

Department of Energy FY 2018 Congressional Budget Request



**Other Defense Activities
Departmental Administration
Inspector General
Working Capital Fund
Crosscutting Activities
Pensions**

Department of Energy

FY 2018 Congressional Budget Request



Other Defense Activities Departmental Administration Inspector General Working Capital Fund Crosscutting Activities Pensions



Volume 2
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FUNDING BY APPROPRIATION

	(\$K)				
	FY 2016 Enacted	FY 2017 Annualized CR*	FY 2018 Request	FY 2018 vs FY 2016	
				\$	%
Department of Energy Budget by Appropriation					
Energy and Water Development, and Related Agencies					
Energy Programs					
Energy Efficiency and Renewable Energy	2,069,194	2,069,059	636,149	-1,433,045	-69.3%
Electricity Delivery and Energy Reliability	206,000	205,608	120,000	-86,000	-41.7%
Nuclear Energy	986,161	984,286	703,000	-283,161	-28.7%
Fossil Energy Programs					
Fossil Energy Research and Development	632,000	630,799	280,000	-352,000	-55.7%
Naval Petroleum and Oil Shale Reserves	17,500	17,467	4,900	-12,600	-72.0%
Strategic Petroleum Reserve	212,000	211,597	180,000	-32,000	-15.1%
Strategic Petroleum Account	0	0	8,400	+8,400	N/A
Northeast Home Heating Oil Reserve	7,600	7,586	6,500	-1,100	-14.5%
Total, Fossil Energy Programs	869,100	867,449	479,800	-389,300	-44.8%
Uranium Enrichment Decontamination and Decommissioning (UED&D) Fund	673,749	767,014	752,749	+79,000	+11.7%
Energy Information Administration	122,000	121,768	118,000	-4,000	-3.3%
Non-Defense Environmental Cleanup	255,000	254,515	218,400	-36,600	-14.4%
Science	5,347,000	5,336,835	4,472,516	-874,484	-16.4%
Advanced Research Projects Agency - Energy	291,000	290,446	20,000	-271,000	-93.1%
Nuclear Waste Disposal	0	0	90,000	+90,000	N/A
Departmental Administration	130,971	130,722	145,652	+14,681	+11.2%
Office of the Inspector General	46,424	46,336	49,000	+2,576	+5.5%
Title 17 - Innovative Technology Loan Guarantee Program	17,000	14,920	0	-17,000	-100.0%
Advanced Technology Vehicles Manufacturing Loan Program	6,000	5,989	0	-6,000	-100.0%
Total, Energy Programs	11,019,599	11,094,947	7,805,266	-3,214,333	-29.2%
Atomic Energy Defense Activities					
National Nuclear Security Administration					
Weapons Activities	8,846,948	8,830,130	10,239,344	+1,392,396	+15.7%
Defense Nuclear Nonproliferation	1,940,302	1,936,614	1,793,310	-146,992	-7.6%
Naval Reactors	1,375,496	1,372,881	1,479,751	+104,255	+7.6%
Federal Salaries and Expenses	363,766	363,937	418,595	+54,829	+15.1%
Total, National Nuclear Security Administration	12,526,512	12,503,562	13,931,000	+1,404,488	+11.2%
Environmental and Other Defense Activities					
Defense Environmental Cleanup	5,289,742	5,279,686	5,537,186	+247,444	+4.7%
Other Defense Activities	776,425	774,949	815,512	+39,087	+5.0%
Defense Nuclear Waste Disposal	0	0	30,000	+30,000	N/A
Total, Environmental and Other Defense Activities	6,066,167	6,054,635	6,382,698	+316,531	+5.2%
Total, Atomic Energy Defense Activities	18,592,679	18,558,197	20,313,698	+1,721,019	+9.3%
Power Marketing Administrations					
Southeastern Power Administration	0	0	0	0	N/A
Southwestern Power Administration	11,400	11,378	11,400	0	N/A
Western Area Power Administration	93,372	93,194	93,372	0	N/A
Falcon and Amistad Operating and Maintenance Fund	228	228	228	0	N/A
Colorado River Basins Power Marketing Fund	-23,000	-23,000	-23,000	0	N/A
Total, Power Marketing Administrations	82,000	81,800	82,000	0	N/A
Federal Energy Regulatory Commission (FERC)	0	0	0	0	N/A
Subtotal, Energy and Water Development and Related Agencies	29,694,278	29,734,944	28,200,964	-1,493,314	-5.0%
Excess Fees and Recoveries, FERC	-23,587	-15,882	-9,000	+14,587	+61.8%
Title XVII Loan Guarantee Program Section 1703 Negative Credit Subsidy Receipt	-68,000	-67,871	-35,000	+33,000	+48.5%
Sale of Northeast Gas Reserve	0	0	-69,000	-69,000	N/A
Use of Advanced Research Projects Agency - Energy Balances	0	0	-46,367	-46,367	N/A
Total, Funding by Appropriation	29,602,691	29,651,191	28,041,597	-1,561,094	-5.3%

*The Consolidated Appropriations Act was not available when the Department of Energy developed the FY 2018 Congressional Budget. Therefore, the FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year.

Other Defense Activities

Other Defense Activities

Other Defense Activities

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Other Defense Activities
Proposed Appropriation Language

For Department of Energy expenses, including the purchase, construction, and acquisition of plant and capital equipment and other expenses, necessary for atomic energy defense, other defense activities, and classified activities, in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), including the acquisition or condemnation of any real property or any facility or for plant or facility acquisition, construction, or expansion, \$815,512,000, to remain available until expended: Provided, That \$285,165,000 shall be available until September 30, 2019, for program direction.

Note.—A full-year 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Further Continuing Appropriations Act, 2017 (P.L. 114–254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution.

Explanation of Changes

No change.

**Other Defense Activities
(\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR ^a	FY 2018 Request
Other Defense Activities	776,425	774,949	815,512

Overview

The Other Defense Activities appropriation funds elements that relate to and support the defense-oriented activities within the Department. These include Environment, Health, Safety and Security (EHSS), Enterprise Assessments (EA), Specialized Security Activities (SSA), Legacy Management (LM), Hearings and Appeals (OHA), and Defense Related Administrative Support (DRAS). Funding from DRAS is used to offset expenses within the Departmental Administration (DA) for work supporting defense-oriented activities.

Highlights and Major Changes in the FY 2018 Budget Request

- The SSA funding increase in FY 2018 is to assure coverage of national security related activities.
- EHSS funding provides for coordination and policy direction for the Insider Threat activities. An increase in funding is provided to maintain Headquarters Security Operations and provide additional support for security system equipment maintenance and replacement.
- EA is expanding its analytical capabilities, to identify emerging trends and systemic weaknesses across the Department’s security and safety performance. Consistent with guidance from the Secretary, EA will place a high priority on supporting a robust cybersecurity program and supporting national security efforts such as modernization of the nuclear weapons infrastructure and clean up of the legacy of waste and contamination from DOE research and nuclear weapons production.
- In LM a decrease in pension and benefit continuity is partially offset by increases in the cost of Program Direction and expanded work requirements for cybersecurity.

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above, below that level, a dash (-) is shown.

Other Defense Activities
Funding by Congressional Control
(\$K)

	FY 2016 Enacted	FY 2017 Annualized CR ^a	FY 2018 Request	FY 2018 vs FY 2016
Environment, Health, Safety and Security	180,998	180,654	199,458	+18,460
Office of Enterprise Assessments	73,534	73,394	74,931	+1,397
Specialized Security Activities	230,377	229,939	237,912	+7,535
Office of Legacy Management	167,180	166,862	154,606	-12,574
Defense-Related Administrative Support	118,836	118,610	143,000	+24,164
Office of Hearings and Appeals	5,500	5,490	5,605	+105
Total, Other Defense Activities	776,425	774,949	815,512	+39,087

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above, below that level, a dash (-) is shown.

Environment, Health, Safety and Security

Overview

The Office of Environment, Health, Safety and Security (EHSS) provides corporate leadership and strategic approaches in enabling the Department of Energy (DOE) mission and furthering the protection afforded the DOE workers, the public, the environment and national security assets. This is accomplished through the maintenance of corporate-level policies and standards and providing implementation guidance; sharing operating experience, lessons learned, and best practices; and providing assistance and supporting services to line management with the goal of mission success as DOE's environment, health, safety and security advocate.

EHSS accomplishes its overall mission in the following focus areas:

Environment, Health and Safety Policy and Support:

- Protecting the health and safety of DOE's Federal and contractor workforce, addressing the health effects legacy of the Nation's nuclear weapons program, and conducting national and international health studies.
- Minimizing DOE's radiological and other environmental footprints and improving DOE's safety performance through analysis, policy development, and sharing lessons learned.
- Promoting the safe design, construction and operation of DOE's facilities, both nuclear and non-nuclear, and providing cross-organizational leadership in resolving related issues.

Security Policy and Support:

- Establishing effective policies, through a collaborative, enterprise approach, by which the national security assets entrusted to the Department are protected and secured.
- Furthering DOE's national security, nonproliferation and open governmental goals through the identification of classified, controlled and unclassified information.
- Providing specialized security services, to include protective force and personnel security, to DOE Headquarters facilities and securing the work environment for Federal and contractor personnel.

As the Department's environment, health, safety and security advocate, EHSS supports the Department by identifying the risks in these areas that could jeopardize DOE's mission. EHSS works closely with DOE line management who is ultimately responsible for ensuring that the Department's work is managed and performed in a manner that protects workers, the public, and the Department's material and information assets. As part of this partnership, EHSS develops and promulgates environment, health, safety and security policy and provides expert advice and implementation assistance to help line management accomplish the Department's mission in a safe and secure manner. EHSS also represents the Department in national and international environment, health, safety, and security matters.

EHSS plays a leadership role in meeting the Department's expectation that all of its organizations embrace a healthy organizational culture where safe and secure performance of work and involvement of workers are deeply, strongly, and consistently held by managers and workers. EHSS contributes to more efficient and cost-effective mission accomplishment by providing quality products and timely expertise aimed at eliminating or mitigating major risks that can lead to adverse impacts to mission. EHSS also informs Secretarial decisions and improves DOE performance by providing expert advice to the Department's senior nuclear safety and nuclear security decision makers.

Working Capital Fund (WCF) estimates for FY 2018 have increased over the FY 2016 estimates to fund the OPM credit monitoring and projected inflation increases in existing WCF programs. EHSS's share of this estimated increase is \$2,004,000 and is included in the Program Direction Budget Request.

**Environment, Health, Safety and Security
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Environment, Health, Safety and Security				
Environment, Health and Safety				
Worker Safety	4,346	-	5,013	+667
Nuclear Safety	5,696	-	5,804	+108
Environment	2,407	-	2,371	-36
Health Programs				
Domestic Health Programs				
Health Research	2,270	-	2,270	0
Former Worker Medical Screening	19,850	-	19,850	0
Employee Compensation Program	5,340	-	5,340	0
International Health Programs				
Russian Health Studies	2,750	-	2,750	0
Japanese Health Studies	14,000	-	14,000	0
Marshall Islands Program	6,300	-	6,300	0
Total, Environment, Health and Safety	62,959	-	63,698	+739
Security				
Insider Threat Program	3,000	-	3,000	0
Security Operational Support	5,762	-	6,462	+700
Classification, Declassification and Controlled Information	8,607	-	9,757	+1,150
Security Investigations	7,445	-	8,705	+1,260
Headquarters Security Operations	30,990	-	39,071	+8,081
Total, Security	55,804	-	66,995	+11,191
Total, Environment, Health, Safety and Security	118,763	-	130,693	+11,930
Program Direction	62,235	-	68,765	+6,530
Total, Environment, Health, Safety and Security	180,998	180,654	199,458	+18,460

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown.

Environment, Health, Safety and Security
Explanation of Major Changes (\$K)

FY 2018 vs FY 2016

Environment, Health, Safety and Security:

Program Direction: An increase for salaries and benefits, working capital fund, and information technology, and an increase of 2 FTEs for the Employee Concerns program. **+6,530**

Headquarters Security Operations: An increase for funding for the Protective Force contract that was awarded in April 2015 to meet the increased labor costs and security measures to meet the current Interagency Security Committee (DHS) standards (\$7,981,000) and an increase of \$100,000 for Headquarters Physical Security Systems to include the cost, maintenance, and replacement of the access control system at both the Forrestal and Germantown facilities, replacement of the current security turnstile system. **+8,081**

Nuclear Safety: An increase for cost escalation for the Filter Test Facility. **+108**

Environment: Funding adjusted to focus on FY 2018 activities. **-36**

Security Operational Support: An increase for Security Technology Integration to provide for the identification and assessment of effective, safe and reliable physical security technologies to replace systems currently in operation at nuclear facilities, laboratories, the Strategic Petroleum Reserve and the Department's Power Marketing Administrations. The increase is also for Vulnerability Assessments, and this is offset by a decrease to the Human Reliability Program. There is also an increase to the FACTS Program to reflect actual spending, offset by a decrease to the Radiological Source Registry and Tracking (RSRT) Program. **+700**

Security Investigations: An increase is for costs by OPM to conduct security clearance investigations, and an increase in costs for the issuance of HSPD-12 credentials. **+1,260**

Classification/Declassification: An increase is to provide additional support for the timely review of classified documents to prevent the inadvertent release of sensitive information to the public. **+1,150**

Worker Safety: An increase is for the Employee Concerns Program and Information Technology. **+667**

Total, Environment, Health, Safety and Security **+18,460**

Environment, Health and Safety

Description

The Environment, Health and Safety subprogram provides technical and analytical expertise to protect and enhance the safety of DOE workers, the public, and the environment. This subprogram maintains policies and guidance for the establishment of safe, environmentally sound work practices to achieve best-in-class performance in occupational, facility, nuclear, and radiation safety; protection of the environment and cultural and natural resources; and quality assurance. Environment, Health and Safety provides assistance to DOE offices and laboratories through site-specific activities, such as nuclear facility safety basis reviews, and corporate-wide services, such as accrediting commercial laboratories used by DOE sites for regulatory compliance and employee monitoring programs; administering the accident investigation program; supporting the Radiation Emergency Assistance Center/Training Site; and testing of high efficient particulate air filters. Corporate databases, such as those pertaining to accidents and illnesses, occurrence reporting, radiation monitoring and dose assessment, safety basis information, and hazardous substances inventories are maintained and used to support analyses of health and safety performance for senior management.

Environment, Health and Safety subprogram provides technical support for the implementation of Department-wide safety and environmental programs such as the DOE Federal occupational safety and health program, the voluntary protection program which encourages and rewards safety performance that exceeds industry averages through universally recognized certifications, environmental management systems which support sustainable practices that promote pollution prevention, greenhouse gas reduction, and effective resource utilization, and radiological clearance and control programs for the safe reuse and recycle of DOE equipment and materials and radiological release of lands and buildings. These DOE-wide safety and environmental programs are integrated with mission activities to optimize protection and effective implementation.

The Environment, Health and Safety subprogram also provides support to the Department of Labor for the implementation of the Energy Employees Occupational Illness Compensation Program Act, the former worker medical screening program, and radiation health studies in Japan and Russia. These projects and programs provide for the evaluation and documentation of health effects and outcomes that support the basis for national and international worker protection policies and standards, which, in turn, provide updated levels of protection appropriate for the risk posed to DOE workers and the public.

In FY 2018, Environment, Health and Safety will continue:

- Developing cost-effective solutions for achieving best-in-class safety performance founded on integrated safety management and enhanced through such concepts as safety culture, voluntary protection, and environmental management systems.
- Honoring the national and Departmental commitment to current and former workers through cost-effective implementation of the former worker medical screening program and support to the Department of Labor for the implementation of the Energy Employees Occupational Illness Compensation Program Act.

Worker Safety

Worker safety and health policies establish Department-wide safe work practices to achieve best-in-class safety performance as compared to industrial operations resulting in work conducted with a full understanding of health and safety related risks and controls necessary to mitigate those risks leading to minimization or avoidance of worker compensation liabilities. Funding provides for the maintenance of existing standards and the development of new requirements based on new or evolving working conditions and new developments in health science; technical assistance to DOE programs, laboratories, and sites in implementing health and safety requirements and programs; promotion of improvements in overall safety culture; and implementation of corporate health- and safety-related programs and information technology systems. Funding also provides for collecting, analyzing, and trending operational data to identify strengths and weaknesses of safety programs in support of continuous improvement in safety performance and cost effective implementation. Funding provides for the Employee Concerns Program that manages and provides a DOE enterprise approach to ensure that employee concerns related to environment, health, safety and security and the management of DOE and NNSA programs and facilities are addressed.

Nuclear Safety

Nuclear Safety activities include establishing and maintaining nuclear safety policies and requirements to ensure adequate protection of workers, the public, and the environment from hazards associated with the design and operation of DOE nuclear facilities. This includes the establishment of general facility safety requirements in fire protection, response to natural phenomena, maintenance, and quality assurance to ensure that products and services meet or exceed the Department's objectives. Nuclear safety provides assistance to field elements in implementing requirements and resolving issues; and provides oversight of DOE nuclear operations and facilities.

Environment

Environmental activities support DOE's efficient use of resources and energy and its compliance with environmental requirements. Funding provides technical support for the development of policies, requirements, and guidance related to responsible management of natural and cultural resources on and around DOE facilities, and performance tracking across the DOE complex. Environmental activities also fund technical analyses supporting AU's role representing DOE to external agencies and stakeholders to develop cost effective and efficient means of meeting environmental and public protection objectives and avoiding future liabilities. Funding is used to identify requirements or recommendations that are not cost beneficial or based on sound science and to identify and assist with implementing suitable alternatives. Environmental activities also support the development of guidance and tools for implementation of consensus standards that are practical and broadly accepted. Funding supports programs that provide assurance that environmental monitoring and sampling data meet DOE data quality objectives and ensures computer codes that are used to demonstrate compliance with DOE public and environmental protection requirements are appropriate and employ the best science. Funding also supports the development and maintenance of plans, models, and guidance to respond to radiological and nuclear-related emergencies and support for interagency and national consensus standard development with a goal to harmonize Federal radiation protection policies and guidance for protection of the public and environment.

Domestic Health Programs:

Health Research

Domestic health research activities provide for the conduct of health studies on DOE workers and communities surrounding DOE sites, technical assistance to DOE Programs in addressing specific health issues, support to national assets used to respond to radiological events throughout the country, and expertise to support national and international efforts in response to disease outbreaks. These activities also support the maintenance of the electronic comprehensive epidemiologic data resource; the beryllium and U.S. transuranium and uranium registries; and the illness and injury surveillance database and access to the data these systems contain.

Former Worker Medical Screening

Former worker medical screening activities provide for the conduct of medical screenings for former DOE and DOE-related beryllium vendor employees to identify adverse health conditions that may have resulted from work conducted at DOE or DOE-related beryllium vendor facilities on behalf of DOE, as mandated by Congress in the FY 1993 Defense Authorization Act (Public Law 102-484). Workers who are found to have illnesses related to work on behalf of DOE are referred to the Department of Labor for potential compensation through the Energy Employees Occupational Illness Compensation Program Act.

Employee Compensation Program

DOE Energy Employees Occupational Illness Compensation Program Act (EEOICPA) activities support the implementation of Parts B and E of the Act by the Department of Labor to provide compensation to DOE and DOE-related vendor employees who have become ill as a result of work for DOE. Part B provides for compensation to workers with beryllium disease,

silicosis, or radiation-induced cancer, and Part E provides for compensation and medical benefits to DOE contractor and subcontractor employees whose illnesses were caused by exposure to any toxic substance, such as beryllium or other chemical hazards. DOE's support consists primarily of providing information regarding employment status, exposures to radiation and toxic substances, and operational history of DOE facilities to the Department of Labor, the National Institute for Occupational Safety and Health, and the President's Advisory Board on Radiation and Worker Health in support of claims filed by current and former DOE Federal and contractor employees.

International Health Programs:

Russian Health Studies

The Russian health studies program supports the collaborative radiation health effects research program between U.S. and Russian scientists to determine the risks associated with working at or living near Russian former nuclear weapons production sites. The research is performed under the Cooperation in Research on Radiation Effects for the Purpose of Minimizing the Consequences of Radioactive Contamination on Health and the Environment, an agreement between the United States and Russia that was signed in 1994 and renewed in 2000, 2007, and 2011. The agreement is implemented through the Joint Coordinating Committee for Radiation Effects Research, representing agencies from the United States and the Russian Federation. The goals of the program are to better understand the relationship between health effects and chronic, low-to-medium radiation exposure; determine radiation-induced cancer risks from exposure to gamma, neutron, and alpha radiation; and improve and validate U.S. and international radiation protection standards and practices.

Japanese Health Studies

The Japanese health studies activity supports the Radiation Effects Research Foundation, managed through a bi-national agreement between the United States and Japan, to conduct epidemiologic studies and medical surveillance of the survivors of the atomic bombings of Hiroshima and Nagasaki. The foundation engages in innovative science to develop new research methods and approaches for assessing radiation health effects that are used as a basis for the development of radiation standards.

Marshall Islands Program

The Marshall Islands program provides for medical surveillance and treatment of Marshallese citizens affected by the nuclear weapons testing conducted by the United States in the Pacific Ocean between 1946 and 1958. The program also provides for environmental monitoring in support of safe resettlement of four atolls affected by the testing. The work is performed as required by the Compact of Free Association Acts of 1986 and 2003 between the United States and the Republic of the Marshall Islands and the Insular Areas Act of 2011 requiring enhanced monitoring of Runit Island Nuclear Waste Containment Structure beginning in FY 2013.

