation and arms control policy. NIS pursues these objectives through four programs: (1) Nuclear Safeguards & Security; (2) Nuclear Controls; (3) Nuclear Verification; and (4) Nonproliferation Policy.

## Defense Nuclear Nonproliferation Research and Development

This program improves U.S. national security through the development of novel technologies to detect foreign nuclear weapons proliferation/detonation and verification of foreign commitments to treaties and agreements.

## Nuclear Counterterrorism Incident Response Program

Nuclear Counterterrorism Incident Response (NCTIR) Program, formerly the Nuclear Weapons Incident Response program, responds to, and mitigates nuclear and radiological incidents worldwide and has a lead role in defending the Nation from the threat of nuclear terrorism.

## Counterterrorism and Counterproliferation

The Counterterrorism and Counterproliferation (CT/CP) program (formerly National Security Applications (NSA) , and a portion of the former NCTIR program) makes strategic investments in the national security science, technology and engineering capabilities and infrastructure base that are necessary to address current and future global nuclear counterterrorism and counterproliferation issues. The CT/CP budget is separated into its own budget line to highlight technical investments. This program integrates the management, development, and maintenance of CT/CP capabilities that are relied upon by agencies across the Federal government and provides transparency, alignment, and accountability into the investments made in workforce and infrastructure to preserve nuclear CT/CP capabilities into the future.

## Naval Reactors

Naval Reactors’ mission includes ensuring the safety of reactors and associated naval nuclear propulsion plants, and control of radiation and radioactivity associated with naval nuclear propulsion activities, including prescribing and enforcing standards and regulations for these areas as they affect the environment and the safety and health of workers, operators, and the general public. Naval Reactors maintains oversight of program support in areas such as security, nuclear safeguards and transportation, radiological controls, public information, procurement, logistics, and fiscal management.

## NNSA Office of the Administrator

The mission of Office of the Administrator is to create a well-managed, inclusive, responsive, and accountable organization through the strategic management of human capital and acquisitions and integration of budget and performance data.

| **Strategic Goal** | **Strategic Objective** | **Programs** |
| --- | --- | --- |
| **3. Secure Our Nation:** Enhance nuclear security through defense, nonproliferation, and environmental efforts | **3A. Support the U.S. Nuclear Stockpile and Future Military Needs** | Directed Stockpile Work |
| Science Campaign |
| Engineering Campaign |
| Inertial Confinement Fusion Ignition and High Yield Campaign |
| Advanced Simulation and Computing Campaign |
| Readiness Campaign |
| Nuclear Programs (formerly Readiness in Technical Base and Facilities) |
| Secure Transportation Asset |
| Facilities and Infrastructure Recapitalization Program |
| Site Stewardship |
| Defense Nuclear Security |
| NNSA CIO Activities |
| **3B. Reduce Global Nuclear Dangers** | Global Threat Reduction Initiative |
| International Material Protection and Cooperation |
| Fissile Materials Disposition |
| Nonproliferation and International Security |
| Defense Nuclear Nonproliferation R&D  (formerly Nonproliferation and Verification R&D) |
| **3C. Apply Our Capabilities for Other Critical National Security Missions** | Counterterrorism and Counterproliferation  (formerly National Security Applications) |
| Nuclear Counterterrorism Incident Response Program |
| Naval Reactors |
| **3A, 3B, and 3C** | NNSA Office of the Administrator |

# Environmental Management (EM)

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars) | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| 5,710.4 | 5,745.4 | 5,621.7 |

The mission of EM is to complete the safe cleanup of the environmental legacy brought about from five decades of nuclear weapons development and government-sponsored nuclear energy research. The EM strategy is to work aggressively to reduce the footprint of our contaminated sites while bringing to bear the Department’s formidable research and development assets to develop and deploy transformational technologies that will both accelerate and lower the cost to disposition the Department’s highest curie materials that present high risk to public health and the environment. (EM website: <http://www.em.doe.gov/Pages/EMHome.aspx>)

|  |  |  |
| --- | --- | --- |
| **Strategic Goal** | **Strategic Objective** | **Programs** |
| **3. Secure Our Nation:** Enhance nuclear security through defense, nonproliferation, and environmental efforts | **3E. Complete Environmental Remediation of Our Legacy and Active Sites** | Environmental Management |

**Legacy Management (LM)**

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars) | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| 169.6 | 170.6 | 177.0 |