Health and Safety

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Environment, Health, Safety and Security \$62,959,000	\$63,698,000	+\$739,000
Worker Safety \$4,346,000	\$5,013,000	+\$667,000
<ul style="list-style-type: none"> • Research, update, and maintain existing DOE regulations, directives and technical standards, and develop new safety and health requirements based on new or evolving working conditions, when warranted; • Provide technical assistance to DOE programs, laboratories, and sites in the implementation of health and safety requirements and programs, such as integrated safety management; • Provide support in development of technical qualification standards and description of required competencies and training for Federal staff involved in management of defense nuclear facilities; • Promote the implementation of the DOE voluntary protection program, which encourages and rewards safety performance that exceeds industry averages; • Provide for the health and safety aspects of the DOE human reliability program, designed to ensure that individuals who occupy positions that afford access to certain national security materials and nuclear explosive devices meet high standards for trustworthiness, dependability, and physical and mental reliability; • Provide technical support for the implementation of the DOE contractor employee assistance program that provides for the collection and analysis of causes of lost time and disabilities and the medical and psychological interventions available to reduce those losses; 	<ul style="list-style-type: none"> • Continuation of all FY 2016 activities; and • Support the DOE enterprise-wide Employee Concerns Program that provides management and administration of the program to ensure that employee concerns related to environment, health, safety, and security and the management of DOE and NNSA programs and facilities are addressed utilizing well established processes that include prompt identification, reporting, and resolution of employee concerns regarding DOE facilities or operations in a manner that provides the highest degree of safe operations. 	<ul style="list-style-type: none"> • Increase is for the Employee Concerns program transferred from the Office of Economic Impact and Diversity. There is also an increase to information technology due to increased costs of services.

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<ul style="list-style-type: none"> • Maintain the electronic Radiation Exposure Monitoring System, which serves as the Department’s central repository for radiation exposure information at DOE in support of 10 C.F.R. 835, Occupational Radiation Protection, Subpart I, requirements regarding annual monitoring of individual occupational radiation exposure records for DOE employees, contractors, and subcontractors, as well as members of the public who visit DOE sites; • Provide technical support for the implementation of the DOE Federal employee occupational safety and health program, as required by Presidential Executive Order 12196, Occupational Safety and Health Programs for Federal Employees; Section 19 of Public Law 91-596, the Occupational Safety and Health Act of 1970; and 29 C.F.R. 1960, Basic Program Elements for Federal Employee Occupational Safety and Health Programs and Related Matters; • Conduct and communicate analysis and trending of safety performance information to identify excellent performance and areas needing improvement in order to reduce or prevent adverse events and injuries and minimize mission interruptions; • Provide information to DOE operating entities regarding operating experience, lessons learned, and suspect, defective, and counterfeit items; • Provide overall program administration and assistance, including training, to DOE program offices in support of implementing the Department’s accident investigation program, which provides for independent Federal investigations of high-consequence incidents involving worker fatalities or serious injuries, 		

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>acute exposures to radiation or chemicals, environmental releases, or significant loss of capital assets. Upon request or as directed by DOE leadership, assist DOE program offices in conducting specific accident investigations;</p> <ul style="list-style-type: none"> • Maintain the differing professional opinion program and process, including a web page and online submittal form that DOE and contractor employees can use to identify and document differing professional opinions concerning technical issues; • Maintain corporate health- and safety-related information management technology systems, such as the Computerized Accident/Incident Reporting System, the Occurrence Reporting and Processing System, the Radiation Exposure Monitoring System, and the lessons learned system; and • Support continuous improvement in meeting the Department’s safety culture and safety conscious work environment (SCWE) across the complex and to ensure consistent leadership and focus on all aspects of DOE’s safety culture initiatives. 		
<p>Nuclear Safety \$5,696,000</p>	<p>\$5,804,000</p>	<p>+\$108,000</p>
<ul style="list-style-type: none"> • Assess, update, and maintain DOE regulations, directives, and technical standards and lead the development of nuclear safety and quality assurance requirements based on new or evolving facility hazards and/or operating conditions, when warranted (including fire protection, natural phenomena hazards, nuclear materials packaging, and maintenance); • Maintain a DOE-wide nuclear safety research and development program to provide corporate-level leadership supporting the coordination and integration of nuclear safety science and 	<ul style="list-style-type: none"> • Continuation of all FY 2016 activities. 	<ul style="list-style-type: none"> • Provides for cost escalation for operation of the Filter Test Facility.

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>technology, share nuclear safety research and development information across the Department, and coordinate the conduct of nuclear safety research and development activities;</p> <ul style="list-style-type: none"> • Provide technical assistance to DOE program and line organizations, national laboratories, and sites in implementing nuclear safety and quality assurance requirements and programs and resolving issues and recommendations identified by the Defense Nuclear Facilities Safety Board; • Provide technical assistance to national standards development organizations in developing and maintaining nuclear safety and quality assurance consensus standards; • Support DOE program offices in assessing conduct of operations, maintenance, and/or training evaluations for hazard category 1, 2, and 3 nuclear facilities prior to authorizing startup or restart of these facilities or their operations; • Facilitate continuous improvement to the DOE facility representative and safety system programs, supporting approximately 280 site office resident nuclear safety subject matter experts funded by and reporting to DOE line management; • Assist in coordinating information exchanges in various safety concepts relevant to DOE including nuclear safety; safety and organizational culture, high reliability performance and human performance improvement; and probabilistic risk assessment with the Institute of Nuclear Power Operations, a non-profit organization established by the commercial nuclear power industry to promote the highest levels of safety and reliability in the operation of nuclear power plants; • Maintain web-based systems to provide the 		

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>status of the safety basis of each hazard category 1, 2, or 3 DOE nuclear facility and provide public information on how to obtain copies of safety basis and related documents for DOE nuclear facilities;</p> <ul style="list-style-type: none"> Implement safety software quality assurance activities that provide for the maintenance of the DOE safety software central registry of approved computer codes, including a user-oriented communication forum, and operation of the safety software expert working group for enabling effective and consistent use of high-quality safety software across DOE; and Provide for the testing of 100 percent of all high efficiency particulate air filters used in safety class and safety significant systems, and other ventilation systems for confinement of radioactive materials prior to their use at DOE nuclear facilities. 		
Environment \$2,407,000	\$2,371,000	\$-36
<ul style="list-style-type: none"> Research, update, and maintain existing DOE regulations, directives, and technical standards, and develop new sustainability, environmental protection, and public radiation protection requirements based on new or evolving science, protection strategies, national radiation protection guidance, and techniques based on new or evolving DOE activities and programs, when warranted; Provide technical assistance to DOE programs, laboratories, and sites in implementing sustainability, environmental protection, and public radiation protection requirements and programs; Provide technical support to DOE site and program offices and laboratories in evaluating 	<ul style="list-style-type: none"> Research, update, and maintain existing DOE regulations, directives, and technical standards, and develop new environmental protection, and public radiation protection requirements based on new or evolving science, protection strategies, national radiation protection guidance, and techniques based on new or evolving DOE activities and programs when warranted; Provide technical assistance to DOE programs, laboratories, and sites in implementing public radiation protection requirements and programs; Provide technical support to DOE site and program offices and laboratories in evaluating and resolving regulatory compliance issues through the interpretation of regulatory requirements, development of cost-effective 	<ul style="list-style-type: none"> Funding adjusted to focus on FY 2018 activities.

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>and resolving regulatory compliance issues through the interpretation of regulatory requirements, development of cost-effective implementation strategies, and maintenance of web-based compliance tools;</p> <ul style="list-style-type: none"> • Coordinate and develop consolidated responses to proposed changes in environmental regulations that may impact Departmental operations, in order to improve implementation and optimize the use of protective resources; • Review data from environmental reports required by Federal and state environmental protection agencies to validate adherence to reporting requirements; evaluate the effectiveness of the Department’s toxic chemical release reduction and pollution prevention efforts; produce annual reports on DOE environmental sustainability performance; and develop annual radionuclide emissions summaries submitted to the Environmental Protection Agency under an interagency agreement; • Conduct proficiency and quality assurance audits and reviews of environmental analytical laboratories and commercial waste treatment, storage, and disposal vendors used by DOE operating entities in support of ongoing operations, remediation, and other cleanup projects; compliance programs; and long-term monitoring and surveillance activities to ensure consistency of services while minimizing the number of DOE audits of these commercial service providers; • Support development and maintenance of software toolkits to assist DOE operating elements in meeting data quality objectives related to environmental field sampling and to 	<p>implementation strategies, and maintenance of web-based compliance tools;</p> <ul style="list-style-type: none"> • Coordinate and develop consolidated responses to proposed changes in environmental regulations that may impact Departmental operations, in order to improve implementation and optimize the use of protective resources; • Review data from environmental reports required by Federal and state environmental protection agencies to validate adherence to reporting requirements; evaluate the effectiveness of the Department’s toxic chemical release reduction and pollution prevention efforts; produce annual reports on DOE environmental performance; and develop annual radionuclide emissions summaries submitted to the Environmental Protection Agency under an interagency agreement; • Conduct proficiency and quality assurance audits and reviews of environmental analytical laboratories and commercial waste treatment, storage, and disposal vendors used by DOE operating entities in support of ongoing operations, remediation, and other cleanup projects, compliance programs, and long-term monitoring and surveillance activities to ensure consistency of services while minimizing the number of DOE audits of these commercial service providers; • Support development and maintenance of software toolkits to assist DOE operating elements in meeting data quality objectives related to environmental field sampling and to support user training at DOE field element sites; • Provide assistance to and oversight of DOE site property radiological clearance and control 	

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>support user training at DOE field element sites;</p> <ul style="list-style-type: none"> • Administer the DOE environmental awards program such as the Green Buy Awards and the Migratory Birds Protection awards and support the Department in other sustainability awards programs that recognize DOE entities for outstanding achievement in sustainable environmental stewardship; • Provide assistance to and oversight of DOE site property radiological clearance and control programs to ensure the public and environment are protected from radiological harm associated with the use or disposition of DOE property; • Continue development and maintenance of residual radioactivity models and codes that support evaluations and safe disposition of lands, structures, equipment, soil, and other material that may contain small amounts of residual radioactive material; • Support development of Federal radiation protection policies and guidelines and consistent, cost effective implementation of radiation protection programs within DOE including the review, evaluation and implementation of the 2014 and 2015 updates to the recommendations of the International Commission on Radiological Protection and associated revisions to Federal guidance reports on radiation protection; • Provide assistance to support development and effective use of national consensus standards for radiation protection, radioactive waste and materials management, environmental protection, and climate change preparedness; • Support the Center for Radiation Protection Knowledge at the Oak Ridge National Laboratory to ensure U.S. leadership in radiation dosimetry 	<p>programs to ensure the public and environment are protected from radiological harm associated with the use or disposition of DOE property;</p> <ul style="list-style-type: none"> • Continue development and maintenance of residual radioactivity models and codes that support evaluations and safe disposition of lands, structures, equipment, soil, and other material that may contain small amounts of residual radioactive material; • Support development of Federal radiation protection policies and guidelines and consistent, cost effective implementation of radiation protection programs within DOE including the review, evaluation and implementation of the 2014 and 2015 updates to the recommendations of the International Commission on Radiological Protection and associated revisions to Federal guidance reports on radiation protection; • Provide assistance to support development and effective use of national consensus standards for radiation protection, radioactive waste and materials management, environmental protection, and operational resilience; • Support the Center for Radiation Protection Knowledge at the Oak Ridge National Laboratory to ensure U.S. leadership in radiation dosimetry and risk assessment; and • Maintain operational guidelines and other radiological criteria that support protective action decisions and Federal policy governing response to and recovery from radiological and nuclear terrorism incidents (radiological dispersal devices and improvised nuclear devices) and major nuclear accidents and support NNSA emergency response and preparedness activities associated with such incidents; 	

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>and risk assessment; and</p> <ul style="list-style-type: none"> Maintain operational guidelines and other radiological criteria that support protective action decisions and Federal policy governing response to and recovery from radiological and nuclear terrorism incidents (radiological dispersal devices and improvised nuclear devices) and major nuclear accidents and support NNSA emergency response and preparedness activities associated with such incidents. 	<ul style="list-style-type: none"> Provide technical assistance to DOE programs, laboratories, and sites in implementing natural and cultural resource protection requirements and programs. 	
<p>Domestic Health Programs \$27,460,000</p>	<p>\$27,460,000</p>	<p>\$0</p>
<p><i>Health Research \$2,270,000</i></p>	<p><i>Health Research \$2,270,000</i></p>	
<ul style="list-style-type: none"> Provide for the operation and maintenance of the electronic comprehensive epidemiologic data resource, the illness and injury surveillance database, and the U.S. transuranium and uranium registries; Support the Radiation Emergency Assistance Center/Training Site, which provides medical expertise to DOE occupational medicine clinics, supplies chelating pharmaceuticals to treat radiation-exposed workers, and trains physicians to respond to radiological accidents anywhere in the United States; Provide for the maintenance of the beryllium registry, which collects, analyzes, summarizes, and disseminates health and exposure data to improve chronic beryllium disease prevention programs; and Provide for the conduct of public health studies and other activities performed by the Department of Health and Human Services through the National Institute for Occupational Safety and Health, the National Center for Environmental Health, and the Agency for Toxic Substances and Disease Registry to provide third- 	<ul style="list-style-type: none"> Continuation of all FY 2016 activities. 	<ul style="list-style-type: none"> No change to work scope.

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
party objectivity regarding the effect of DOE operations on communities surrounding DOE sites.		
<p><i>Former Worker Medical Screening \$19,850,000</i></p> <ul style="list-style-type: none"> • Conduct site assessments to identify groups of at-risk former DOE Federal and contractor/subcontractor workers and DOE site-specific exposures; • Provide for outreach efforts to inform former workers of the availability and benefits of the program; • Provide for approximately 8,000 medical screenings annually to check for adverse health effects that could be related to occupational exposures to radiation, noise, beryllium, asbestos, silica, lead, cadmium, chromium, and solvents, conducted by independent health experts through seven cooperative agreements held by a consortia of universities, labor unions, and commercial organizations throughout the United States with expertise in administration of medical programs; • Refer workers who are found to have illnesses related to work on behalf of DOE to the Department of Labor for potential compensation through the Energy Employees Occupational Illness Compensation Program Act; and • Support the DOE central institutional review board, jointly funded with Science and the National Nuclear Security Administration, which reviews all medical screening programs funded by DOE and/or involving the DOE workforce to ensure that the risks to human participants are minimized and reasonable in relation to the anticipated benefits. 	<p><i>Former Worker Medical Screening \$19,850,000</i></p> <ul style="list-style-type: none"> • Continuation of all FY 2016 activities. 	<ul style="list-style-type: none"> • No change in work scope.
<i>Employee Compensation Program \$5,340,000</i>	<i>Employee Compensation Program \$5,340,000</i>	

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<ul style="list-style-type: none"> • Conduct searches for records related to the employment and hazardous exposures for workers who applied to the Department of Labor for benefits under EEOICPA, declassify relevant records, and provide copies of those records to the Department of Labor and the National Institute for Occupational Safety and Health; • Provide for large-scale records research projects conducted by the Department of Labor, the National Institute for Occupational Safety and Health, and the President’s Advisory Board on Radiation and Worker Health; • Provide for the continued transition of hard copy, paper records to electronic records, as well as records indexing projects to improve the efficiency of responses to the Department of Labor and the National Institute for Occupational Safety and Health; and • Continue coordination and interface between former worker medical screening activities and EEOICPA activities, including identifying mechanisms for outreach to former workers and enhancing the exchange of medical, site, and exposure information among former worker medical screening service providers, the Department of Labor, and the National Institute for Occupational Safety and Health to assist the agencies tasked with adjudicating claims. 	<ul style="list-style-type: none"> • Continuation of all FY 2016 activities. 	<ul style="list-style-type: none"> • No change in work scope.
International Health Program \$23,050,000	\$23,050,000	\$0
<i>Russian Health Studies \$2,750,000</i>	<i>Russian Health Studies \$2,750,000</i>	
<ul style="list-style-type: none"> • Provide for the conduct of radiation exposure historical dose reconstruction studies, epidemiologic studies, and for a tissue repository of Russian nuclear workers and people living in communities surrounding the Russian nuclear facilities; 	<ul style="list-style-type: none"> • Continuation of all FY 2016 activities. 	<ul style="list-style-type: none"> • No change in work scope.

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<ul style="list-style-type: none"> Assess radiation health effects of ionizing radiation; and Publish analyses of radiation health effects assessments. 		
<p><i>Japanese Health Studies \$14,000,000</i></p> <ul style="list-style-type: none"> Conduct epidemiologic studies and medical surveillance of the survivors of the atomic bombings of Hiroshima and Nagasaki; Assess radiation health effects of ionizing radiation; and Publish analyses of radiation health effects assessments. 	<p><i>Japanese Health Studies \$14,000,000</i></p> <ul style="list-style-type: none"> Continuation of all FY 2016 activities. 	<ul style="list-style-type: none"> No change in work scope.
<p><i>Marshall Islands Program \$6,300,000</i></p> <ul style="list-style-type: none"> Conduct whole-body counting and plutonium urinalyses to measure individual exposure to radionuclides; Conduct comprehensive annual screening examinations; Provide medical care for specified Marshallese; and Provide environmental monitoring services in support of resettlement activities. 	<p><i>Marshall Islands Program \$6,300,000</i></p> <ul style="list-style-type: none"> Continuation of all FY 2016 activities. 	<ul style="list-style-type: none"> No change in work scope.

Security

Description

The Security subprogram provides support to develop and assist in the implementation of safeguards and security programs that provide protection to national security and other vital national assets entrusted to DOE, and to implement the U.S. Government's nuclear weapons-related technology classification and declassification program. Policies and guidance related to physical, personnel, and information security and nuclear materials accountability are designed to promote responsiveness to national security needs and changing threat environments. Assistance is provided to DOE programs and site offices and laboratories via working groups, site-specific support, and corporate program support to implement cost-effective security measures tailored to Departmental mission accomplishment. Corporate security-related information management systems are maintained to identify and reduce the potential for undue risk to individual sites, the Department, and national security. This subprogram also provides for the continuous physical protection and security of DOE facilities and information in the National Capital Area and access authorization security background investigations for DOE Headquarters Federal and contractor personnel. Additionally, DOE implements the information control program for the U.S. Government to mitigate national security threats by preventing the release of information regarding weapons of mass destruction and other data that could lead to damage of the Nation's energy infrastructure. Support is also provided to review over 400 million pages of documents at the National Archives for potential release as required by Executive Order 13526.

In FY 2018, Security activities will include developing comprehensive, reasonable, and cost effective security policies and operational guidelines to assure that the Nation's nuclear and energy assets and DOE's personnel and facilities are secure from insider and external threats.

Insider Threat Program

The DOE Insider Threat Program is intended to deter cleared employees from becoming insider threats; detect insiders who pose a risk to personnel, facilities, or classified or sensitive information; and mitigate the risks through administrative, investigative or other response actions. The Deputy Secretary of Energy designated an EHSS Senior Executive as the Senior Insider Threat Official to provide guidance and oversight for the insider threat program. On a continuing basis this Designated Senior Official advises and reports directly to the Secretary and Deputy Secretary regarding the planning, construct and operation of the Insider Threat Program. In FY 2018, the Insider Threat Program will continue to cut across several components of DOE and the Designated Senior Official will continue to coordinate implementation with those components. This budget justification shows only the funding to implement EHSS's share of program responsibilities. Funding provides the DOE share for the inter-agency Security, Suitability and Credential Line of Business (SSCLOB) budget supporting Executive Branch-wide reforms to the security clearance, employment suitability, and credentialing processes.

Security Operational Support

Security operational support provides technical expertise to develop safeguards and security requirements and guidance; provide assistance to DOE operations; conduct security technology research, development, test and evaluations to effectively mitigate current and emerging threats; and maintain and manage corporate-level safeguards and security-related programs and information technology systems. These activities support Departmental objectives by providing an appropriately tailored level of security requirements and cost effective protection options for a wide range of scientific, research, and national security operations based on the significance of the national assets involved. Security policies, requirements, and guidance are developed to be clear and easily implemented, with the goal of securing nuclear material and classified matter and protecting the highly specialized DOE workforce.

Classification, Declassification, and Controlled Information

The classification, declassification, and controlled information activity ensures that the Department meets its statutory responsibility to implement the U.S. Government-wide program to classify and declassify nuclear weapons-related information (i.e., Restricted Data and Formerly Restricted Data) in order to prevent proliferation of nuclear weapons and

technology. This activity supports the implementation of Executive Order 13526, Classified National Security Information, to classify other information critical to national security (i.e., National Security Information), such as security-related information concerning U.S. nuclear sites, energy critical infrastructure, and chemical/biological and radiological dispersal devices. Funding provides for declassification review of DOE records and the development of policies, requirements, and guidance and technical support for the protection of controlled unclassified information.

Security Investigations

Security investigation activities provide for background investigations conducted by the Office of Personnel Management and the Federal Bureau of Investigation of DOE Headquarters Federal and contractor personnel who require access to classified information or certain quantities of special nuclear material, as required by Section 145 of the Atomic Energy Act of 1954 (as amended) and Executive Order 12968, Access to Classified Information. The conduct of investigations and granting of access authorizations are based on 10 C.F.R. 710, Criteria and Procedures for Determining Eligibility for Access to Classified Matter or Special Nuclear Material. DOE program offices provide funding for security investigations for personnel whose access authorizations are managed through offices other than DOE Headquarters.

This activity also provides support to personnel security programs associated with maintaining access authorizations to personnel who meet the criteria noted above. The conduct of investigations and granting of access authorizations is based on 10 C.F.R. 710, Criteria and Procedures for Determining Eligibility for Access to Classified Matter or Special Nuclear Material.

Headquarters Security Operations

Headquarters security operations provide a comprehensive safeguards and security program for the protection of DOE Headquarters facilities and assets in the Washington, DC, area. This is accomplished through the deployment of a protective force; security education programs; the management and operation of countermeasures, alarms, and access control equipment; and the implementation of security-related programs. Funding provides for a secure work environment and assures management, workers, and stakeholders that activities within Headquarters facilities are effectively protected.

Security

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Security \$55,804,000	Security \$66,995,000	+\$11,191,000
Insider Threat Program \$3,000,000	\$3,000,000	\$0
<ul style="list-style-type: none"> Develop and maintain a robust program to deter, detect, and centrally analyze and respond to insider threats facing the Department; Deploy information technology enabled techniques, detectors, and triggers on all DOE and NNSA classified and unclassified computer networks to identify anomalous activity; Enhance existing information-sharing partnerships with law enforcement, intelligence, and community organizations; Develop measures of success and program review criteria. Develop and implement insider threat program training in fundamentals of counterintelligence, security, agency procedures for insider threat response, as well as applicable laws and regulations on gathering, integrating, retaining, safeguarding and use of collected insider threat data; and Produce an annual report for the Secretary to provide to the President. Provide for the inter-agency Security, Suitability and Credentialing Line of Business operating budget. 	<ul style="list-style-type: none"> Develop and maintain a robust program to deter, detect, and centrally analyze and respond to insider threats facing the Department; Enhance existing information-sharing partnerships with law enforcement, intelligence, and community organizations; Assist Field Sites in the establishment of Local Insider Threat Working Groups. Develop measures of success and program review criteria. Develop and implement insider threat program training in fundamentals of counterintelligence, security, agency procedures for insider threat response, as well as applicable laws and regulations on gathering, integrating, retaining, safeguarding and use of collected insider threat data; and Produce an annual report for the Secretary to provide to the President. Provide for the inter-agency Security, Suitability and Credentialing Line of Business operating budget. 	<ul style="list-style-type: none"> Assist Field Sites in the establishment of Local Insider Threat Working Groups.
Security Operational Support \$5,762,000	\$6,462,000	+\$700,000
<ul style="list-style-type: none"> Research, update, and maintain existing DOE regulations, directives and technical standards, and develop new safeguards and security requirements based on new or evolving threats or working conditions, when warranted; Provide technical assistance to DOE programs, laboratories, and sites in implementing 	<ul style="list-style-type: none"> Continuation of all FY 2016 activities; and Provide for the identification and assessment of effective, safe and reliable physical security technologies to replace systems currently in operation at nuclear facilities, laboratories, the Strategic Petroleum Reserve and the Department's Power Marketing Administrations. 	<ul style="list-style-type: none"> An increase for Security Technology Integration to provide for the identification and assessment of effective, safe and reliable physical security technologies to replace systems currently in operation at nuclear facilities, laboratories, the Strategic

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>safeguards and security requirements and programs;</p> <ul style="list-style-type: none"> • Provide technical support, training, and awareness materials for the security-related aspects of the human reliability program, including deployment of the human reliability program database and standard certification management system to ensure that over 10,000 individuals with access authorizations/clearances who occupy positions requiring access to special nuclear materials, nuclear explosive devices, or related facilities and information meet the highest standards of reliability and physical and mental suitability; • Provide support to the security awareness special interest group for DOE and contractor safeguards and security awareness coordinators to share security awareness methods and products, solve problems, and disseminate security-related information to satisfy Presidential and other regulatory requirements; • Operate, maintain, and perform data analysis of the electronic Safeguards and Security Information Management System, a centralized classified browser-based database that serves as the repository of current and historical DOE safeguards and security information pertaining to inspection deficiencies, corrective action status, facility clearance levels, classified addresses, and asset information; • Provide technical support and assistance for risk communication, risk management, vulnerability assessments, and security system performance evaluations, verifications, and validations, which are used to identify and cost-effectively address and mitigate current and emerging threats to 	<p>Security technology assessments will be conducted on systems having the highest cost-benefit potential while driving down risk from an enterprise perspective.</p>	<p>Petroleum Reserve and the Department's Power Marketing Administrations. An additional increase is also for Vulnerability Assessments, and this is offset by a decrease to the Human Reliability Program. There is also an increase to the FACTS program to reflect actual spending offset by a decrease to the RSRT program.</p>

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>Departmental assets at the site level;</p> <ul style="list-style-type: none"> • Provide assistance to DOE programs, sites, and laboratories in the use of security technology as a means to mitigate vulnerabilities, reduce recurring costs, and lessen environmental impacts, and maintain the Security Technology Information Archive for the collection, storage, and dissemination of security technology cost, performance, safety, and implementation information; and • Maintain corporate security-related information technology systems, such as the DOE electronic Foreign Ownership, Control, or Influence program mandated by the Federal acquisition regulations system (48 C.F.R. 904.7003, 952.204-2, 970.0404, 904.404, and 952.204-73) and by Executive Order 12829, National Industrial Security Program; the DOE foreign visits and assignments (FACTS) program that enables foreign nationals' participation in unclassified DOE work, as well as classified visits involving foreign nationals; and the RSRT database, which is used to inventory approximately 18,000 radioactive sealed sources at DOE sites in support of the Department's nonproliferation and antiterrorist programs, U.S. and DOE regulatory compliance, and international treaty obligations. 		
<p>Classification, Declassification and Controlled Information \$8,607,000</p>	<p>\$9,757,000</p>	<p>+\$1,150,000</p>
<ul style="list-style-type: none"> • Provide technical support in developing U.S. Government and DOE-wide policy and technical guidance to ensure that classified nuclear weapons-related information and other information critical to national security and to U.S. Governmental, commercial, or private 	<ul style="list-style-type: none"> • Continuation of all FY 2016 activities. 	<ul style="list-style-type: none"> • Increase is to provide additional support for the timely review of classified documents to prevent the inadvertent release of sensitive information to the public.

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>interests is identified for proper protection;</p> <ul style="list-style-type: none"> • Provide specialized technical expertise to foreign governments and to DOE and other U.S. departments and agencies regarding the national security implications of classification and declassification decisions for nuclear proliferation issues; • Provide training and certification of DOE and other agency personnel in classification and information control programs and related areas; • Provide support to the National Declassification Center for review of 400 million pages at the National Archives and follow-on record collections; • Review documents in support of DOE operations and other U.S. Government entities, such as Congress, Presidential Libraries, U.S. Patent Office, the Defense Nuclear Facilities Safety Board, the Government Accountability Office, and the Inspector General; and • Perform the final review of classified DOE documents and documents containing DOE equities from all U.S. Government departments and agencies, including DOE, when they are requested under the Freedom of Information Act and the mandatory provisions of Executive Order 13526, to ensure that DOE classified and controlled information is identified and protected from unauthorized release to the public as required by 10 C.F.R. 1004, Freedom of Information, and 10 C.F.R. 1045, Nuclear Classification and Declassification. 		
<p>Security Investigations \$7,445,000</p>	<p>\$8,705,000</p>	<p>+\$1,260,000</p>
<ul style="list-style-type: none"> • Provide for the Federal Bureau of Investigation to 	<p>Continuation of all FY 2016 activities.</p>	<ul style="list-style-type: none"> • Increase funding required due to price

**Other Defense Activities/Environment,
Health, Safety and Security**

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>conduct background investigations of DOE Headquarters Federal and contractor employees applying for or occupying sensitive positions, as dictated by the Atomic Energy Act (as amended). Provides for initial background investigations, periodic reinvestigations, and reimbursement for fingerprint and name checks;</p> <ul style="list-style-type: none"> • Provide for the Office of Personnel Management to conduct most background investigations of DOE Headquarters Federal and contractor employees. Funding provides for initial single-scope background investigations, periodic reinvestigations, and initial and reinvestigation national agency checks; • Research, update, and maintain existing DOE regulations, directives, and technical standards, and develop new personnel security requirements based on new or evolving threats or working conditions, when warranted; • Provide technical assistance to DOE programs, laboratories, and sites in implementing personnel security requirements and programs; • Conduct corporate-level access authorization adjudications (i.e., performing case reviews, conducting evaluations, and preparing decision packages), as necessary; • Operate and manage the electronic DOE Integrated Security System, which consists of interrelated databases and associated client applications and web pages that automate the processing and tracking of access authorizations, access and visitor control, personal identity verification, and related personnel security processes; and • Continue deployment of the personnel security case management system, as well as the 		<p>increase for background investigations. Also, the FY 2018 reinvestigation caseload is expected to increase.</p>

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>integration of this system with DOE field site human resources, financial management, and access control systems to reduce overall personnel security program costs by eliminating redundant systems at DOE field sites and reduce processing time by integrating directly with other databases.</p>		
<p>Headquarters Security Operations \$30,990,000</p>	<p>\$39,071,000</p>	<p>+\$8,081,000</p>
<ul style="list-style-type: none"> • Provide a protective force engaged in the physical protection of classified information, facilities, and the workforce 24 hours a day, 365 days a year at DOE Headquarters facilities and satellite facilities in Washington, DC, and Germantown, MD; • Operate and maintain security alarms and access control systems, including security screening equipment, vehicle inspection scanning devices, internet protocol video, turnstiles, unmanned access/egress portals, other access control equipment; and protective force shelters; • Conduct performance testing of information control systems to ensure the protection of sensitive and classified information vital to both national and economic security; • Conduct technical surveillance countermeasures activities, such as surveys, inspections, in-conference monitoring, pre-construction consultation services, and threat analysis, in support of Presidential Decision Directive 61, Energy Department Counterintelligence, to detect and prevent hostile intelligence collection operations intent on penetrating DOE installations to steal technology or sensitive or classified information; • Conduct the telecommunications security activities consisting of emission security, 	<ul style="list-style-type: none"> • Continuation of all FY 2016 activities; and • Replace and repair Headquarters physical security systems at both the Forrestal and Germantown facilities. 	<ul style="list-style-type: none"> • Supports the increased fixed costs of the Protective Force contract and the current DHS Interagency Security Committee standards, and replacement and repair of Headquarters physical security systems.

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>protected transmission systems, and communications security to ensure the protection of DOE's sensitive unclassified and classified telecommunications through various security components;</p> <ul style="list-style-type: none"> • Provide access authorization adjudication services (i.e., case reviews and analysis, interviews, and use of court reporters and consulting physicians as needed) for DOE Headquarters personnel to assure that access to DOE classified information is permitted only after a determination that such access will not endanger the common defense and national security; • Implement Homeland Security Presidential Directive 12 requirements related to the secure and reliable identification of DOE Federal and contractor employees; • Provide technical support for the implementation of the DOE Headquarters security awareness and classified matter protection and control programs; • Administer the DOE Headquarters facility clearance registration and foreign ownership, control, or influence programs for contractors granted access to classified information; and • Conduct safeguards and security surveys, self-assessments, and program reviews to ensure that DOE Headquarters operations comply with Departmental and national-level requirements. 		

Program Direction

Overview

Program Direction provides for Federal staffing and mission support services to provide overall direction and execution of the EHSS mission of conducting the Department's activities in environment, health, safety, and security policy, technical assistance, analysis, and corporate programs.

Technical Support Services: Defense Nuclear Facilities Safety Board (DNFSB) Liaison Activities

Liaison activities facilitate the Department's interaction with the DNFSB.

Other Related Expenses

Other related expenses provide support required for EHSS to accomplish its mission. Support includes Working Capital Fund services; training for Federal employees; funding for information technology equipment and services and DOE common operating environment fees; and executive protection and other security-related equipment.

**Program Direction
Funding (\$K)**

FY 2016 Enacted	FY 2017 Annualized CR ^a	FY 2018 Request	FY 2018 vs FY 2016
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Program Direction Summary

Program Direction

Salaries and Benefits	46,024	-	48,306	+2,282
Travel	1,665	-	2,400	+735
Mission Support	300	-	285	-15
Other Related Expenses	14,246	-	17,774	+3,528
Total, Program Direction	62,235	-	68,765	+6,530
Federal FTEs	260	260	262	+2

Support Service and Other Related Expenses

Support Services

Technical Support				
Defense Nuclear Facilities Safety Board Liaison Activities	300	-	285	-15
Total, Technical Support	300	-	285	-15
Total, Support Services	300	-	285	-15

Other Related Expenses

Working Capital Fund	9,604	-	11,608	+2,004
Tuition/Training of Federal Staff	223	-	260	+37
Other Services Procured	4,419	-	5,906	+1,487
Total, Other Related Expenses	14,246	-	17,774	+3,528

*FY 2017 amounts shown reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the “congressional control” level and above, below that level, a dash (-) is shown.

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown.

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Program Direction \$62,235,000	\$68,765,000	+\$6,530,000
Salaries and Benefits \$46,024,000	\$48,306,000	+\$2,282,00
<ul style="list-style-type: none"> • Provide: corporate-level leadership and strategic vision to coordinate and integrate environment, health, safety, and security policy development and technical assistance; analysis; corporate safety and security programs including insider threat activities and Employee Concerns Program; quality assurance programs; executive protection; and effective cross-organizational coordination to resolve Defense Nuclear Facilities Safety Board-related technical and management issues necessary to ensure worker and public health and safety; • Manage the conduct of domestic and international health programs; • Implement physical and personnel security programs for DOE Headquarters facilities; and • Manage the U.S. Government-wide program to classify and declassify nuclear weapons-related technology and other national security information. 	<ul style="list-style-type: none"> • Continuation of all FY 2016 activities. 	<ul style="list-style-type: none"> • The increase reflects an expected rise in cost of living adjustments in Federal employee salaries and benefits, and an increase of 2 FTEs for the Employee Concerns Program which was transferred to EHSS in FY 2016.
Travel \$1,665,000	\$2,400,000	+\$735,000
<ul style="list-style-type: none"> • Supports the management and conduct of environment, health, safety, and security programs for the Department; and • Supports executive protection activities for the Secretary, Deputy Secretary, and other dignitaries as assigned. 	<ul style="list-style-type: none"> • Continuation of all FY 2016 activities. 	<ul style="list-style-type: none"> • Increase is to provide for increased travel costs, including additional travel support for Executive Protection.
Technical Mission Support \$300,000	\$285,000	-\$15,000
<i>Defense Nuclear Facilities Safety Board (Board) Liaison Activities</i>	<i>Defense Nuclear Facilities Safety Board (Board) Liaison Activities</i>	<ul style="list-style-type: none"> • No change in work scope.
<ul style="list-style-type: none"> • Promote resolution of recommendations and agreed-upon safety issues; • Provide requested reports on nuclear safety issues; • Provide ready access to such facilities, personnel, 	<ul style="list-style-type: none"> • Continuation of all FY 2016 activities. 	

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>and information as are necessary for the Board to carry out its responsibilities;</p> <ul style="list-style-type: none"> • Provide technical evaluation and analysis of safety and management issues identified by the Board; Provide advice and support to DOE line managers on addressing and resolving such issues; and • Monitor Department-wide performance in addressing issues raised by the Board. 		
Other Related Expenses \$14,246,000	\$17,774,000	+\$3,528,000
<ul style="list-style-type: none"> • Working Capital Fund fees, based on guideline estimates issued by the working capital fund manager, for the cost of common administrative services such as building occupancy and alterations, computer and telephone infrastructure and usage, mail service, copying, printing and graphics, procurement closeouts, supplies, online learning, computer network support, and payroll processing; • Federal employee training to obtain and/or maintain the technical competence of Federal employees, assuring that Federal personnel are fully capable of performing current and future missions of the Department; • The DOE common operating environment initiative that provides a single point of contact for all common information technology systems and services and brings security, service, efficiency, and scale to these projects; • Information technology investments that support Headquarters Federal and contractor staff with hardware, software, hotline, and other desktop computer maintenance support on per-user count and level of service; • Information technology systems exclusive to EHSS such as the classified local area network that includes a Secret/Restricted Data network that supports Headquarters users and the Secret 	<ul style="list-style-type: none"> • Continuation of all FY 2016 activities. 	<ul style="list-style-type: none"> • Working Capital Fund (WCF) estimates for FY 2018 have increased over the FY 2016 estimates to fund the OPM credit monitoring and projected inflation increases in existing WCF programs. Additionally, actual and expected cost increases for Enterprise Information Technology Services for IT desktop services support.

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
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Internet Protocol Router Network that provides access to the Department of Defense classified network to effect coordination between the two departments;

- Executive protection services to the Secretary of Energy and others designated by the Secretary; and the conduct of inquiries and investigations into significant matters of security concern; and
- Specialized security equipment and services.

**Environment, Health, Safety and Security
Safeguards and Security Crosscut
(\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR ^a	FY 2018 Request	FY 2018 vs FY 2016
<u>Environment, Health, Safety and Security (EHSS)</u>				
Protective Forces	23,410	23,410	31,391	+7,981
Physical Security Systems	5,488	5,488	5,588	+100
Information Security	8,607	8,607	9,757	+1,150
<u>Cyber Security</u>				
Protecting Networks and Information	4,315	4,315	4,315	0
Detect, Analyze, and Mitigate Intrusions	806	806	806	0
Continuous Monitoring	248	248	248	0
Shaping the Cyber Security Environment	40	40	40	0
Subtotal, Cyber Security	5,409	5,409	5,409	0
Personnel Security	5,342	5,342	5,392	+50
Program Management	5,762	5,762	6,462	+700
Security Investigations	4,195	4,195	5,105	+910
Total, EHSS	58,213	58,213	69,104	+10,891

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (–) is shown.

**Environment, Health, Safety and Security Funding by Appropriation by Site
(\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request
Environment, Health, Safety and Security			
Argonne National Laboratory	945	-	945
Brookhaven National Laboratory	250	-	250
Chicago Operations Office	50	-	50
Consolidated Business Center	259	-	259
Idaho National Laboratory	150	-	150
Idaho Operations Office	400	-	400
Kansas City Plant	10	-	10
Lawrence Berkeley National Laboratory	0	-	0
Lawrence Livermore National Laboratory	3,050	-	3,050
Lexington Project Office	200	-	200
Los Alamos National Laboratory	95	-	95
Nevada Site Office	15	-	15
NNSA Service Center	1,000	-	1,000
Oak Ridge Institute for Science and Education	1,305	-	1,305
Oak Ridge National Laboratory	1,035	-	1,035
Oak Ridge Operations Office	2,795	-	2,795
Office of Scientific and Technical Information	300	-	300
Ohio Field Office	5	-	5
Pacific Northwest National Laboratory	1,905	-	1,905
Pantex Plant	10	-	10
Richland Operations Office	1,000	-	1,000
Sandia National Laboratory	1,210	-	1,210
Savannah River Operations Office	500	-	500
Savannah River Site	10	-	10

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown.

	FY 2016 Enacted	FY 2017 Annualized CR ^b	FY 2018 Request
Washington, D.C., Headquarters	164,479	-	182,939
Y-12 National Security Complex	20	-	20
Total, Environment, Health, Safety and Security	180,998	180,654^c	199,458

**Health, Safety and Security
Departmental Administration
Performance Measures**

In accordance with the GPRA Modernization Act of 2010, the Department sets targets for, and tracks progress toward, achieving performance goals for each program.

	FY 2016	FY 2017	FY 2018
Performance Goal (Measure)	Former Worker Satisfaction - Obtain an average rating of no less than satisfactory on 90 percent of customer satisfaction surveys from former worker medical screening program participants who receive medical screenings.		
Target	90 percent satisfactory rating on customer satisfaction surveys	90 percent satisfactory rating on customer satisfaction surveys	90 percent satisfactory rating on customer satisfaction surveys
Result	Met - 98	TBD	TBD
Endpoint Target	N/A; ongoing		

^b The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown.

Office of Enterprise Assessments

Overview

The Office of Enterprise Assessments (EA) supports the President's and Secretary of Energy's priorities for the United States nuclear security enterprise, strengthening the Department of Energy (DOE or Department) cybersecurity protections, cleaning up contaminated sites, and other infrastructure and science missions. EA provides independent assessments for the DOE senior leadership that report on whether national security material and information assets are appropriately protected; and whether Departmental operations provide for the safety of its employees and the public. In addition, EA implements Congressionally authorized contractor enforcement programs, operates the DOE National Training Center (NTC), and maintains collaborative relationships within and outside the Department. Because EA reports directly to the Office of the Secretary, it is organizationally independent of the DOE entities that develop and implement security and safety policy and programs and can therefore provide a "check and balance," by objectively: 1) observing and reporting on the performance of DOE Federal and contractor organizations' implementation of security and safety policies and programs, 2) applying enforcement actions to contractor organizations for poor performance in adhering to legally enforceable security and safety requirements, and 3) developing and delivering security and safety training programs that reflect best practices and lessons learned from EA independent assessments to enhance workforce performance. EA activities complement, but do not replace the responsibility of DOE line management to ensure compliance with security and safety requirements.

EA's key initiatives in FY 2018 are:

- Strengthening the Department's ability to protect national security assets (special nuclear material [SNM], controlled unclassified information, and classified matter) by:
 - Conducting comprehensive independent security performance assessments and follow-up assessments at DOE National Security / Category I SNM sites (those with high value assets),
 - Utilizing "limited notice" performance tests to provide accurate, up-to-date assessments of DOE site security response capabilities, and
 - Increasing focus on insider threats from employees who may seek to compromise National security and/or the ability of the Department to meet its mission goals.
- Protecting the Department's information systems by conducting and reporting on the results of comprehensive independent cybersecurity performance assessments and unannounced "red team" performance testing to improve systems against external and internal attacks.
- Supporting the Department's nuclear weapons complex and clean-up operations by conducting nuclear safety, worker safety and health, and emergency management performance assessments of:
 - High hazard nuclear construction projects and operations, e.g., at the Los Alamos National Laboratory, Y-12 National Security Complex, Savannah River Site, Hanford Site, and Idaho National Laboratory, and
 - The Waste Isolation Pilot Plant in support of resumed operations.
- Supporting and promoting secure and safe operations throughout the Department by:
 - Maintaining and operating the NTC, providing relevant security and training programs, and implementing the training reciprocity program to enhance performance and increase operational efficiency and effectiveness across the Department, and
 - Administering the DOE contractor Enforcement Program for violations of the Department's security and safety regulations.