The mission of LM is to fulfill the DOE’s post-closure responsibilities and ensure the future protection of human health and the environment. As part of the mission, LM performs long-term surveillance and maintenance, which is the focus of LM’s performance measures. (LM website: <http://www.lm.doe.gov/>)

|  |  |  |
| --- | --- | --- |
| **Strategic Goal** | **Strategic Objective** | **Programs** |
| **3. Secure Our Nation:** Enhance nuclear security through defense, nonproliferation, and environmental efforts | **3E. Complete Environmental Remediation of Our Legacy and Active Sites** | Legacy Management |

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# Departmental Administration: Support Offices/Corporate Management

|  |  |  |
| --- | --- | --- |
| Total Budget Authority (in millions of dollars)\* | | |
| FY 2012 actual | **FY 2013 CR** | **FY 2014 est.** |
| 821.8 | 826.8 | 732.6 |

\*These funding levels are not fully comparable year-to-year due to budget structure changes.

The Departmental Administration (DA) account includes 10 DOE-wide corporate management organizations which support headquarters operations in human resources, administration, accounting, budgeting, program analysis, contract and project management, information management, cybersecurity, legal services, life-cycle asset management, workforce diversity, Indian energy policy and programs, minority economic impact, policy, international affairs, congressional and intergovernmental liaison, ombudsman services, public affairs and the Office of the Secretary. The Departmental Administration offices provide essential services to its mission programs, as well as serve the Secretary of Energy and protect taxpayer interests. While activities are varied among DOE Support Offices, the common focus is the safe, secure, efficient, and effective execution of the Department’s mission. (<http://www.doe.gov/>)

|  |  |  |
| --- | --- | --- |
| **Strategic Goal** | **Strategic Objective** | **Programs** |
| **4. Management and Operational Excellence:** Establish an operational and adaptable framework that combines the best wisdom of all Department stakeholders to maximize mission success | **4A. Achieve Operational and Technical Excellence** | Departmental Administration |
| Hearings and Appeals |
| **4B. Implement a Performance-Based Culture** | Departmental Administration |
| Health, Safety and Security |
| Inspector General |

# Agency Priority Goals and Cross Agency Priority Goals

The GPRA Modernization Act of 2010 set a process for agencies to focus on a limited number of near-term priority goals. So, in addition to the almost 200 performance measures DOE monitors internally, DOE supports 8 Agency Priority Goals (APGs). For contributions to our Agency Priority Goals, please refer to www.Performance.gov.