Highlights of the FY 2018 Request

EA is expanding its analytical capabilities, to identify emerging trends and systemic weaknesses across the Department's security and safety performance as a whole. EA will place a high priority on supporting a robust cybersecurity program and supporting national security efforts such as modernization of the nuclear weapons infrastructure and cleaning up the legacy of waste and contamination from DOE research and nuclear weapons production.

Other Defense Activities/

**Office of Enterprise Assessments
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Office of Enterprise Assessments				
Nuclear Safety Assessments	6,621	-	6,621	0
Enforcement	1,947	-	1,947	0
Security and Safety Training (HS)	15,000	-	15,000	0
Outreach and Analysis	500	-	500	0
Total, Office of Enterprise Assessments	24,068	-	24,068	0
Program Direction	49,466	-	50,863	+1,397
Total, Office of Enterprise Assessments	73,534	73,394	74,931	+1,397

**Office of Enterprise Assessments
Explanation of Major Changes (\$K)**

	FY 2018 vs FY 2016
Office of Enterprise Assessments	
Program Direction: Increased funding supports salaries, benefits and other costs associated with EA's Federal workforce including hiring actions necessary to address skills gaps; and an increase in working capital fund fees.	+1,397
Total, Office of Enterprise Assessments	+1,397

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown.

Enterprise Assessments

Description

The EA Program provides for the assessment of DOE performance in nuclear safety; the implementation of the Congressionally-authorized contractor enforcement programs for classified information security, nuclear safety, and worker health and safety; the development and administration of security and safety training that reflects the most current Departmental policy and lessons learned through independent assessments to enhance performance of the workforce; and the establishment and maintenance of collaborative relationships with internal and external organizations.

Nuclear Safety Assessments

Provides for the planning and execution of independent assessments of DOE high hazard nuclear facility construction projects and nuclear facilities and operations to determine performance compared with nuclear safety requirements contained in Title 10 Code of Federal Regulations (C.F.R.) Part 830, Nuclear Safety Management, and DOE directives. EA will continue its focus of nuclear safety performance assessments on nuclear weapons complex infrastructure projects, e.g. at the Y-12 National Security Complex; and at clean-up and related operations, e.g., the construction of the Hanford Site Waste Treatment and Immobilization Plant and monitoring resumption of operations at the Waste Isolation Pilot Plant.

Enforcement

Provides the Department with the capability to implement regulatory DOE contractor enforcement programs specified in Title 10 C.F.R. Part 824, Procedural Rules for the Assessment of Civil Penalties for Classified Information Security Violations; Title 10 C.F.R. Part 820, Procedural Rules for DOE Nuclear Activities; and Title 10 C.F.R. Part 851, Worker Safety and Health Program. These activities provide a consistent and transparent method of contractor accountability for classified information security, nuclear safety, and worker health and safety performance that complements the Department's contract management mechanisms. The goal of the enforcement program is to ensure that DOE contractors adhere to classified information security, nuclear safety, and worker safety and health requirements, and to promote proactive performance improvement through timely self-identification, reporting, and correction of noncompliant conditions to enable contractors to achieve excellence in mission accomplishment without the need for enforcement actions.

Security and Safety Training

Security and safety training activities provide the Department a means to improve security and safety performance by developing and maintaining the proficiency and competency of DOE security and safety contractor and Federal employees. These activities also improve senior executives' performance and capabilities to fulfill security and safety leadership responsibilities through standardized training for the security of critical Departmental and national security assets, the safety and health of the workforce, and the protection of the public and the environment. The DOE National Training Center (NTC), located in Albuquerque, New Mexico, serves as the primary resource for DOE security and safety training. Funding provides for the operation of the NTC and the development, maintenance, and presentation of various security and safety-related training and certification programs at the NTC, through e-learning mechanisms, and at DOE sites via mobile training teams. The NTC is also responsible for certifying training programs in accordance with DOE Policy 364.1, Health and Safety Training Reciprocity. The NTC certifies certain health and safety training programs in order for those training programs to be accepted at various DOE sites and contractor organizations, thus reducing or eliminating the need for employees to complete redundant training programs required prior to conducting work at DOE sites. The NTC also incorporates lessons learned and best practices identified during EA independent assessments into more effective training programs.

Outreach and Analysis

Establishes and maintains collaborative relationships with line management, external stakeholders, and other U.S. Government entities in order to inform the Secretary of their input and positions, and foster improvements in security and safety performance at DOE sites. This helps determine complex-wide crosscutting issues and trends and provides analytic materials to help EA leadership determine areas of critical need and vulnerability and address Departmental issues.

Office of Enterprise Assessments

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Office of Enterprise Assessments \$24,068,000	\$24,068,000	\$0
Nuclear Safety Assessments \$6,621,000	\$6,621,000	\$0
<ul style="list-style-type: none"> • Conduct independent assessments of high hazard nuclear facility construction projects to ensure compliance with nuclear safety requirements; and • Provide independent assessments of DOE nuclear facilities and operations to ensure compliance with nuclear safety requirements. 	<ul style="list-style-type: none"> • Conduct independent assessments of high hazard nuclear facility construction projects to ensure performance in the implementation of nuclear safety requirements; and • Provide independent assessments of DOE nuclear facilities and operations to ensure performance in the implementation of nuclear safety requirements. 	<ul style="list-style-type: none"> • No change in funding.
Enforcement \$1,947,000	\$1,947,000	\$0
<ul style="list-style-type: none"> • Review and analyze operational data from the DOE data management system designed for noncompliance reporting, as well as reports from independent assessment activities, the DOE Occurrence Reporting and Processing System, the DOE Computerized Accident/Incident Reporting System, the DOE Safeguards and Security Information Management System, Federal accident investigations, and DOE site and program office assessments and evaluations to determine whether enforcement investigations are warranted and to identify trends in noncompliance events; • Conduct regulatory reviews; • Conduct enforcement investigations; • Develop and issue enforcement actions and other regulatory outcomes, such as notices of violation, enforcement letters, consent orders, and compliance orders, and assess civil penalties or other sanctions for regulatory violations; and • Conduct periodic outreach and training activities 	<ul style="list-style-type: none"> • Review and analyze performance data from the DOE data management system designed for noncompliance reporting, as well as reports from independent assessment activities, the DOE Occurrence Reporting and Processing System, the DOE Computerized Accident/Incident Reporting System, the DOE Safeguards and Security Information Management System, Federal accident investigations, and DOE site and program office assessments and evaluations to determine whether enforcement investigations are warranted and to identify performance trends; • Conduct enforcement investigations; • Develop and issue enforcement case outcomes, such as notices of violation, enforcement letters, and consent orders, and assess civil penalties or other sanctions for regulatory violations; and • Conduct periodic outreach and training activities to communicate the Department’s approach to security and safety enforcement, convey noncompliance reporting expectations, and 	<ul style="list-style-type: none"> • No change in funding.

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
to communicate the Department’s approach to safety and security enforcement, convey noncompliance reporting expectations, and provide information about DOE regulatory performance.	provide information about DOE regulatory performance.	
Safety and Security Training (HS) \$15,000,000	\$15,000,000	\$0
<ul style="list-style-type: none"> • Develop and provide security-and safety-related training and professional development programs at the DOE National Training Center (NTC), at DOE sites through mobile training teams, and through Webinars, video conferencing, and synchronous distance learning; • Maintain and upgrade equipment and technologies to support a greater web presence and “just-in-time” online training products, such as webcasts and topical area seminars; and • Expand the reciprocity program whereby certified safety training programs are recognized by other DOE contractors and sites and; • Operate and maintain the NTC, including classrooms, administrative offices, weapons live-fire ranges, and the Integrated Safety and Security Training and Evaluation Complex, a simulated DOE research and operational facility designed to allow for the use and evaluation of training methodologies and evolving safety and security technologies through hands-on, performance-based instruction. 	<ul style="list-style-type: none"> • Develop and provide security and safety-related training and professional development programs at the NTC and at DOE sites through mobile training teams, Webinars, video conferencing, and synchronous distance learning to enhance performance throughout the Department; • Maintain and upgrade equipment and technologies to support a greater web presence and “just-in-time” online training products, such as webcasts and topical area seminars; • Continue the implementation of the training reciprocity and collaboration program whereby certified safety training programs are recognized by other DOE contractors and sites and provide mechanisms for DOE contractors to work together to share training content and develop DOE-wide courses; • Incorporate best practices and lessons learned from EA independent assessments into NTC training programs to enhance performance of the workforce; and • Operate and maintain the NTC, including classrooms, administrative offices, weapons live-fire ranges, and the Integrated Safety and Security Training and Evaluation Complex, a simulated DOE research and operational facility designed to allow for the use and evaluation of training methodologies and evolving safety and security technologies through hands-on, 	<ul style="list-style-type: none"> • No change in funding.

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
	performance-based instruction.	
Outreach and Analysis \$500,000	\$500,000	\$0
<ul style="list-style-type: none"> Establish and maintain collaborative relationships with organizations both internal and external to DOE; and Leverage and provide analytic materials to help EA leadership determine areas of critical need and vulnerability. 	<ul style="list-style-type: none"> Establish and maintain collaborative relationships with organizations both internal and external to DOE; Establish outreach mechanisms to industry, government, and academic organizations to leverage expertise for improving security and safety performance; Analyze site wide issues and trends and determine complex-wide crosscutting issues and trends; and Leverage and provide analytic materials techniques and means to help EA leadership understand areas of critical need and performance vulnerabilities. 	<ul style="list-style-type: none"> No change in funding.

Program Direction

Overview

Program Direction provides for Federal staffing and mission support services to provide overall direction and execution of the EA mission to conduct assessments of the Department's performance in security, safety, and other areas; implement classified information security, nuclear safety, and health and safety contractor enforcement programs; develop and administer security and safety training that reflects the most current Departmental policy on security and safety issues; and establish and maintain collaborative relationships with organizations both internal and external to DOE.

Critical to achieving its vision and goals is the ability of EA to maintain a highly qualified workforce with the expertise and skills necessary to support, manage, and conduct its mission. The EA workforce is composed of security and safety professionals highly educated in science, engineering, and technology that are led by effective program and project managers with exceptional communication and leadership skills and supported by innovative resource management experts. The judicious use of contractor support continues to be a practical and cost-effective means of providing a surge pool of technical experts.

Support Services - Independent Assessments

Independent assessment activities provide high value to the Department by assessing performance and identifying gaps and vulnerabilities in physical security and cybersecurity programs, safety (worker and nuclear safety, and emergency management), and related performance. Independent assessment activities are selected based on careful consideration and analysis of risk to Departmental operations and performance trends, and are tailored to the unique missions and needs of each DOE program and site office. Safeguards and security, information security, and cybersecurity-related independent performance assessment activities are designed to determine whether special nuclear materials, classified matter (parts and information), controlled unclassified and sensitive information are adequately protected from unauthorized or inadvertent disclosure or diversion, including from the actions of malicious insiders. Independent performance assessment activities are also designed to evaluate whether the Department's overarching management and governance structure is effective in promoting robust protection strategies and informed risk management decisions. Safety-related independent performance assessment activities determine whether workers and the public are protected from the hazards associated with the Department's operations, and to identify events that could negatively impact the Department's ability to perform its mission and achieve its goals. Independent assessment activities provide accurate and timely information and analysis to the Department's senior leadership regarding the performance of the Department's security and safety programs and other functions of interest. Information is made available to Department management, congressional committees, and stakeholders, such as unions and local public interest groups, to provide confidence that the Department's operations are performed in a secure and safe manner.

Independent performance assessment activities complement but do not replace DOE line management's responsibility for security, safety, and contract performance management as required by Departmental policies. EA provides a check-and-balance function for the Department that is vital to provide assurance of its security and safety performance to its leadership, its workers, the public and Congress, and to maintain confidence in the Department's ability to be an effective self-regulator. As required by DOE Order 227.1A, Independent Oversight Program, independent assessment activities are performed by personnel who are organizationally independent of the DOE program and site offices that develop and implement policies and programs, and who can therefore objectively observe and report on the performance of those policies and programs as they relate to Departmental operations. Independent assessment processes are governed by documented, formal protocols that are continuously evaluated, revised, and refined based on Departmental and national events and activities that have an impact on DOE security and safety in order to provide more useful performance data and related information to line managers.

Other Related Expenses

Support includes working capital fund services; training for Federal employees; information technology equipment and services, and the Energy Information Technology Services.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Program Direction				
Salaries and Benefits	16,336	-	17,517	+1,181
Travel	1,235	-	1,235	0
Support Services	27,765	-	27,765	0
Other Related Expenses	4,130	-	4,346	+216
Total, Program Direction	49,466	-	50,863	+1,397
Federal FTEs	92	92	92	0
Support Services				
Technical Support				
Independent Assessments	27,765	-	27,765	0
Total, Technical Support	27,765	-	27,765	0
Total, Support Services	27,765	-	27,765	0
Other Related Expenses				
Working Capital Fund	2,756	-	2,972	+216
Training	78	-	78	0
Other Services Procured	1,296	-	1,296	0
Total, Other Related Expenses	4,130	-	4,346	+216

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown.

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Program Direction \$49,466,000	\$50,863,000	+\$1,397,000
Salaries and Benefits \$16, 336,000	\$17,517,000	+\$1,181,000
<ul style="list-style-type: none"> Federal staffing and mission support services to provide overall direction and execution of the EA mission to conduct expert evaluations of management performance in safety, security and other areas; implement health and safety, nuclear safety, and classified information security enforcement programs; develop and administer safety and security training that reflects the most current Departmental policy on safety and security issues; and establish and maintain collaborative relationships with organizations both internal and external to DOE in order to foster improvements in health, safety, environmental and security performance at DOE sites. 	<ul style="list-style-type: none"> Federal staffing and mission support services to provide overall direction and execution of the EA mission to conduct expert assessments of the Department's performance in security, safety, and other areas; implement classified information security, nuclear safety, and health and safety contractor enforcement programs; develop and administer security and safety training that reflects the most current Departmental policy on security and safety issues; and establish and maintain collaborative relationships with organizations both internal and external to DOE in order to foster improvements in security and safety performance at DOE sites. 	<ul style="list-style-type: none"> Increased funding supports salaries, benefits and other costs associated with EA's Federal workforce including hiring actions necessary to address skills gaps.
Travel \$1,235,000	\$1,235,000	\$0
<ul style="list-style-type: none"> Provides for Federal employee travel in support of EA enforcement, independent assessment, training outreach and other mission-related activities. 	<ul style="list-style-type: none"> Provides for Federal employee travel in support of EA enforcement, independent assessment, training, outreach, and other mission-related activities. 	No change in funding.
Support Services \$27,765,000	\$27,765,000	\$0
<i>Independent Assessments</i>	<i>Independent Assessments</i>	<i>Independent Assessments</i>
<ul style="list-style-type: none"> Observe operations and conduct technical assessments and performance tests that examine the effectiveness of safety and security programs and policies, giving priority to the highest security interests, such as strategic quantities of special nuclear material, and activities that present the most significant safety risks to workers and the public, such as nuclear facilities and operations; 	<ul style="list-style-type: none"> Observe operations and conduct technical assessments and performance tests that examine the effectiveness of security and safety programs and policies, giving priority to the highest security interests, such as strategic quantities of special nuclear material, and activities that present the most significant safety risks to workers and the public, such as nuclear facilities and operations; 	<ul style="list-style-type: none"> No change in work scope.

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<ul style="list-style-type: none"> • Conduct performance tests for critical safeguards and security interests, including protective force tests (e.g., force-on-force exercises) using weapons simulation systems and a specially trained composite adversary team to assess overall security effectiveness; • Conduct limited-notice performance testing of site protective forces to maximize response realism and broaden the spectrum of tested threat scenarios; • Conduct assessments of the implementation of the Department’s insider threat program to deter, detect, and mitigate potential insider threats posed by Federal and DOE contractor employees; • Conduct announced and unannounced internal and external network penetration testing to provide a full understanding of a site’s cybersecurity protection posture; • Conduct the annual independent evaluation of classified information systems security programs for DOE as required by the Federal Information Security Management Act; • Conduct an annual evaluation of classified information systems security programs for systems that process intelligence information on behalf of the DOE Office of Intelligence and Counterintelligence; • Provide input to the DOE Office of Inspector General for the annual evaluation of the DOE unclassified information systems security program; • Conduct annual “red team” cybersecurity assessments of the computer networks within the National Nuclear Security Administration 	<ul style="list-style-type: none"> • Conduct performance tests for critical security interests, including protective force tests (e.g., force-on-force exercises) using weapons simulation systems and a specially trained composite adversary team to assess overall effectiveness; • Conduct limited-notice performance testing of site protective forces to maximize response realism and broaden the spectrum of tested threat scenarios; • Conduct performance assessments of the implementation of the Department’s insider threat program to deter, detect, and mitigate potential insider threats posed by Federal and DOE contractor employees; • Conduct announced and unannounced internal and external network penetration testing to provide a full understanding of a site’s cybersecurity protection posture; • Conduct the annual independent evaluation of DOE classified information systems security programs as required by the Federal Information Security Management Act; • Conduct an annual evaluation of DOE classified information systems security programs for systems that process intelligence information on behalf of the DOE Office of Intelligence and Counterintelligence; • Provide input to the DOE Office of Inspector General for the annual evaluation of the DOE unclassified information systems security program; • Conduct annual “red team” cybersecurity performance assessments of the computer networks within the National Nuclear Security 	

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>weapons laboratories;</p> <ul style="list-style-type: none"> • Conduct targeted reviews of selected nuclear safety functional areas across the DOE complex based on such factors as performance trends, changes to applicable requirements, and/or performance information gaps; • Maintain the nuclear safety site lead program to monitor the status of DOE nuclear facilities and activities and facilitate the selection and execution of risk-informed assessment activities; • Conduct risk-informed reviews of worker safety and health programs. • Conduct reviews to assess emergency planning, preparedness, and response and recovery capabilities. • Conduct special reviews and studies of safety and security policies, programs, and implementation to identify needed program corrections; • Develop reports identifying findings and opportunities for improvement; • Develop and broadly disseminate abstracts of key results to promote performance improvements; • Continuously analyze results, and develop periodic summary reports that identify cross-cutting issues and performance trends; • Conduct follow-up reviews to evaluate corrective action effectiveness; and • Provide lessons learned and trending of inspection results to the National Training Center to be used to develop or amend safety and security curricula. 	<p>Administration nuclear weapons sites and laboratories;</p> <ul style="list-style-type: none"> • Conduct targeted reviews of selected nuclear safety functional areas across the DOE complex based on such factors as performance trends, changes to applicable requirements, and/or performance information gaps; • Maintain the nuclear safety site lead program to monitor the status of DOE nuclear facilities and activities and facilitate the selection and execution of risk-informed assessment activities; • Conduct risk-informed reviews of worker safety and health programs; • Conduct reviews to assess performance of emergency planning, preparedness, and response and recovery capabilities; • Conduct special reviews and studies of security and safety policies, programs, and implementation to identify needed program corrections; • Develop reports to communicate security and safety performance, findings, and opportunities for improvement; • Develop and broadly disseminate assessment report abstracts of key results to promote performance improvements; • Continuously analyze results, and develop periodic summary reports that identify cross-cutting issues and performance trends; • Conduct follow-up performance reviews to evaluate corrective action effectiveness; and • Provide lessons learned and trending of assessment results to the NTC to be used to develop or amend security and safety curricula to enhance performance of the workforce. 	

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Other Related Expenses \$4,130,000	\$4,346,000	+\$216,000
<ul style="list-style-type: none"> Working capital fund fees, based on guideline estimates issued by the working capital fund manager, for the cost of common administrative services such as building occupancy and alterations, computer and telephone infrastructure and usage, mail service, copying, printing and graphics, procurement closeouts, supplies, online learning, computer network support, and payroll processing; Federal employee training to obtain and/or maintain the technical competence of EA Federal employees, assuring that Federal personnel are fully capable of performing missions of the Department; and The DOE common operating environment initiative that provides a single point of contact for all common information technology systems and services and brings security, service, efficiency, and scale to these projects. 	<ul style="list-style-type: none"> Working capital fund fees, based on guideline estimates issued by the working capital fund manager, for the cost of common administrative services such as building occupancy and alterations, computer and telephone infrastructure and usage, mail service, copying, printing and graphics, procurement closeouts, supplies, online learning, computer network support, and payroll processing; Federal employee training to obtain and/or maintain the technical competence of EA Federal employees, assuring that Federal personnel are fully capable of performing missions of the Department; and The Energy Information Technology Services that provide a single point of contact for all common information technology systems and services at DOE Headquarters, promoting security, service, and efficiency. 	<ul style="list-style-type: none"> The increase is based upon Working Capital Fund (WCF) guidance provided and approved by the WCF board.

**Other Defense Activities
Facilities Maintenance and Repair**

The Department’s Facilities Maintenance and Repair activities are tied to its programmatic missions, goals, and objectives. The Facilities Maintenance and Repair activities funded by this budget and displayed below are intended to halt asset condition degradation.

Costs for Direct-Funded Maintenance and Repair (including Deferred Maintenance Reduction) (\$K)

	FY 2016 Actual Cost	FY 2016 Planned Cost	FY 2017 Planned Cost	FY 2018 Planned Cost
National Training Center	1,181	1,282	1,192	1,200
Total, Direct-Funded Maintenance and Repair	1,181	1,282	1,192	1,200

Report on FY 2016 Expenditures for Maintenance and Repair

This report responds to legislative language set forth in Conference Report (H.R. 108-10) accompanying the Consolidated Appropriations Resolution, 2003 (Public Law 108-7) (pages 886-887), which requests the Department of Energy provide an annual year-end report on maintenance expenditures to the Committees on Appropriations. This report compares the actual maintenance expenditures in FY 2016 to the amount planned for FY 2016, including Congressionally directed changes.

**Other Defense Activities
Total Costs for Maintenance and Repair (\$K)**

	FY 2016 Actual Cost	FY 2016 Planned Cost
National Training Center	1,181	1,282
Total, Maintenance and Repair	1,181	1,282

**Enterprise Assessments
Safeguards and Security (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Protective Forces	0	-	0	0
Physical Security Systems	0	-	0	0
Information Security	0	-	0	0
Cybersecurity	4,039	-	5,619	+1,580
Personnel Security	0	-	0	0
Material Control and Accountability	0	-	0	0
Program Management	0	-	0	0
Transportation Security	0	-	0	0
Construction	0	-	0	0
Total, Safeguards and Security	4,039	-	5,619	+1,580

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown.

Crosscutting Initiatives

The Department is organized into three Under Secretariats—Science and Energy, Nuclear Security, and Management and Performance—which recognize the complex interrelationship among DOE Program Offices. The Budget Request continues crosscutting programs which coordinate across the Department and seek to tap DOE’s full capability to effectively and efficiently address the United States’ energy, environmental, and national security challenges. These crosscutting initiatives will be discussed further within the Programs in which the crosscuts are funded. The Enterprise Assessments (EA) program contains the following crosscut.

Cybersecurity: The Department of Energy (DOE) is engaged in two categories of cyber-related activities: protecting the DOE enterprise from a range of cyber threats that can adversely impact mission capabilities and improving cybersecurity in the electric power subsector and the oil and natural gas subsector. The cybersecurity crosscut supports central coordination of the strategic and operational aspects of cybersecurity and facilitates cooperative efforts such as the Joint Cybersecurity Coordination Center (JC3) for incident response and the implementation of Department-wide Identity, Credentials, and Access Management (ICAM).

The Department maintains strong independent oversight of both classified and unclassified information technology systems through EA cybersecurity assessment activities. These activities include announced internal and external network penetration testing as well as unannounced "red-team" cybersecurity assessments to provide a full understanding of the Department's cybersecurity protection posture against external and insider threats.

FY 2018 Crosscuts (\$K)

	Cybersecurity	Total
Enterprise Assessments	4,864	4,864
Total, Crosscuts	4,864	4,864

Legacy Management

FY 2016 Enacted	FY 2017 Annualized CR ^a	FY 2018 Request
\$167,180	\$166,862	\$154,606

Overview

The Office of Legacy Management (LM) assists the Department in providing a long-term solution to the environmental legacy of the Cold War and ensures that DOE fulfills its long-term commitments to: protect human health and the environment; and, provide post-retirement benefits to former contractor workers. By funding the long-term activities at over 90 closed sites in the LM subprogram, other DOE programs are able to concentrate on risk reduction and site closure at the remaining operating sites.

LM provides funding for Long-Term Surveillance and Maintenance (LTS&M), Environmental Justice (EJ), Archives and Information Management (AIM), Pension and Benefit Continuity, Asset Management, Program Direction, and Public and Intergovernmental Engagement.

Highlights and Major Changes in the FY 2018 Budget Request

LM will continue its core activities at \$12.5 million below the FY 2016 funding level. A \$24 million decrease in pension and benefit continuity was partially offset by increases in the cost of Program Direction and expanded work requirements for cybersecurity. The funding levels of the program request will allow LM to perform LTS&M at over 90 sites, provide funding for payment of post-retirement benefits to over 10,000 former contractor employees, support termination of pension plans for remaining closure sites, manage records and information, pursue beneficial reuse of properties, engage the public and perform outreach, and support an interagency agreement to address abandoned uranium mines.

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (–) is shown.

**Legacy Management
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Legacy Management				
Legacy Management				
Long-Term Surveillance and Maintenance	45,252	56,404	48,658	+3,406
Environmental Justice	1,303	1,303	1,643	+340
Archives and Information Management	13,967	14,400	16,211	+2,244
Pension and Benefit Continuity	84,000	69,880	60,000	-24,000
Asset Management	9,558	11,800	10,762	+1,204
Public Intergovernmental Engagement	0	0	400	+400
Total, Legacy Management	154,080	153,787	137,674	-16,406
Program Direction	13,100	13,075	16,932	+3,832
Total, Legacy Management	167,180	166,862	154,606	-12,574
Federal FTEs	64	67	69	+5

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (–) is shown.

Legacy Management
Explanation of Major Changes (\$K)

	FY 2018 vs FY 2016
<ul style="list-style-type: none"> • Legacy Management: Funding requirements decreased due to recent actions taken by the responsible contractors related to health insurance payments in accordance with DOE Order 350.1, Contractor Human Resource Management Programs, Chapter V. LM analysis shows this funding level will allow termination of the two Rocky Flats pension plans. 	-24,000
<ul style="list-style-type: none"> • Program Direction: LM added five FTEs during first quarter, FY 2017 to address additional site responsibility and pending retirements of site managers for major sites. Additional funding is also required for Support Services. 	+3,832
<ul style="list-style-type: none"> • Legacy Management: Funding requirements for records/ IT management increased at site locations and increased cybersecurity requirements. 	+2,244
<ul style="list-style-type: none"> • Legacy Management: Funding requirements for LTS&M at additional sites and expanded work on defense-related uranium mines. 	+3,406
<ul style="list-style-type: none"> • Legacy Management: Funding requirements for increased scope of work for the Environmental Justice Program. 	+340
<ul style="list-style-type: none"> • Legacy Management: Funding requirements for managing infrastructure and facilities at LM sites. 	+1,204
<ul style="list-style-type: none"> • Legacy Management: Funding requirements for Public and Intergovernmental Engagement efforts. This effort was previously a part of Archives and Information Management and Asset Management. 	+400
Total, Legacy Management	-12,574

Legacy Management

Overview

Long-Term Surveillance and Maintenance (LTS&M), Environmental Justice (EJ), Archives and Information Management (AIM), Pension and Benefit Continuity, and Asset Management.

Long-Term Surveillance and Maintenance

This activity is required for remediated sites that have been closed. Before transferring to LM, cleanup is performed to a level that protects human health and the environment. DOE maintains the sites to ensure the cleanup remains protective of human health and the environment. Site conditions must meet the regulatory requirements established by state and federal agencies in cooperation with local governments, Tribal Nations, and public stakeholders.

The funding requested for FY 2018 will allow LM to monitor and conduct LTS&M and implement additional institutional control commitments at its sites in accordance with legal, contractual and regulatory agreements. Routine functions include soil, water, and air monitoring, long-term treatment of contaminants, maintenance of disposal cells, and security. Funding for this activity is required to meet legal and regulatory requirements for LM sites. LM is planning to manage 93 sites by the close of FY 2017 and 97 sites by the close of FY 2018. LM is also planning projects to understand and address soil subsidence at Rocky Flats and other disposal cells.

LM led the effort to produce the defense-related uranium mines (DRUM) report as required by Congress and delivered in August 2014. One conclusion of the report was there are still numerous data gaps associated with abandoned uranium mines in order to fully comply with the intent of Congress. Over the past 18 months, DOE has participated with intergovernmental coordination efforts to fill the data gaps and quantify the risks. The funding requested for FY 2018 will support LM's continued involvement in a multi-agency effort to fill existing data gaps and to validate and verify existing information at 300 mines. This effort will help DOE better define potential safety and environmental issues at DRUM sites.

A related cost, directly supporting this activity and embedded within the total activity cost, is safeguards and security for LM properties. The costs include protective forces and physical security systems, as follows (in whole dollars): FY 2016 - \$200,000; FY 2017 - \$184,000; and FY 2018 - \$186,000. The cost is derived from protective forces and physical security systems in Weldon Spring and Fernald.

Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice (EJ) in Minority and Low-Income Populations, directed each Federal agency to make achieving EJ part of its mission. LM provides leadership and coordination of Departmental EJ activities and represents the Department in interagency planning and activities. The FY 2018 funding continues actions under a Memorandum of Understanding that includes participation from 17 Federal agencies to work collaboratively with communities to increase their ability to sustain a healthy quality of life.

Archives and Information Management

LM is the custodian of legacy physical and electronic records for LM sites, including the major closure sites of Fernald, Mound, and Rocky Flats. LM is responsible for approximately 114,000 cubic feet of physical records and approximately 54 terabytes of electronic records.

Within this activity, LM provides records management services for its active program elements and maintains legacy archives of inherited collections, including paper and electronic records and records in other media. Elements include records management policy and procedure development, planning, and development of oversight processes and actions that guide and govern physical and electronic records management operations, including preservation efforts for fragile or deteriorating records. Functions within this activity encompass operational records retention, records maintenance and use, and records disposition processes and activities to ensure proper documentation of LM's environmental protection, and hazardous waste disposition-related policies and activities.

The activity includes responding to requests associated with the Freedom of Information Act (FOIA), Privacy Act, and other information requests (e.g., DOE stakeholders processing claims associated with the Energy Employees Occupational Illness Compensation Program Act). LM currently receives ~1,600 information requests each year.

This activity also provides LM's information management and technology needs. This work involves the coordination of information collection, storage, dissemination, and destruction as well as managing the policies, guidelines, and standards regarding information management. LM maintains its information technology (IT) infrastructure – including maintaining functional equipment, operating systems, and software capable of accessing electronic records – and provides planning, design, and maintenance of an IT infrastructure to effectively support automated needs (e.g., platforms, networks, servers, printers, etc.) and provides IT security for LM's unclassified computing networks. Specific accomplishments will include beginning operating phase II of the FUSRAP sites data information system; and completing migration of LTS&M data for major closure sites (Rocky Flats, Fernald, and Mound) to a modern data management system that better supports GIS, which will improve stakeholder access to the data.

IT security involves all processes and activities pertaining to the securing of Federal data and systems through the creation and definition of security policies, procedures and controls covering such services as identification, authentication, and non-repudiation in accordance with Federal Information Processing Standards (FIPS) and the Federal Information Security Management Act (FISMA). The cost of the embedded cyber security and information security functions are as follows (in whole dollars): FY 2016 - \$922,000; FY 2017 - \$1,190,000; and FY 2018 - \$1,130,000.

Pension and Benefit Continuity

This activity fulfills the Department's commitment to its former contractor employees who previously worked at sites prior to closure. For sites that have been closed following the end of active programs and completion of site remediation, LM is responsible for ensuring that former contractor employees, their dependents, and their beneficiaries receive the pensions and post-retirement benefits (PRB) that are part of the contractual agreements for the respective sites. Dependent upon the contract provisions for the respective sites, LM funds the contractor cost of providing retirement benefits to former contractor employees. These retirement benefits include pension plans, health insurance, health reimbursement account stipends, Medicare Part B reimbursement, and life insurance. Several DOE contractors responsible for closure site pension plans are in the process of terminating pension plans through a combination of lump sum buyouts and the purchase of insurance company annuities.

In FY 2018, LM will support the administration of pensions and/or PRB for the following sites: Fernald (OH), Grand Junction (CO), Mound (OH), Paducah (KY), Pinellas (FL), Portsmouth (OH), and Rocky Flats (CO). The number of participants in the pension and/or other benefit plans (including spouses covered under the retiree medical plans) is over 10,000. The total number of participants is expected to decrease over time due to a closed participant population and normal mortality.

Asset Management

LM manages tens of thousands of acres of land and other assets. This activity focuses on management of those assets – including administration of leases for property used in program functions, infrastructure and facility management – and on reuse or transfer of the real and personal property to other agencies or private interests. Transferring land to a private interest allows the land to be reused productively, reduces the Department's "footprint" of the Cold War legacy, and enables resumption of local property taxes. Transfer of excess assets to non-DOE ownership is a priority. LM has disposed of more than ten properties since being created in FY 2004, and continues to evaluate assets for future property disposition. In FY 2018, this will include efforts to begin disposition property at the Mound site. Asset Management also administers LM's Environmental Management Systems (EMS) for maintaining environmental compliance.

This activity also includes management of lease tracts for royalties paid to the US government from uranium production on BLM managed lands in Colorado. Uranium lease management continues to strengthen LM's capacity for long-term management of uranium-mine-related issues.

A related cost directly supporting this activity and embedded within the total activity cost is safeguards and security for LM properties. The costs include protective forces, physical security systems, personnel security, information security, and program management, as follows (in whole dollars): FY 2016 - \$850,000; and FY 2017 - \$856,000, and FY 2018 - \$868,000.

Public Intergovernmental Engagement

This activity provides for robust outreach to the public, intergovernmental collaboration, and effective dialogue with tribal nations integral to the Office of Legacy Management's work. This activity focuses on ensuring that stakeholders are involved and informed of LM's current and planned work.

**Legacy Management
Activities and Explanation of Changes**

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Long-Term Surveillance and Maintenance- \$45,252,000		
	\$48,658,000	+\$3,406,000
<ul style="list-style-type: none"> Conduct surveillance and maintenance at 91 sites. Conduct needed actions to prepare for transfer of future sites. 	<ul style="list-style-type: none"> Conduct surveillance and maintenance at 93 sites. Accept responsibility for four additional sites by the end of FY 2018. Conduct needed actions to prepare for transfer of future sites. Supports an interagency effort to address defense-related uranium mines. 	<ul style="list-style-type: none"> The increase supports the transfer of new sites to LM and DOE's contribution to an interagency effort to address the legacy of defense-related uranium mines.
Environmental Justice (EJ)- \$1,303,000		
	\$1,643,000	\$340,000
<ul style="list-style-type: none"> Continue EJ functions as the Departmental focus for that program element. Promote EJ functions in the communities affected by DOE closure actions. 	<ul style="list-style-type: none"> Continue EJ functions as the Departmental focus for that program element. Promote EJ functions in the communities affected by DOE closure actions. 	<ul style="list-style-type: none"> No significant change.
Archives and Information Management- \$13,967,000		
	\$16,211,000	\$2,244,000
<ul style="list-style-type: none"> Continue records/IT management functions for all sites and activities. Accept responsibility for records/IT for sites transferred to LM during the fiscal year. 	<ul style="list-style-type: none"> Continue records/IT management functions for all sites and activities. Accept responsibility for records/IT for sites transferred to LM during the fiscal year. 	<ul style="list-style-type: none"> The increase supports additional cybersecurity requirements.
Pension and Benefit Continuity- \$84,000,000		
	\$60,000,000	-\$24,000,000
<ul style="list-style-type: none"> Continue to pay pensions and/or PRB for eight sites. 	<ul style="list-style-type: none"> Continue to pay pensions and/or PRB for seven sites. Support termination of pension plans for the retirees at three sites, as needed. 	<ul style="list-style-type: none"> PRB costs reduced through the use of health reimbursement arrangements. Pension plan for the Yucca Mountain site retirees terminated and PRBs replaced with private health insurance policies.

Asset Management- \$9,558,000	\$10,762,000	+\$1,204,000
<ul style="list-style-type: none"> • Continue asset management support for 91 sites. • Manage infrastructure and facilities at LM sites. • Continue management of the Uranium Leasing program. • Continue to increase and manage beneficial reuse initiatives at sites available for reuse. • Disposition of one property during FY 2016. 	<ul style="list-style-type: none"> • Continue asset management support for 93 sites. • Add four sites by the end of FY 2018. • Manage infrastructure and facilities at LM sites. • Continue management of the Uranium Leasing Program. • Continue to increase and manage beneficial reuse initiatives at sites available for reuse. 	<ul style="list-style-type: none"> • The increase supports additional requirements in managing infrastructure and facilities at LM sites.
Public and Intergovernmental Engagement- \$0	\$400,000	+\$400,000
<ul style="list-style-type: none"> • Previously was a part of Archives and Information Management and Asset Management. 	<ul style="list-style-type: none"> • Continue to increase stakeholder awareness and engage the public. 	<ul style="list-style-type: none"> • The increase breaks out funding as a separate effort from Archives and Information Management and Asset Management.

**Legacy Management
Legacy Management Performance Measures**

In accordance with the GPRA Modernization Act of 2010, the Department sets targets for, and tracks progress toward, achieving performance goals for each program.

	FY 2016	FY 2017	FY 2018
Performance Goal (Measure)	Environmental Remedies - Conduct surveillance and maintenance activities to ensure the effectiveness of cleanup remedies in accordance with legal agreements or identify sites subject to additional remedial action in order to ensure effectiveness at all sites within Legacy Management's responsibility.		
Target	= 90 sites	= 93 Sites	= 97 Sites
Result	Met - 91	TBD	TBD
Endpoint Target	Continued inspections on all sites until risk has been reduced to the point that further inspections are not needed.		
Performance Goal (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 each year.		
Target	≥ 2 percent reduction	≥ 2 percent reduction	≥ 2 Percent Reduction
Result	Met - 14.4	TBD	TBD
Endpoint Target	Achieve a 2 percent reduction below the baseline each year.		

Program Direction

Overview

The LM mission is carried out by a workforce composed mainly of contractors paid mostly from program funds. Oversight, policy, and inherently governmental functions (e.g., contract administration and budget formulation and execution) are provided by a federal workforce funded from program direction. Within the program direction subprogram, most costs are associated with Federal personnel salaries and benefits.

Highlights of the FY 2018 Budget Request

The FY 2018 Request includes five additional FTEs (and additional travel and training costs) to address growing site management responsibilities.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Washington Headquarters				
Salaries and Benefits	10,246	9,781	11,461	+1,215
Travel	522	598	790	+268
Support Services	346	524	2,190	+1,844
Other Related Expenses	1,986	2,172	2,491	+505
Total, Program Direction	13,100	13,075	16,932	+3,832
Federal FTEs	64	67	69	+5
Support Services				
Technical Support				
System Definition	50	50	51	+1
Total, Technical Support	50	50	51	+1
Management Support				
Manpower Systems Analysis	94	51	82	-12
Training and Education	71	72	21	-50
Analysis of DOE Management Processes	50	50	250	+200
Reports and Analyses Management and General Administrative Support	81	301	1,786	+1,705
Total Management Support	296	474	2,139	+1,843
Total, Support Services	346	524	2,190	+1,844
Other Related Expenses				
Other Services and Supplies	203	224	387	+184
Energy IT Services	134	166	324	+190
Working Capital Fund	1,649	1,782	1,780	+131
Total, Other Related Expenses	1,986	2,172	2,491	+505

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (–) is shown.

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Program Direction- \$13,100	\$16,932	+\$3,832
Salaries and Benefits- \$10,246	\$11,461	+\$1,215
<ul style="list-style-type: none"> Federal staff will perform functions to ensure the objectives under each LM program goal are met. Conduct oversight, audit, and policy development for contractors' activities. 	<ul style="list-style-type: none"> Continue functions to manage LM's activities in order to achieve LM's program goals. Increase the number of federal employees to meet the additional site management responsibility and address defense-related uranium mine issues. 	<ul style="list-style-type: none"> The increase will allow 5 additional FTEs.
Travel- \$522	\$790	+\$268
<ul style="list-style-type: none"> Travel enables staff to conduct surveillance and maintenance functions, business and site operations, oversight, and related activities. 	<ul style="list-style-type: none"> Continue to conduct functions at a growing number of closed sites. 	<ul style="list-style-type: none"> Additional travel funds are needed to meet expanding site requirements and additional FTEs.
Support Services- \$346	\$2,190	+\$1,844
<ul style="list-style-type: none"> Support services assist in the preparation of both routine and ad hoc reports. In addition, contractual support assists with staff training. 	<ul style="list-style-type: none"> Continue effort to prepare more analyses and reports with Federal staff. 	<ul style="list-style-type: none"> Additional Support Services is required to address responsibility for an increased number of sites.
Other Related Expenses- \$1,986	\$2,491	+\$505
<ul style="list-style-type: none"> Other services include LM's contribution to the DOE Working Capital Fund (WCF) as well as expenses not encompassed by the fund, supplies, computer software and hardware, and the Department's IT support. 	<ul style="list-style-type: none"> Continue with procuring services and supplies at relatively the same level with the exception of WCF. 	<ul style="list-style-type: none"> The increase is due to higher WCF expenses and CIO labor increases on EITS contracts.

**Legacy Management
Facilities Maintenance and Repair**

The Department’s Facilities Maintenance and Repair activities are tied to its programmatic missions, goals, and objectives. Facilities Maintenance and Repair activities funded by this budget are displayed below.

**Costs for Direct-Funded Maintenance and Repair (including Deferred Maintenance Reduction)
(\$K)**

	FY 2016 Planned Cost	FY 2017 Planned Cost	FY 2018 Planned Cost
Office of Legacy Management Comprehensive Environmental Response Compensation and Liabilities Act (CERCLA) Sites	1,380	2,327	1,149
Non-CERCLA Sites	1,859	1,192	3,257
Total, Direct-Funded Maintenance and Repair	3,239	3,519	4,406

Report on FY 2014 Expenditures for Maintenance and Repair

This report responds to legislative language set forth in Conference Report (H.R. Conf. Rep. No. 108-10) accompanying the Consolidated Appropriations Resolution, 2003 (Public Law 108-7) (pages 886-887), which requests the Department of Energy provide an annual year-end report on maintenance expenditures to the Committees on Appropriations.