| **Agency Priority Goal Short Name** | **Agency Priority Goal Statement** | **GPRA Unit or Office Responsible for the Agency Priority Goal** | **Strategic Goal Supported by the Agency Priority Goal** | **Strategic Objective supported by the Agency Priority Goal** |
| --- | --- | --- | --- | --- |
| Nuclear Weapons | Maintain the U.S. nuclear weapons stockpile and dismantle excess nuclear weapons to meet National nuclear security requirements as assigned by the President through the Nuclear Posture Review.  Each year through 2013 and into the future, maintain 100% of warheads in the stockpile that are safe, secure, reliable, and available to the President for deployment. | Directed Stockpile Work | Strategic Goal 3. Secure our Nation: Enhance nuclear security through defense, nonproliferation, and environmental efforts. | Objective 3.1. Support the U.S. Nuclear Stockpile and Future Military Needs |
| Science Campaign (contributing) |
| Engineering Campaign (contributing) |
| Advanced Simulation and Computing Campaign (contributing) |
| Inertial Confinement Fusion Ignition and High Yield Campaign (contributing) |
| Readiness Campaign (contributing) |
| Nuclear Programs (Readiness in Technical Base and Facilities) (contributing) |
| Secure Transportation Asset (contributing) |
| Secure Nuclear Materials | Make significant progress toward securing the most vulnerable nuclear materials worldwide within four years.  By December 31, 2013, remove or dispose of a cumulative total of 4,353 kg of vulnerable nuclear material (highly enriched uranium and plutonium), and complete material protection, control and accounting (MPC&A) upgrades on a cumulative total of 229 buildings containing weapons usable material. | Global Threat Reduction Initiative | Strategic Goal 3. Secure our Nation: Enhance nuclear security through defense, nonproliferation, and environmental efforts. | Objective 3.2. Reduce Global Nuclear Dangers |
| International Material Protection and Cooperation |
| Legacy Waste | Reduce the Department's Cold War legacy environmental footprint. By September 30, 2013, achieve a 71% reduction in DOE’s cold war environmental footprint. | Office of Environmental Management | Strategic Goal 3. Secure our Nation: Enhance nuclear security through defense, nonproliferation, and environmental efforts. | Objective 3.5. Complete Environmental Remediation of Our Legacy and Active Sites |
| Science Facilities | Prioritization of scientific facilities to ensure optimal benefit from Federal investments. By September 30, 2013, formulate a 10-year prioritization of scientific facilities across the Office of Science based on (1) the ability of the facility to contribute to world-leading science, (2) the readiness of the facility for construction, and (3) an estimated construction and operations cost of the facility. | Office of Science | Strategic Goal 2. The Science and Engineering Enterprise: Maintain a vibrant U.S. effort in science and engineering as a cornerstone of our economic prosperity with clear leadership in strategic areas. | The APG is linked directly to the strategic goal. It is not linked at the strategic objective level. |
| SunShot | Make solar energy as cheap as traditional sources of electricity.  By the end of the decade, drive the cost of solar electricity down to: $1/W at utility scale; $1.25/W at commercial scale; and $1.50/W at residential scale.  By December 2013, demonstrate a prototype thin film or film silicon module with an efficiency of greater than 21% and a balance-of-system with a 50% reduction in the permitting and installation costs to $1.50/W. | Solar Energy | Strategic Goal 1. Transform our Energy Systems: Catalyze the timely, material, and efficient transformation of the nation's energy system and secure U.S. leadership in clean energy technologies. | Objective 1.1. Deploy the Technologies We Have;   Objective 1.2. Discover the New Solutions We Need |
| Battery Performance | Reduce the cost of batteries for electric drive vehicles to help increase the market for Plug-In Hybrids and All-Electric Vehicles and thereby reduce petroleum use and greenhouse gas emissions. By October 2013, demonstrate a prototype Plug-In Hybrid battery technology that is capable of achieving a cost of $400/kWhr (useable energy) during high volume manufacturing (100,000 packs per year) compared to a 2008 baseline of $1000/kWhr. | Vehicle Technologies | Strategic Goal 1. Transform our Energy Systems: Catalyze the timely, material, and efficient transformation of the nation's energy system and secure U.S. leadership in clean energy technologies. | Objective 1.2. Discover the New Solutions We Need |
| Appliance Standards | Reduce consumer energy use and costs for household appliances. By December 31, 2013, issue at least 9 new energy conservation standards to deliver net consumer savings of hundreds of billions of dollars over 30 years and require efficient products across domestic and international manufacturers. | Building Technologies | Strategic Goal 1. Transform our Energy Systems: Catalyze the timely, material, and efficient transformation of the nation's energy system and secure U.S. leadership in clean energy technologies. | Objective 1.1. Deploy the Technologies We Have |
| Weatherization Retrofits | Save low-income families money and energy through weatherization retrofits. From FY2010 through FY2013, in collaboration with HUD, enable the cost-effective energy retrofits of a total of 1.2 million housing units, of which more than 75% are low income. | Weatherization and Intergovernmental Program | Strategic Goal 1. Transform our Energy Systems: Catalyze the timely, material, and efficient transformation of the nation's energy system and secure U.S. leadership in clean energy technologies. | Objective 1.1. Deploy the Technologies We Have |
| Building Technologies (contributing) |

The GPRA Modernization Act of 2010 also called for the creation of federal priority goals that would be managed across agencies. The administration identified 14 cross-agency priority (CAP) goals in the FY 2013 President’s Budget. The implementation of these goals is led by White House offices, the Office of Management and Budget, and interagency councils. Please refer to www.Performance.gov for DOE’s contributions to CAP Goals.

DOE currently contributes to the following CAP Goals: the Department of Energy plays a direct role with three outcome-oriented, cross-agency priority goals and a supporting role with six management-focused goals, as follows:

* Energy Efficiency: “Reduce energy intensity (energy demand/$ real Gross Domestic Product) 50% by 2035 (2010 base year)”
* Sustainability: “By 2020, the Federal Government will reduce its direct greenhouse gas emissions by 28 percent and will reduce its indirect greenhouse gas emissions by 13 percent by 2020 (from 2008 baseline).”
* Entrepreneurship and Small Business: “Increase federal services to entrepreneurs and small businesses with an emphasis on (1) startups and growing firms and (2) underserved market”