**Legacy Management
Safeguards and Security Crosscut (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR	FY 2018 Request	FY 2018 vs FY 2016
Protective Forces	549	539	548	-1
Physical Security Systems	139	136	137	-2
Information Security	6	56	6	0
Cyber Security	922	1,140	1,130	+208
Personnel Security	33	33	34	+1
Material Control and Accountability	0	0	0	0
Program Management	323	473	329	+6
Security Investigations	0	0	0	0
Transportation Security	0	0	0	0
Construction	0	0	0	0
Total, Safeguards and Security	1,972	1,616	2,184	+212

Office of Hearings and Appeals Program Direction

Overview

The Office of Hearings and Appeals (OHA) provides adjudicatory and conflict resolution services for DOE's programs so that disputes may be resolved at the agency level in a fair, impartial and efficient manner. OHA supports all DOE strategic goals, including management and operational excellence. The bulk of OHA work is defense-related and consists of the adjudication of security clearance cases that determine the eligibility of employees to have access to special nuclear material or classified information.

Within the Other Defense Activities Appropriation, OHA operates with three staffs: the Personnel Security and Appeals Division, the Employee Protection and Exceptions Division, and the Office of Conflict Prevention and Resolution.

OHA offers fair, timely, impartial, and customer-friendly processes for adjudicating matters pursuant to regulatory authority or special delegation from the Secretary. Such cases include: (i) eligibility for a security clearance, (ii) whistleblower protection for employees of DOE contractors, (iii) Freedom of Information Act and Privacy Act appeals, (iv) relief from DOE product efficiency regulations to prevent special hardship, and (v) and other matters that the Secretary may delegate. With respect to alternative dispute resolution (ADR), OHA offers mediation and other services for a variety of matters.

Highlights of the FY 2018 Budget Request

The FY 2018 Budget Request supports a staff of 22 FTEs needed to accomplish its primary mission of adjudicating security clearance cases, adjudicating exception relief from DOE product efficiency regulations, and providing ADR support for the Department.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Program Direction				
Salaries and Benefits	4,106	-	4,156	+50
Travel	40	-	40	0
Support Services	44	-	44	0
Other Related Expenses	1,310	-	1,365	+55
Total, Program Direction	5,500	5,490	5,605	+105
Federal FTEs	22	22	22	0
Support Services				
Legal Research Support	44	44	44	0
Other Related Expenses				
Energy IT Services	175	-	200	+25
Working Capital Fund	1,135	-	1,165	+30
Total, Other Related Expenses	1,310	-	1,365	+55

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (–) is shown.

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs. FY 2016
Program Direction \$5,500,000	\$5,605,000	+\$105,000
Salaries and Benefits \$4,106,000	\$4,156,000	+\$50,000
<ul style="list-style-type: none"> Supports current staffing level of 22 FTEs. 	<ul style="list-style-type: none"> Supports staffing level of 22 FTEs. 	<ul style="list-style-type: none"> Increase (+\$50,000) to fund salary and benefits escalation for 22 FTEs.
Travel \$40,000	\$40,000	\$0
<ul style="list-style-type: none"> Supports travel to conduct security hearings at DOE field locations. 	<ul style="list-style-type: none"> Continuation of FY16 activities. 	<ul style="list-style-type: none"> No change in funding level.
Support Services \$44,000	\$44,000	\$0
<ul style="list-style-type: none"> Supports computer legal research services for FY 2016. 	<ul style="list-style-type: none"> Supports computer research services for FY 2017. 	<ul style="list-style-type: none"> No change in funding level.
Other Related Expenses \$1,310,000	\$1,365,000	+\$55,000
<ul style="list-style-type: none"> Funding supports the Working Capital Fund (WCF), which provides for shared service costs and Departmental overhead expenses; Energy IT Services; and other services. 	<ul style="list-style-type: none"> Continuation of FY 2016 activities. 	<ul style="list-style-type: none"> Increase (+\$55,000) permits OHA to fund increased overhead expenses.

**Hearings and Appeals
Departmental Administration
Performance Measures**

In accordance with the GPRA Modernization Act of 2010, the Department sets targets for, and tracks progress toward, achieving performance goals for each program.

	FY 2016	FY 2017	FY 2018
Performance Goal (Measure)	OHA Effectiveness Measure - Improve the timeliness of security cases by reducing the number of cases over 120 days old.		
Target	3 cases	3 cases	3 cases
Result	Met - 3	TBD	TBD

Department Of Energy
FY 2018 Congressional Budget
Funding By Appropriation By Site
(\$K)

Other Defense Activities	FY 2016 Enacted	FY 2017 Annualized CR	FY 2018 Request
Argonne National Laboratory			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	945	945	945
Total, Argonne National Laboratory	945	945	945
Brookhaven National Laboratory			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	250	250	250
Total, Brookhaven National Laboratory	250	250	250
Chicago Operations Office			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	50	50	50
Total, Chicago Operations Office	50	50	50
Consolidated Business Center			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	259	259	259
Total, Consolidated Business Center	259	259	259
Fernald Site			
Office of Legacy Management			
Legacy Management	15,785	13,369	14,240
Total, Fernald Site	15,785	13,369	14,240
Grand Junction Office			
Office of Legacy Management			
Legacy Management	34,150	33,672	37,570
Total, Grand Junction Office	34,150	33,672	37,570
Idaho National Laboratory			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	150	150	150
Total, Idaho National Laboratory	150	150	150
Idaho Operations Office			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	400	400	400
Total, Idaho Operations Office	400	400	400
Kansas City National Security Complex (KCNSC)			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	10	10	10
Total, Kansas City National Security Complex (KCNSC)	10	10	10

Department Of Energy
FY 2018 Congressional Budget
Funding By Appropriation By Site
(\$K)

Other Defense Activities	FY 2016 Enacted	FY 2017 Annualized CR	FY 2018 Request
Lawrence Livermore National Laboratory			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	3,050	3,050	3,050
Total, Lawrence Livermore National Laboratory	3,050	3,050	3,050
Lexington Office			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	200	200	200
Total, Lexington Office	200	200	200
Los Alamos National Laboratory			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	95	95	95
Total, Los Alamos National Laboratory	95	95	95
Morgantown Office			
Office of Legacy Management			
Legacy Management	11,462	11,925	16,211
Total, Morgantown Office	11,462	11,925	16,211
Mound Site			
Office of Legacy Management			
Legacy Management	15,611	12,583	12,327
Total, Mound Site	15,611	12,583	12,327
Nevada Field Office			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	15	15	15
Total, Nevada Field Office	15	15	15
NNSA Albuquerque Complex			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	1,000	1,000	1,000
Enterprise Assessments			
Enterprise Assessments	150	150	150
Total, NNSA Albuquerque Complex	1,150	1,150	1,150
Oak Ridge Institute for Science & Education			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	1,305	1,305	1,305
Total, Oak Ridge Institute for Science & Education	1,305	1,305	1,305

Department Of Energy
FY 2018 Congressional Budget
Funding By Appropriation By Site
(\$K)

Other Defense Activities	FY 2016 Enacted	FY 2017 Annualized CR	FY 2018 Request
Oak Ridge National Laboratory			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	1,035	1,035	1,035
Total, Oak Ridge National Laboratory	1,035	1,035	1,035
Oak Ridge Office			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	2,795	2,795	2,795
Total, Oak Ridge Office	2,795	2,795	2,795
Office of Scientific & Technical Information			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	300	300	300
Total, Office of Scientific & Technical Information	300	300	300
Ohio Field Office			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	5	5	5
Total, Ohio Field Office	5	5	5
Pacific Northwest National Laboratory			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	1,905	1,905	1,905
Enterprise Assessments			
Enterprise Assessments	125	125	125
Total, Pacific Northwest National Laboratory	2,030	2,030	2,030
Paducah Gaseous Diffusion Plant			
Office of Legacy Management			
Legacy Management	3,000	2,933	2,793
Total, Paducah Gaseous Diffusion Plant	3,000	2,933	2,793
Pantex Plant			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	10	10	10
Total, Pantex Plant	10	10	10
Pinellas Site			
Office of Legacy Management			
Legacy Management	7,643	6,130	4,570
Total, Pinellas Site	7,643	6,130	4,570

Department Of Energy
FY 2018 Congressional Budget
Funding By Appropriation By Site
(\$K)

Other Defense Activities	FY 2016 Enacted	FY 2017 Annualized CR	FY 2018 Request
Portsmouth Gaseous Diffusion Plant			
Office of Legacy Management			
Legacy Management	6,100	4,867	3,867
Total, Portsmouth Gaseous Diffusion Plant	6,100	4,867	3,867
Richland Operations Office			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	1,000	1,000	1,000
Total, Richland Operations Office	1,000	1,000	1,000
Rocky Flats Site			
Office of Legacy Management			
Legacy Management	53,460	42,605	36,571
Total, Rocky Flats Site	53,460	42,605	36,571
Sandia National Laboratories			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	1,210	1,210	1,210
Total, Sandia National Laboratories	1,210	1,210	1,210
Savannah River Operations Office			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	500	500	500
Total, Savannah River Operations Office	500	500	500
Savannah River Site Office			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	10	10	10
Total, Savannah River Site Office	10	10	10

Department Of Energy
FY 2018 Congressional Budget
Funding By Appropriation By Site
(\$K)

Other Defense Activities	FY 2016 Enacted	FY 2017 Annualized CR	FY 2018 Request
Washington Headquarters			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	102,244	101,900	114,174
Program Direction	62,235	62,235	68,765
Total, Environment, Health, Safety and Security	164,479	164,135	182,939
Hearings and Appeals			
Program Direction	5,500	5,490	5,605
Office of Legacy Management			
Legacy Management	14,403	28,392	18,975
Enterprise Assessments			
Enterprise Assessments	23,793	23,747	23,793
Program Direction	49,466	49,372	50,863
Total, Enterprise Assessments	73,259	73,119	74,656
Specialized Security Activities			
Specialized Security Activities	230,377	229,939	237,912
Total, Washington Headquarters	488,018	501,075	520,087
Weldon Spring Site Office			
Office of Legacy Management			
Legacy Management	3,061	7,911	7,482
Total, Weldon Spring Site Office	3,061	7,911	7,482
Y-12 Site Office			
Environment, Health, Safety and Security			
Environment, Health, Safety and Security	20	20	20
Total, Y-12 Site Office	20	20	20
Yucca Mountain Site Office			
Office of Legacy Management			
Legacy Management	2,505	2,475	0
Total, Yucca Mountain Site Office	2,505	2,475	0
Total, Other Defense Activities	657,589	656,339	672,512

Departmental Administration

Departmental Administration

Departmental Administration

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Departmental Administration
Proposed Appropriation Language

For salaries and expenses of the Department of Energy necessary for departmental administration in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), \$241,652,000, to remain available until September 30, 2019, including the hire of passenger motor vehicles and official reception and representation expenses not to exceed \$30,000, plus such additional amounts as necessary to cover increases in the estimated amount of cost of work for others notwithstanding the provisions of the Anti-Deficiency Act (31 U.S.C. 1511 et seq.): Provided, That such increases in cost of work are offset by revenue increases of the same or greater amount: Provided further, That moneys received by the Department for miscellaneous revenues estimated to total \$96,000,000 in fiscal year 2018 may be retained and used for operating expenses within this account, as authorized by section 201 of Public Law 95–238, notwithstanding the provisions of 31 U.S.C. 3302: Provided further, That the sum herein appropriated shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2018 appropriation from the general fund estimated at not more than \$145,652,000.

Note.—A full-year 2017 appropriation for this account was not enacted at the time the budget was prepared; therefore, the budget assumes this account is operating under the Further Continuing Appropriations Act, 2017 (P.L. 114–254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution.

Explanation of Change

No change.

Departmental Administration

(\$K)

FY 2016 Enacted	FY 2017 Annualized CR	FY 2018 Request
130,971	130,722	145,652

Overview

The Departmental Administration (DA) appropriation funds 16 management and mission support organizations that have enterprise-wide responsibility for administration, accounting, budgeting, contract and project management, congressional and intergovernmental liaison, domestic and international energy policy, information management, life-cycle asset management, legal services, workforce diversity and equal employment opportunity, ombudsman services, small business advocacy, sustainability, public affairs, Indian energy policy and technology transitions.

The DA appropriation also budgets for Strategic Partnership Projects of expenses and collections resulting in a net offset, and receives Miscellaneous Revenues from other sources. Additionally, the DA appropriation receives funding from the Other Defense Activities (ODA) appropriation, Defense-Related Administrative Support (DRAS), which is used to offset expenses within the DA appropriation that support defense-funded administrative support activities at DOE.

Highlights of the FY 2018 Budget Request

In FY 2018, the DA Budget reflects a dedication to strengthen enterprise-wide management and mission support functions, as outlined below:

- Office of Management (MA): The FY 2018 Request level reflects the transfer of \$15,192,000 and 34 FTEs from MA to the newly established Project Management Oversight and Assessment Office (PM), which will better enable DOE to conduct independent reviews of projects greater than \$100,000,000, conduct cost estimating and program evaluation, and perform other critical DOE-wide functions.
- Chief Information Officer (CIO): The \$18,225,000 increase supports replacement of legacy network infrastructure, consolidation of data centers and enterprise e-mail as well as the implementation of other Administration priorities.
- Chief Financial Officer (CFO): The increase of \$1,460,000 above the FY 2016 Enacted level as a result of the transfer of \$1,484,000 and 12 FTE from the Office of Science for the consolidation of Oak Ridge financial payment operations into CFO.
- Transfers from EERE to DA: International Affairs (IA) will increase by \$878,000 more than the FY 2016 Enacted due to the transfer of Energy Efficient and Renewable Energy's (EERE) International Office, including 8 FTEs. Staff transferred from EERE will be positioned in IA's HQ and regional offices to assist with international activities related to renewable power and energy efficiency. In addition, Public Affairs (PA) includes a \$3,158,000 increase from FY16 Enacted for the transfer of communication functions and personnel from EERE Communications to PA.
- Energy Policy and Systems Analysis (EPSA): The decrease of \$20,865,000 is in an effort to eliminate redundancies and increase efficiencies across the Department, EPSA's activities will be phased out during FY 2018 in order to close the program by the end of the fiscal year.
- The DA Request also includes the Office of Technology Transitions (\$6,876,000) and the Office of Indian Energy Policy and Programs (\$10,000,000).

Funding by Congressional Control (\$K)

	FY 2016 Enacted	FY 2017 Annualized CR	FY 2018 Request	FY 2018 vs FY 2016
Departmental Administration				
Office of the Secretary	5,008	4,998	5,300	+292
Congressional & Intergovernmental Affairs	6,300	6,288	6,200	-100
Public Affairs	3,431	3,424	6,589	+3,158
General Counsel	33,000	32,937	33,000	0
Economic Impact & Diversity	10,000	9,981	10,000	0
Chief Financial Officer	47,024	46,935	48,484	+1,460
Office of Technology Transitions	0	0	6,876	+6,876
Chief Human Capital Officer	24,500	24,453	25,500	+1,000
Office of Indian Energy Policy & Programs	16,000	15,970	10,000	-6,000
Energy Policy and Systems Analysis	31,297	31,238	10,432	-20,865
International Affairs	18,000	17,966	18,878	+878
Office of Small & Disadvantaged Business Utilization	3,000	2,994	3,000	0
Management	65,000	64,876	53,758	-11,242
Project Management Oversight and Assessments	0	0	15,192	+15,192
Strategic Partnership Projects	40,000	39,924	40,000	0
Chief Information Officer	73,218	73,079	91,443	+18,225
Subtotal, Departmental Administration (Gross)	375,778	375,063	384,652	+8,874
Adjustments	-8,800	-8,783	0	+8,800
Defense-Related Administrative Support	-118,836	-118,610	-143,000	-24,164
Subtotal, Departmental Administration	-127,636	-127,393	-143,000	-15,364
Miscellaneous Revenues				
Revenues Associated with SPP	-40,000	-39,924	-40,000	0
Other Revenues	-77,171	-77,024	-56,000	+21,171
Subtotal, Miscellaneous Revenues	-117,171	-116,948	-96,000	+21,171
Total, Departmental Administration (Net)	130,971	130,722	145,652	+14,681
Federal FTEs	1,160	1,179	1,139	-21

Defense-Related Administrative Support

Overview

Beginning in FY 1999, funding has been provided within the Other Defense Activities appropriation to offset amounts within the DA appropriation that support defense-related activities. This offset addresses the significant level of administrative support performed within DA in support of the Department's defense-related programs. The services provided by the offices within DA are performed without distinction between defense and non-defense related activities and provide benefit for all headquarters organizations proportionally

Defense-Related Administrative Support Funding (\$K)

Defense-Related Administrative Support

FY 2016 Enacted	FY 2017 Annualized CR	FY 2018 Request
-118,836	-118,610	-143,000

Strategic Partnership Projects

Overview

The Strategic Partnership Projects (SPP) program provides funding to DOE’s multi-purpose field offices and National Laboratories to finance the cost of products and services requested by non-DOE users, both foreign and domestic. The products and services provided by the Department under this program generally are not available from alternate sources and are either (1) a revenue program which results from a budgeted mission of the Department or (2) reimbursable work for non-federal entities where the sponsor is precluded by law from providing advance funding. The costs of the SPP program are offset by revenues received from the sale of products and services to customers so that the appropriation from the general fund is not more than \$0.

The SPP program includes a portion of the Department’s Foreign Research Reactor Spent Fuel Program. This program, which involves the receipt and storage of foreign research reactor spent fuel, is provided for in the SPP program only to the extent of revenues provided.

The benefits for this program are: continued access to the Department’s Laboratory complex and the availability of by-products for sale to non-federal customers. The SPP program satisfies the needs of our non-federal customers. For this reason, performance evaluation for this work is the responsibility of our customers. The success of this program is indicated by the steady influx of business from the targeted groups.

Strategic Partnership Projects Funding (\$K)

	FY 2016 Enacted	FY 2018 Request
Chicago Operations Office	200	200
Idaho Operations Office	1,000	1,000
Lawrence Berkeley Laboratory	4,634	3,500
National Energy Technology Laboratory	150	150
National Renewable Energy Laboratory	510	500
NNSA Albuquerque Complex	6,630	8,500
Oak Ridge National Laboratory	8,968	9,025
Pacific Northwest Laboratory	10,000	10,325
Richland Operations Office	100	100
Savannah River Ops Office	6,700	6,700
Washington, DC (Reserve)	1,108	0
Total, Strategic Partnership Projects	40,000	40,000

**Revenues Associated with Strategic Partnership Projects
Funding (\$K)**

<u>Description of FY 2017 Activities</u>	FY 2016 Enacted	FY 2018 Request
Chicago Operations Office	200	200
<ul style="list-style-type: none"> • Work with universities and state and local governments. 		
Idaho Operations Office	1,000	1,000
<ul style="list-style-type: none"> • Work with state and local governments. 		
Lawrence Berkeley National Laboratory	4,634	3,500
<ul style="list-style-type: none"> • Additional university support for Composite for Basic Science Research; • University of Washington for comprehensive Identification of Worm and Fly Transcription Factors; • Fabricate the components in the ALICE (A Large Ion Collider Experiment)-USA scope and ALICE ITS (Inner Tracking System) upgrade; • Independent Technical Assistance for Management and Treatment of Groundwater and Drinking Water; and • National Laboratory High Energy Physics for Particle Data Group. 		
National Energy Technology Laboratory	150	150
<ul style="list-style-type: none"> • Work with state and local governments. 		
National Renewable Energy Laboratory	510	500
<ul style="list-style-type: none"> • Work with state and local governments. 		
NNSA Complex (formally NNSA Albuquerque Complex)	6,630	8,500
<ul style="list-style-type: none"> • Y-12 National Security Complex support to long-term supply contracts with foreign governments to provide uranium fuel; • Lawrence Livermore National Laboratory support to State of California Ambient Groundwater Monitoring & Assessment (GAMA) program; • Y-12's Global Threat Reduction Initiative support to arrange for the return of enriched uranium from foreign countries; and • State of Washington aerial radiological survey of the City of Seattle performed by the Nevada Field Office Remote Sensing Laboratory. 		

Description of FY 2017 Activities

Oak Ridge Operations Office

- Oak Ridge National Laboratory support to Inter-comparison Studies Program–Bioassay Samples; New York State Department of Transportation - Research and Analytical Support; Beam Dump Research & Development and Conceptual Design; New York State Department of Transportation - Research and Analytical Support; etc.;
- Stanford Linear Accelerator Center (SLAC) support to U.S./Japan Cooperative Program in High Energy Physics;
- Oak Ridge Institute for Science and Education (ORISE) support to Radiation Emergency Assistance Center/Training courses; and
- Thomas Jefferson National Laboratory support for research and development on Superconducting Radio Frequency (SRF) cavity fabrication, processing and instrumented testing at cryogenic temperatures for high performance SRF cavities.

Pacific Northwest National Laboratory

- Maritime Radiological/Nuclear training, logistics management, and technical assistance.

Richland Operations Office

- Training in support of disaster recovery, emergency response, fire protection, transportation, law enforcement, military readiness, technology deployment.

Savannah River Operations

- Savannah River Forest Service Timber Management program;
- Savannah River National Laboratory support to the University of Washington; and
- South Carolina Institute of Archaeology and Anthropology cooperative agreement to comply with archaeological regulatory requirements needed to support the U.S. Forest Service Savannah River timber program.

Washington, DC (in Reserve)

- Reserve funds set aside for use at Headquarters.

Total, Revenues Associated with Strategic Partnership Projects

FY 2016 Enacted	FY 2018 Request
8,968	9,025
10,000	10,325
100	100
6,700	6,700
1,108	0
40,000	40,000

Miscellaneous Revenues

Overview

The Departmental Administration account receives Miscellaneous Revenues from the following:

- Revenues associated with Strategic Partnership Projects (SPP) represents the full-cost recovery offset to the SPP account. SPP is the program associated with providing products and services to our customers.
- Other Revenues received from the sale of by-products that have no cost associated with the Departmental Administration appropriation. These items are by-products of activities funded by other on-going Departmental programs and are collected as Miscellaneous Revenues. Included in this estimate are revenues collected from the Reimbursable Work program for Federal Administrative Charges.

**Miscellaneous Revenues
Funding (\$K)**

	FY 2016 Enacted	FY 2018 Request
Revenues Associated with Strategic Partnership Projects	-40,000	-40,000
Other Revenues	-77,171	-56,000
Federal Administrative Charges	-30,000	-33,435
Y-12 Site Office	-14,000	-4,044
Pittsburgh Naval Reactors Office	-27,700	-14,221
Other Revenues, including Timber Sales	-5,471	-4,300
Total, Miscellaneous Revenues	-117,171	-96,000

Other Revenues
Explanation of Major Changes (\$K)

	FY 2016 Enacted	FY 2018 Request
Federal Administrative Charges – Revenues collected from other federal agencies as well as non-federal entities for reimbursable activity conducted by the Department in accordance with full-cost recovery policy.	-30,000	-33,435
Y-12 Site Office – Revenues generated from shipment of surplus Highly Enriched Uranium and Low Enriched Uranium for use in foreign research and test reactors.	-14,000	-4,044
Pittsburgh Naval Reactors Office - The Department of Navy reimburses the Pittsburgh Naval Reactors Office for the nuclear material burn-up while the core is in operation and when residual nuclear material is removed during refueling and defueling of the core. While nuclear material burn-up is relatively consistent across years, major fluctuations in this line item are attributable to the refueling and defueling schedules, which are based on ship availability and quantity of nuclear material left in the cores.	-27,700	-14,221
Other Revenues, including Timber Sales - Estimate based on current rate of collections for various miscellaneous revenues collected at all Departmental sites, including timber sales at Savannah River Site.	-5,471	-4,300
Total, Other Revenues	-77,171	-56,000

**Office of the Secretary
Program Direction**

Overview

The Office of the Secretary (OSE) provides leadership and policy direction to the Department of Energy (DOE) in its commitment to enhance America's security and economic growth through transformative science and technology innovation. The OSE in keeping with the mission achieves its responsibilities by advancing the energy, environmental, and nuclear security of the United States; promoting scientific and technological innovation; sponsoring basic research in the physical sciences; and ensuring the environmental cleanup of the nation's nuclear weapons complex. The OSE also provides oversight for fulfilling its work through the three broad strategic goals in Science and Energy, Nuclear Security, and Management and Performance. The Department made progress in achieving each of these goals through continued investments in scientific research, technology innovation, nuclear security, and environmental cleanup. In FY 2018, the OSE Budget supports fulfilling its responsibilities through the three broad strategic goals as follows

Science and Energy – DOE leads the nation in the transformational research and development of an extensive range of energy and efficiency technologies. DOE identifies and promotes advances in fundamental and applied sciences; translates cutting-edge inventions into technological innovations; and accelerates transformational technological advances in energy areas that industry by itself is not likely to undertake because of technical or financial risk. DOE also leads national efforts to develop technologies to modernize the electricity grid, enhance the security and resilience of energy infrastructure, and expedite recovery from energy supply disruptions. DOE conducts robust, integrated policy analysis and engagement to support the nation's energy agenda. DOE is the largest federal sponsor of basic research in the physical sciences. DOE world-leading research in the physical, chemical, biological, environmental, and computational sciences contributes fundamental scientific discoveries and technological solutions that support the nation's primacy in science and innovation.

Nuclear Security – DOE enhances the security and safety of the nation through its national security endeavors: maintaining a safe, secure, and effective nuclear weapons stockpile in the absence of nuclear testing and managing the research, development, and production activities and associated infrastructure needed to meet national security requirements; accelerating and expanding efforts to reduce the global threat posed by nuclear weapons, nuclear proliferation and unsecured or excess nuclear materials; and providing safe and effective nuclear propulsion for the U.S. Navy. As a result of the expertise developed to support these nuclear security missions, the DOE laboratories also serve as strategic assets in support of broader national security missions.

Management and Performance – DOE leads the largest cleanup effort in the world to remediate the environmental legacy of over six decades of nuclear weapons research, development, and production. As DOE carries out its mission, it employs effective and cost-efficient management, and remains committed to maintaining a safe and secure work environment for all personnel and to ensuring that its operations preserve the health, safety, and security of the surrounding communities.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Washington Headquarters				
Salaries and Benefits	4,473	-	4,765	+292
Travel	529	-	529	0
Support Services	0	-	0	0
Other Related Expenses	6	-	6	0
Total, Program Direction	5,008	4,998	5,300	+292
Federal FTEs	32	32	32	32
Other Related Expenses				
Training	6	-	6	0
Total, Other Related Expenses	6	-	6	0

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above, below that level, a dash (-) is shown.

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Program Direction \$5,008,000	\$5,300,000	+\$292,000
Salaries and Benefits \$4,473,000	\$4,765,000	+\$292,000
Funding supports 32 FTEs in the Office of the Secretary, Deputy Secretary, Under Secretary for Management and Performance, and Under Secretary for Science and Energy.	Funding to support 32 FTEs.	The increase will support payroll costs for 32 FTEs.
Travel \$529,000	\$529,000	\$0
Funding for the Office of the Secretary, Deputy Secretary, Under Secretary for Management and Performance, Under Secretary for Science and Energy, and Special Assistants to travel both internationally and domestically in support of the Department's mission.	Continuation of activities.	No changes.
Other Related Expenses \$6,000	\$6,000	\$0
Training and course registration cost for OSE employees for essential training activities.	Continuation of activities.	No changes.

Chief Financial Officer Program Direction

Overview

The Office of the Chief Financial Officer (CFO) is responsible for the effective management and financial integrity of Department of Energy (DOE) programs, activities and resources by developing, implementing, and monitoring DOE-wide policies and systems in budget formulation and execution, finance and accounting, internal controls and financial policy, corporate financial systems, and strategic planning.

Highlights of the FY 2018 Budget

The FY 2018 request is \$48,484,000, an increase of \$1,460,000 above the FY 2016 Enacted level as a result of the transfer of \$1,484,000 and 12 FTE from the Office of Science for the consolidation of Oak Ridge financial payment operations into CFO. In FY 2017, CFO consolidated DOE financial payment functions and financial systems that support those functions previously managed by the Office of Science in the Oak Ridge Payment Services Branch, the Financial Systems and Reporting Branch, and a small element in the Financial Pricing and Review Team into the CFO Accounting Operations Division of the Office of Finance and Accounting and to the Enterprise Business Application Division of the Office of Corporate Information Systems.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Washington Headquarters				
Salaries and Benefits	29,420	-	31,847	+2,427
Travel	200	-	200	0
Support Services	9,030	-	6,515	-2,515
Other Related Expenses	8,374	-	9,922	+1,548
Total, Program Direction	47,024	46,935	48,484	+1,460
Total FTEs	212	212	224	+12
Support Services				
Management Support				
Corporate Business Systems	5,450	-	3,176	-2,274
System Support/Other Support Services	3,580	-	3,339	-241
Total, Support Services	9,030	-	6,515	-2,515
Other Related Expenses				
IT Services	1,600	-	1,950	+350
Training	140	-	140	0
Rent/Utilities/etc. Oak Ridge Financial Payment Center	0	-	137	+137
Interagency Agreements	600	-	600	0
Working Capital Fund	6,034	-	7,095	+1,061
Total, Other Related Expenses	8,374	-	9,922	+1,548

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Salaries and Benefits \$29,420,000	\$31,847,000	+\$2,427,000
Funds 212 full-time equivalent employees (FTE).	Funds 224 FTE. Includes the transfer of 12 FTE from the Office of Science to CFO for the consolidation of Oak Ridge financial payment operations into CFO.	Increase (+\$1,080,000) covers employee pay increases; and (+\$1,347,000) for the transfer of 12 FTE from the Office of Science
Travel \$200,000	\$200,000	\$0
Supports travel requirements for 212 FTEs.	Continuation of FY 2016 activities.	No change from FY 2016.
Support Services \$9,030,000	\$6,515,000	-\$2,515,000
The FY 2016 Corporate Business Systems (CBS) budget funds the continued operation of the DOE financial, procurement, and human capital systems, including the Data Warehouse, which supports over 2,000 users and maintains structured data from multiple data sources; the integration of funds distribution; and operation and maintenance of the Foreign Travel Management System.	The FY 2018 CBS budget funds the operation and maintenance of the DOE financial, procurement, and human capital systems, including the Data Warehouse and Foreign Travel Management System. Funding is also provided for system support and other support services.	Decrease (-\$2,515,000) reflects completion of integration of funds distribution.
Other Related Expenses \$8,374,000	\$9,922,000	+\$1,548,000
Funding supports Working Capital Fund (WCF), interagency agreements, employee training, data licenses, and information technology (IT) desktop support requirements.	Funding supports WCF, interagency agreements, employee training, and IT desktop support requirements. Funding also supports rent/utilities for the 12 FTE located at Oak Ridge	Increase (+\$1,061,000) for corporate activities funded in the WCF; (+\$137,000) to support overhead costs for 12 FTE at Oak Ridge; and (\$350,000) increased costs for corporate information technology desktop support.

Management Program Direction

Overview

The Office of Management (MA) provides the Department of Energy (DOE) with centralized direction and oversight for the full range of management, procurement, administrative services, and tracking conference attendance. These services are critical in supporting the mission of the Department and its program offices, as well as keeping the Headquarters (HQ) operational. MA's activities include policy development and oversight, and delivery of procurement services to DOE Headquarters (HQ) organizations, and the management of HQ facilities. MA also fulfills the statutory responsibilities of the Chief Acquisition Officer, Senior Real Property Officer, Senior Procurement Executive, Federal Historic Preservation Officer, and the Department's Advisory Committee Management Officer.

In FY 2018, MA will accomplish its mission through its program office components and associated Departmental budget lines:

- Acquisition Management – Provide corporate oversight, leadership, and develop and assist in the implementation of DOE-wide policies, procedures, programs, and management systems pertaining to procurement and financial assistance, contract management, professional development, and related activities to provide procurement services to Headquarters elements. The Director serves as the Senior Procurement Executive.
- Administration – Manage HQ facilities and support services, including operations management, building automation, lease and office space management, supply management, transportation/courier services, concession services, exchange visitor program, mail/printing service, and Freedom of Information Act (FOIA) compliance.
- Asset Management – Develop and maintain DOE policies, regulations, standards, and procedures while tracking performance pertaining to real estate, facilities and infrastructure management, and personal property to include motor vehicle fleet management. Assist senior leadership with planning and execution decisions related to the acquisition, utilization, condition, maintenance, and disposition as they relate to real and personal property. Manage the Department's real property database and excess screening process. Manage the professional development, training, and certification of our personal property and realty specialists. The Director serves as the Senior Real Property Officer, as designated by the Secretary and also as the Head of the Contracting Activity for Real Estate.
- Aviation Management – Manage all DOE-owned aircraft and contract aviation services world-wide by developing and implementing policies and procedures; provide technical and management assistance to program leaders and field elements with aviation responsibilities; and conduct independent oversight over all DOE elements that own or use aviation as a part of their mission.
- Directives Program – Manage the Department's Directive System, the primary system for establishing, promulgating, and maintaining long-term, crosscutting, departmental policies and procedures. Support the Department's Secretarial Delegations of Authority system.
- Executive Secretariat – Facilitate quality document management of executive correspondence, departmental actions and decisions; ensure timely delivery of Congressional reporting requirements, executive commitments and information; serve as the Department's Federal Historic Preservation Officer Advisory Committee Management Officer and manage the Department's Advisory Committee Management Program.
- Ombudsman – Provides an independent, confidential and informal option for DOE federal employees to address any workplace issue; Helps the Department's senior leaders, managers, and supervisors minimize unwarranted distractions; increase employee engagement; and expeditiously address individual and organization matters.
- Secretary of Energy Advisory Board (SEAB) – Administer and coordinate the activities of the Board and its subcommittees for the Secretary to obtain timely, balanced, and independent external advice on issues of national importance related to the missions of the Department.
- Scheduling and Advance – Manage scheduling, logistical, and advance preparations for the Office of the Secretary.
- Sustainability and Performance Office (SPO) – Ensure DOE-wide implementation of statutory and executive requirements related to operational efficiency and sustainability; coordinate data collection, reporting, and analysis of DOE's data, including energy, water, petroleum, and resource use; manage and implement DOE's Strategic Sustainability Performance Plan; and provide oversight of energy, water, and resource assessments at DOE sites and National Laboratories.

Highlights of the FY 2018 Budget Request

The Department requests \$53,758,000 in FY 2018 for MA, which is \$11,242,000 below the FY 2016 Enacted level of \$65,000,000. The net change includes:

- The transfer of 34 FTEs and the associated payroll and operating expense totaling \$15,192,000 from MA to the Project Management Oversight and Assessment Office (PM), which is requested as a separate account within the Departmental Administration appropriation in FY 2018. The \$15,192,000 to PM includes \$3,000,000 transferred to MA for the project management function from the Office of Environmental Management (EM).
- A \$950,000 transfer from the Office of Energy Efficiency and Renewable Energy (EERE) to MA to cover the cost of four FTEs and function for the Sustainability and Performance Office (SPO) program implementation.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Salaries and Benefits	36,140	-	31,861	-4,279
Travel	940	-	867	-73
Support Services	13,436	-	5,971	-7,465
Other Related Expenses	14,484	-	15,059	+575
Total, Program Direction	65,000	64,876	53,758	-11,242
Federal FTEs—MA	226	226	206	-20
Federal FTEs—WCF	40	40	40	0
Support Services				
Management Support	10,797	-	3,489	-7,308
Other Support Services	2,639	-	2,482	-157
Total, Support Services	13,436	0	5,971	-7,465
Other Related Expenses				
Training	143	-	151	+8
Energy IT Services (EITS)	1,207	-	1,152	-55
Working Capital Fund (WCF)	11,650	-	12,272	+622
Other Services	1,484	-	1,484	0
Total, Other Related Expenses	14,484	0	15,059	+575

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown.

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Program Direction \$65,000,000	\$53,758,000	-\$11,242,000
Salaries and Benefits \$36,140,000	\$31,861,000	-\$4,279,000
Funding in support of 226 FTEs. Funding provides for salaries/benefits, overtime, lump sum leave, and performance awards.	Funding in support of 206 FTEs (Includes 4 FTEs for the SPO functional transfer).	Net change of -20 FTEs and associated funding of (-\$4,279,000) as follows: Transfer of +10 FTEs from EM to MA (+\$1,920,000); -34 FTEs Transferred from MA to PM for functional realignment (-\$6,168,000). Additional funding to support +4 FTEs for the SPO functional transfer (+\$650,000). Realignment to WCF (-\$862,000) and cost of living and pay adjustments (+181,000).
Travel \$940,000	\$867,000	-\$73,000
Funding in support of MA/SEAB staff travel; all travel associated with scheduling and logistics for Secretarial trips, meetings of the Laboratory Operations Board (LOB); travel associated with program oversight and evaluation, procurement, construction management activities. Includes the rental of vehicles from the General Services Administration motor pool and the DOE fleet.	Continuation of MA activities and support for SPO.	Net change reflects the following: Additional funding to support travel for SPO (+15,000). Decrease for the functional transfer to PM to cover travel (-\$485,000); and transfer of (+\$397,000) from EM to MA.
Support Services \$13,436,000	\$5,971,000	-\$7,465,000
Funding in support of contractual requirements for PM functions to include External Independent Reviews (EIRs), Earned Value Management System (EVMS), Project Assessment and Reporting System (PARS II), Cost Estimating and Cost Analysis. MA associated functions are Cross Agency Priority Goals, FOIA, LOB, Acquisition Career Management Program (ACMP), Internal Evaluation and other support services.	Continuation of MA activities including contractual requirements, Internal Evaluation, ACMP, Cross Agency Priority Goals and LOB. Funding also supports SPO contractual requirements.	Net change reflects a transfer of funding to PM for support services (-\$8,889,000); includes EM's transfer of (+\$1,352,000) to MA. Increase for SPO functional transfer (+\$72,000).

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Other Related Expenses \$14,484,000	\$15,059,000	+\$575,000
Other related expenses to cover EITS, WCF, training and other services necessary for organizational mission support.	Continuation of MA activities and support for SPO.	<p>Net change reflects a transfer of funding to PM to cover EITS, WCF expenses, and training (-\$2,300,000); includes EM's transfer of (+1,800,000) to MA.</p> <p>Additional funding to support EITS, WCF expenses and training for SPO (+213,000).</p> <p>Increased WCF Funding to support operational estimates (+\$862,000).</p> <p>Increased funding for SPO implementation (+\$950,000)</p>

**Office of Management
Departmental Administration
Performance Measures**

In accordance with the GPRA Modernization Act of 2010, the Department sets targets for, and tracks progress toward, achieving performance goals for each program.

	FY 2016	FY 2017	FY 2018
Performance Goal (Measure)	Expanded use of strategic sourcing - Execute expanded use of Federal Strategic Sourcing Initiative to DOE Federal Procurement Operations while continuing to focus on Contractor Supply Chain Council activities to achieve 4% in cost savings against actionable spend by end of fiscal year. Institute a corporate approach (including the laboratories) for strategic sourcing to achieve at least a 4% cost savings target against actionable spend on products and services.		
Target	\$269.5M Cost Savings	\$292.4M Cost Savings	\$252M Cost Savings
Result	Met - \$441.4M	TBD	TBD
Endpoint Target	Achieve 4% cost savings target against actionable spend on products and services.		
Performance Goal (Measure)	Maintain certified acquisition professionals - Maintain levels of certified acquisition professionals		
Target	85 %	85 %	85 %
Result	Met – 99%	TBD	TBD
Endpoint Target	Achieve certification levels of at least 90% for acquisition professionals.		
Performance Goal (Measure)	Reduce FOIA backlog - Reduce Freedom of Information Act (FOIA) backlog		
Target	10 %	10 %	3 %
Result	Met - 17.86%	TBD	TBD
Endpoint Target	Continually reduce the FOIA backlog cases by 3% over the prior year backlog.		
Performance Goal (Measure)	Reduce travel expenses - Reduce non-mission essential travel expenses		
Target	30 %	N/A	N/A
Result	Met – 30%	N/A	N/A
Endpoint Target	Reduce non-mission essential travel expenses by 30% using FY 2010 baseline for non-mission essential travel of \$41.5M.		
Performance Goal (Measure)	Un-assessed DOE Buildings - Decrease percentage of un-assessed DOE Buildings, OSFs and Trailers (excluding FERC, LM, NR and PMAs).		
Target	N/A	5 % reduction of un-assessed buildings	5 % reduction of un-assessed buildings
Result	N/A	TBD	TBD
Endpoint Target	Decrease of 5% below the prior year's baseline each year.		

Chief Human Capital Officer Program Direction

Overview

The mission of the Office of the Chief Human Capital Officer (HC) is to provide the most efficient and effective human resources (HR) services and human capital programs to the Department of Energy (DOE). The vision of HC is to help DOE accomplish its mission through collaborative and responsive partnerships; proactive problem identification and resolution; and innovative and sound human capital management services. HC advises and assists the Secretary and Deputy Secretary of Energy (and other agency officials) in recruiting, staffing, developing, training, and managing a highly skilled, productive, and diverse workforce, in accordance with merit system principles and all applicable statutory requirements.

Highlights of the FY 2018 Budget Request

The Department requests \$25,500,000 in FY 2018 for HC. This Request sustains current operational levels, while improving customer service, reducing administrative overhead, and building operational capacity to carry out personnel actions and strategic workforce planning related to proposed Departmental programmatic changes in the FY18 budget.

Since November 2013, HC has been implementing a more efficient and effective HR Service Delivery (HRSD) model across the Department through consolidation of 17 separate HR Offices (HRO) serving more than 14,000 employees across the country to create a HR Hybrid Model consisting of five HR Shared Service Centers (SSCs): 1. Management & Performance (M&P); 2. Science & Energy (S&E); 3. Bonneville Power Administration (BPA); 4. Other Power Marketing Administrations; and 5. National Nuclear Security Administration (NNSA) (not yet operational). In addition to establishing the organizational structure and infrastructure for these SSCs, the HR Service Delivery Initiative undertook significant efforts to improve the people, processes, and technology of the HR line of business to ensure the success of the new structure (i.e. single set of HC Standard Operating Procedures and Processes followed by all SSCs under the oversight management of HC).

The HRSD Initiative was completed on time and under budget, costing DOE \$10M to implement. The initiative has resulted in:

- Reduced Costs – DOE's HR cost per employee decreased 26%
- Increased Efficiency – DOE's HR servicing ratio increased 33%
- Improved Effectiveness – While workload increased by 71%, DOE HR audits no longer have significant negative findings. HR also strategically partners with mission programs and is receiving more positive customer feedback.

The FY 2018 Budget anticipates significant changes to several DOE programs and the composition of their federal staff. With the completion and stand-up of five SSCs, HC is strategically positioned to provide DOE oversight on all Human Capital matters and adjust to changes in operational capacity to assist programs through this transition using a blend of shared services for operational/ transactional HR services and on-site strategic HR business partners to more effectively and efficiently support DOE's diverse and changing missions. Through ongoing strategic workforce planning, reshaping analysis, and in accordance with merit system principles and all applicable statutory requirements, HC is working with programs to minimize the impacts of streamlining and budget changes on the workforce using sound workforce planning and flexible management practices. In the event workforce reshaping results in a Reduction in Force, HC is developing and/or updating operating plans and procedures used to address involuntary separations, demotions, and/or relocations placement of surplus employees. Additionally, HC is prepared to provide Benefits Resources for Employees, Worklife Resources (Employee Assistance Programs), as well as Career Transition services.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR*	FY 2018 Request	FY 2018 vs FY 2016
Washington Headquarters				
Salaries and Benefits	19,034	-	20,074	+1,040
Travel	130	-	135	+5
Support Services	350	-	300	-50
Other Related Expenses	4,986	-	4,991	+5
Total, Program Direction	24,500	24,453	25,500	+1,000
Federal FTEs	146	146	146	0
Support Services				
Management Support				
Training and Education	100	-	100	0
Management Support, Other	250	-	200	-50
Total, Support Services	350	-	300	-50
Other Related Expenses				
Other Services	1,214	-	1,026	-188
Working Capital Fund	3,772	-	3,965	+193
Total, Other Related Expenses	4,986	-	4,991	+5

*FY 2017 amounts shown reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the “congressional control” level and above, below that level, a dash (-) is shown.

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Program Direction \$24,500,000	\$25,500,000	+\$1,000,000
Salaries and Benefits \$19,034,000	\$20,074,000	+\$1,040,000
Provides for 146 full time equivalents (FTEs). In addition to salaries and benefits, funding is also provided for workers' compensation payments on behalf of all employees funded through the HQ Departmental Administration appropriation. FTEs support core HC mission functions of: policy, oversight and automation; learning and development; HR operations and services (including executive resources, staffing/classification, benefits and labor management relations); strategic alignment and measurement of human capital management; and internal business management.	Provides for 146 FTEs which support core HC mission functions as well as workers' compensation payments.	Inflationary increase in salaries and benefits.
Travel \$130,000	\$135,000	+\$5,000
HC staff travel includes program oversight, program evaluation, recruitment, and permanent change of station moves. Primary travel need is associated with OPM-mandated HC/HR accountability audits; these audits are critical to maintaining agency-delegated HR authority.	Continuation of required HC staff travel activities in FY 2018. HC will explore options to partner with other internal organizations and web and video conference as feasible.	Reflects travel to the SSC to support DOE's HR line of business and mission priorities.
Support Services \$350,000	\$300,000	-\$50,000
Includes funding for: HC staff training; HC Core Contractors; and other minor items.	Continuation of FY 2016 activities. Provides for Labor Relation Services and services for the Albuquerque office. HC will use no cost training opportunities, as feasible.	Decrease in the number of contractors
Other Related Expenses \$4,986,000	\$4,991,000	+\$5,000
Other Related Expenses provides for Working Capital Fund (WCF) and Energy IT Services. Includes funding for HC-internal office administration needs (e.g., software and hardware, Council fees, small automation system support, and rent for HC's duty station facility in Albuquerque). HC's Albuquerque duty station partners with the Office of Health Safety and Security, to utilize existing space in the local area in an effort to reduce rent and offset WCF and Energy IT Services increases.	Continuation of FY 2016 activities.	Adjustments to projected overhead cost.

**Human Capital Management
Departmental Administration
Performance Measures**

In accordance with the GPRA Modernization Act of 2010, the Department sets targets for, and tracks progress toward, achieving performance goals for each program.

	FY 2016	FY 2017	FY 2018
Performance Goal (Measure)	Annual reductions in the average time-to-hire - Annual reductions in the average time-to-hire (both agency-wide and for each HR office) from 174 days in FY09 to 100 days or less by end of FY 2011, and further to 80 days by end of FY 2012.		
Target	≤ 80 calendar days	≤ 80 calendar days	≤ 80 Calendar Days
Result	Not Met - 106.5	TBD	TBD
Endpoint Target	Each HR Office will have an average time-to-hire of 80 days or less.		
Performance Goal (Measure)	Implement a framework for performance-based culture - Percent of SES with compliant plans.		
Target	≥ 90 %	≥ 90 %	≥ 90 %
Result	Met - 92.1	TBD	TBD
Endpoint Target	Improve and continue to refine DOE performance management systems/processes so they clearly link work to mission goals, expected outcomes and accomplishment measures. Ensure meaningful distinctions between levels of performance are identified and rewarded.		

Office of the Chief Information Officer

Overview

The CIO leads information technology (IT) and cybersecurity coordination across the extended DOE enterprise. The CIO follows the National Institute of Standards and Technology's (NIST) Cyber Security Framework Core – identify, protect, detect, respond, and recover – to develop and manage the Department's cybersecurity operations and risk management processes.

Highlights of the FY 2018 Budget Request

For FY 2018, CIO requests \$91,443,000, an increase of \$18,225,000, to modernize the DOE IT network infrastructure and make significant improvements in DOE's cybersecurity position. The current design and architecture of the DOE Federal IT infrastructure has become increasingly outdated, unsupported, and unreliable, causing significant cybersecurity and operational risks. Modernizing the DOE network to a level consistent with the needed capacity, agility, and resiliency of modern enterprise networks will enable DOE to move to commercially managed IT services, including cloud solutions, with inherent cybersecurity capabilities, such as virtual datacenter services and enterprise software as a service solutions. The proposed network modernization will improve cybersecurity, scale capacity commensurate with demand, and establish the foundation for future IT enterprise capabilities. The \$18.2M increase funds:

- \$7.6M for network security modernization to fund multiple projects, including a \$5M upgrade to the fiber cable plant to improve resiliency and increase capacity and redundant connections to mitigate intermittent outages and improve cybersecurity
- \$5.8M for IT infrastructure, including network upgrade (\$3.3M) to replace end-of-life core switches and wiring and data center migration (\$2.0M) to initiate transition of DOE corporate data centers to commercial data centers, and
- \$4.8M to cover increases in Salaries and Benefits, support services costs, and EITS services as a customer (\$1.3M), as well as, cover the increase of the Working Capital Fund payment (\$3.3M)

**Chief Information Officer
Funding (\$K)**

	FY 2016 Comparable Enacted^a	FY 2017 Annualized CR^b	FY 2018 Request	FY 2018 vs FY 2016
Chief Information Officer				
Cybersecurity				
Protecting Networks and Information (Protect)	3,180	-	24,443	+21,263
Detect, Analyze, and Mitigate Intrusions (Detect and Respond)	5,816	-	3,700	-2,116
Shaping the Cybersecurity Environment (Identify and Recover)	17,528	-	6,000	-11,528
Total, Cybersecurity	26,524	20,966	34,143	+7,619
Corporate IT Program Support				
IT Portfolio Summary	8,252	-	11,985	+3,733
IT Infrastructure	0	-	2,000	+2,000
End User- EITS	5,224	-	5,230	+6
Policy and Performance Management	1,230	-	1,280	+50
Total, Corporate IT Program Support	14,706	20,186	20,495	+5,789
Program Direction				
Salaries and Benefits	19,663	-	20,092	+429
Travel	208	-	230	+22
Support Services	3,424	-	3,500	+76
Other Related Expenses	8,693	-	12,983	+4,290
Total, Program Direction	31,988	31,927	36,805	+4,817
Total, Chief Information Officer	73,218	73,079	91,443	+18,225
Federal FTEs	113	113	113	0

^a Comparable Enacted column reflects the distribution of the FY 2016 budget had it been enacted in the structure presented for FY 2018. The FY 2016 Enacted amount for Cybersecurity and Secure Communications was \$21,006K and the amount for Corporate IT Program Support was \$20,224K.

^b The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (–) is shown.

Explanation of Major Changes (\$K)

FY 2018 vs Proposed FY 2016 Comparable

<p>Cybersecurity: The Cybersecurity budget follows the NIST Cybersecurity Framework for Critical Infrastructure. Increased funds will be used to modernize network infrastructure to enhance cybersecurity and achieve program efficiencies.</p>	<p>+7,619</p>
<p>Corporate IT Program Support: The Corporate IT Program Support budget is now structured functionally, rather than organizationally. The increase in funds will be used to modernize the core network infrastructure, including expansion for future capacity and bandwidth (\$3,300) and migration of the EITS data centers to commercial facilities/cloud services (\$2,000)</p>	<p>+5,789</p>
<p>Program Direction: Increase funds Salaries and Benefits to maintain 113 FTEs, support services, Working Capital Fund requirements, and OCIO EITS Desktop services as a customer.</p>	<p>+4,817</p>
<hr/>	
<p>Total, Chief Information Officer</p>	<p>+18,225</p>

**Chief Information Officer
All Funding View (\$K)**

	FY 2018			
	Request	WCF	Customer	Total
CYBERSECURITY				
Protecting Networks and Information (Protect)	24,443	9,072	4,376	37,891
Detect, Analyze, and Mitigate Intrusions (Detect and Respond)	3,700	26,662 ^a	3,803	34,165
Shaping the Cybersecurity Environment (Identify and Recover)	6,000	2,099	2,799	10,898
TOTAL, CYBERSECURITY	34,143	37,833	10,978	82,954
CORPORATE IT PROGRAM SUPPORT				
IT Portfolio Summary	11,985	4,000	0	15,985
IT Infrastructure	2,000	0	0	2,000
End User – EITS	5,230	33,059	57,162	95,451
Policy and Performance Management	1,280	5,807	0	7,087
TOTAL, CORPORATE IT PROGRAM SUPPORT	20,495	42,866	57,162	120,523
PROGRAM DIRECTION				
Federal Salaries & Benefits	20,092			20,092
Travel	230			230
Support Services	3,500			3,500
Other Related Expenses	12,983			12,983
TOTAL, PROGRAM DIRECTION	36,805	0	0	36,805
OCIO payments into Shared Services and WCF ^b		(3,740)	(6,034)	(9,774)
Total, Chief Information Officer	91,443	76,959	62,106	230,508
Federal FTEs	113	8	0	

^a Includes funding from both the CyberOne business line (\$23,662 for the JC3) and the Inter-agency transfer business line (\$3,000 for Office of Personnel Management credit monitoring.

^b As a customer, OCIO provides funds to Shared Services and WCF. In order to not double count those payments in the totals available, a bottom line adjustment was made.

Chief Information Officer Cybersecurity

Overview

The CIO Cybersecurity Program provides IT and cybersecurity policy at the enterprise level that is tailored at the organizational level based on mission risk tolerances. The CIO protects DOE networks and information; detects, analyzes, and mitigates intrusions; provides continuous monitoring of the network and infrastructure; and manages the DOE cybersecurity environment.

Highlights of the FY 2018 Budget Request

- Implement network security modernization
- Collaborate with the Department of Homeland Security to improve security protection for information and information systems/continuous diagnostic management (Continuous Diagnostics and Mitigation).
- Introduce new cybersecurity products and services to protect the DOE IT infrastructure.

Budget Line: Protecting Networks and Information - Protect (\$24,443,000 – Request; \$9,072,000 – WCF; \$4,376,000 - Customer) (TOTAL = \$37,891,000)

Provide programs to protect DOE networks and the information that resides on them.

Activity: Reporting - Data Collection, Analysis, and Metrics (\$500,000)

Analyze data to identify successful strategies, systemic weaknesses, anomalies, and root causes to ensure effective enterprise risk management and cybersecurity programs.

Activity: Cyber Supply Chain Management (\$700,000)

Establish policy to ensure enterprise Supply Chain Risk Management Program (SCRM) protects critical missions through comprehensive management of supply chain risk.

Activity: Network Security Modernization (\$23,243,000)

Modernize DOE's Network Security through a secure, robust, and capable network, built on interoperable standards and architecture principles. Projects that make up the initiative include:

Sub-Activity: Cloud Service Provider Secure Interconnectivity (\$1,062,000)

Establish secure connectivity to cloud service provider (CSP) networks to leverage infrastructure as a service offerings to improve data security and performance reliability.

Sub-Activity: DOE Enterprise Wide Area Network (WAN) Circuit Optimization (\$2,799,000)

Evaluate existing network connections to prepare for transition from on-premises services to cloud-based Infrastructure as a Service (IaaS) to improve network availability.

Sub-Activity: DOE HQ National Capital Region Network Upgrade (\$5,009,000)

Upgrade the Fiber Cable Plant (\$4,596,000) and the network (SONET Ring) (\$413,000) that provide data and voice communications to DOE Headquarters. Connectivity is not fully redundant and has experienced intermittent service disruptions. Upgrading the physical fiber cable plant with redundant connections will mitigate the risk of outages, provide needed resiliency, and increase the capacity to support up to 100G network throughput speeds required to support usage demands imposed by current and planned technologies.

Sub-Activity: Continuity of Operations/Disaster Recovery Planning (\$1,746,000)

Additional FY 2018 funding supports integration of the unclassified Security Operations Center (SOC) and Incident Response capabilities in DOE's Continuity of Operations and Disaster Recovery planning to ensure Unified Coordination Structure (UCS) response to any cybersecurity event. The FY 2018 funding request also supports expanding the DOE Alert, Warning, Accountability, and Response (DOE-AWARe) system from its current DC-area HQ across the DOE enterprise.

DOE-AWAre utilizes the cloud-based service from AtHoc, and supports notification and accountability for emergency and continuity events.

Sub-Activity: Unified Communications/ Voice Over Internet Protocol (VoIP) (\$8,349,000)

Replace DOE HQ phone system to provide unified, resilient communications that will meet expanding program requirements through delivery of voice, video, and data through converged data networks enabling future standards-based upgrades and will reduce operating costs.

Sub-Activity: Secure Mobility and Remote Access Enhancements (\$2,773,000)

Modernize secure exchange of information through desktop and mobile clients to ultimately allow transition from DOE mobile device management to cloud-managed services.

Sub-Activity: Trusted Internet Connection (TIC) Managed Service (MTIPS) (\$1,505,000)

Continue TIC/MTIPS project to allow DOE to migrate to commercially-managed TIC services, to reduce and consolidate external access points, enhance security requirements for network and security operations, and increase security monitoring.

Summary of Funding from Working Capital Fund – CyberOne business line (\$9,072,000)*

Cyber Intelligence (\$3,312,000)

The Cyber Federated Model (CFM) is a Joint Cybersecurity Coordination Center (JC3) service that provides machine-to-machine sharing of cyber threat intelligence, speeding up proactive defense, and distributed detection for the National Laboratories and site offices. CFM can deliver signatures and indicators of compromise to automatically update cyber defenses, such as intrusion detection systems, intrusion prevention systems, and firewalls.

ICAM (\$5,760,000)

Continues the enterprise Identity Credential and Access Management (ICAM) program to establish strong authentication services for access management to networks, applications, and facilities.

Customer Cyber funding as part of EITS (\$4,376,000)^a

Funds Antivirus Software, PKI encryption, website filtering, and level 4 multifactor authentication.

Budget Line: Detect, Analyze, and Mitigate Intrusions – Detect and Respond (\$3,700,000 – Request; \$26,662,000 – WCF; \$3,803,000 - Customer) (TOTAL= \$34,165,000)

Continue to enhance and refine DOE's cybersecurity capabilities and approach to allow for detection, analysis, and mitigation of cyber intrusions resulting in a DOE-centric cyber risk management approach that is aligned with the NIST Risk Management Framework and meets the needs of DOE's complex network environment. Evaluate tools and technologies that can enhance the cybersecurity capabilities necessary to defend the Department against potential cyber adversaries. This activity also includes processes to introduce, test, pilot, and operationalize new cybersecurity products or services, such as hardware, software, applications, and equipment, designed to protect the DOE IT infrastructure.

OCIO supports greater information sharing within the Department and with other federal partners. A key part of that effort includes the use of standard tools to improve continuous monitoring and sharing of data. DOE has developed an Information Security Continuous Monitoring (ISCM) Strategy. In support of ISCM, the Department is continuing to collaborate with DHS to implement the CDM Program which is intended to create a common baseline of cybersecurity capability and protection across the Federal Government. The program provides federal departments and agencies with CDM-certified capabilities and tools that identify and prioritize cybersecurity risks on an ongoing basis and enable cybersecurity personnel to mitigate the most significant problems first. The CDM tools provide near real-time awareness of DOE's networks and environments. The CDM tools also allow departments and agencies to better manage their IT assets, helping to reduce their overall attack surface. More information on the CDM program can be found at <https://www.dhs.gov/cdm>.

^a WCF and customer fund dollars included OCIO contributions

Summary of Funding from Working Capital Fund – CyberOne business line (\$23,662,000)^b

Joint Cybersecurity Coordination Center (JC3)

The iJC3 provides cybersecurity threat analysis; conducts attack trending and tracking of advanced persistent threats; and distributes threat information and indicators of compromise to DOE entities in an automated manner. Integrates DOE Incident Management capabilities and coordinates all enterprise activities including prevention, detection, containment, and recovery on both unclassified and classified networks through internal partnerships with the National Nuclear Security Administration (NNSA) and Counterintelligence and Intelligence (IN). The JC3 also coordinates communications for cybersecurity events and cyber emergency response with United States Computer Emergency Response Team (US-CERT) and other agency partners.

Summary of Funding from Working Capital Fund – Interagency business line (\$3,000,000)^c

Credit Monitoring

To provide funding for credit monitoring services for all DOE employees following the OPM PII data breach.

Customer funding provided as part of EITS (\$3,803,000)^d

Funds continuous monitoring, cybersecurity assurance and accreditation, and information systems security officer support for EITS customers.

Budget Line: Shaping the Cybersecurity Environment – Identify and Recover (\$6,000,000 – Request; \$2,099,000 – WCF; \$2,799,000 – Customer) (TOTAL = \$10,898,000)

The CIO is responsible for enterprise strategic cybersecurity policy, including, establishing policies, managing investments in initiatives to support strategic direction, and establishing programs to promote outreach and effective risk implementation.

Activity: Planning, Policy, and Management (\$2,000,000)

Organize and clarify risk management goals and provide a consistent approach through which to make risk-based cybersecurity decisions. By providing foundational guidance, strategies, and implementation plans, such as an enterprise Risk Management Approach and Methodology, and working closely with programs and sites, OCIO develops, documents, and deploys fundamental approach(s) to cybersecurity and risk management for use within the DOE enterprise. The Department leverages strategic planning to identify critical cybersecurity gaps, establishing priorities, and determine appropriate actions are necessary to improve the Department's Cyber posture. This a continuous process across the enterprise and includes execution in discreet operational initiatives.

Activity: Requirements Analysis and Integration (\$4,000,000)

Provide the Project Management processes, risks, issues, and decision requests regularly for management escalation and reporting. Collect and build the enterprise architecture view and the list of Technical and Cybersecurity Requirements that inform implementation. Later in the project lifecycle, maintain status on cybersecurity certifications and controls implemented, hosting agreements, contract consolidations, and implementation approaches. Continue design of the Shared Services architecture and process workflows for requested IT services across the enterprise. Enterprise implementations of like products with separate installations will start to see the cost savings and value of moving to shared Department solutions. IT investments will enable DOE to better achieve Federal Information Technology Acquisition Reform Act (FITARA) objectives of increased IT transparency and reduced redundancy of investments.

^b WCF and customer fund dollars include OCIO contributions

^c WCF and customer fund dollars include OCIO contributions

^d WCF and customer fund dollars include OCIO contributions

Summary of Funding from Working Capital Fund – CyberOne business line (\$2,099,000)^e

Coordinated Cyber Response (CCR) develops cyber incident responder specialized skills needed to defend against and mitigate cyber threats through extensive training and provides advanced teams of incident responders to respond to escalated cyber incidents.

Cyber for EITS (Assessment and Authorization (A&A)) (\$2,799,000)^f

Provides A&A in cybersecurity control implementation, management and monitoring of the Energy Information Technology Services (EITS) Enclaves and Subsystems to ensure compliance with Federal Information Security Management Act (FISMA) and National Institute of Standards and Technology (NIST) requirements.

^e WCF and customer fund dollars include OCIO contributions

^f WCF and customer fund dollars include OCIO contributions

Cybersecurity

Activities and Explanation of Changes

FY 2016 Enacted	FY2016 Comparable Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Cybersecurity \$21,006,000	\$26,524,000	\$34,143,000	+\$7,619,000
Program, Policy, and Reporting			
Program, Policy, and Reporting (\$8,402,000)	Program, Policy, and Reporting (\$0)	Program, Policy, and Reporting (\$0) • Closeout of Program Funding Line	Program, Policy, and Reporting (\$0) • Activities under Programs and Reporting in FY 2016 have moved under various functional categories in FY 2018.
Strategic Planning and Initiatives/ Enterprise Services			
Strategic Planning and Initiatives/ Enterprise Services (\$12,604,000)	Strategic Planning and Initiatives/ Enterprise Services (\$0)	Strategic Planning and Initiatives/ Enterprise Services (\$0) • Closeout of Program Funding Line	Strategic Planning and Initiatives/Enterprise Services (\$0) • Activities under Programs and Reporting in FY 2016 have moved under various functional categories in FY 2018.
Protecting Networks and Information (Protect)			
Protecting Networks and Information (\$0)	Protecting Networks and Information (\$3,180,000) • Cyber Supply Chain • Reporting (Data Collection, Analysis, and Metrics). Includes performing validation and verification of reported Plan of Action and Milestones (POA&M) data collected from Departmental elements and score-carding of Cross-Agency Priority (CAP) status and progress.	Protecting Networks and Information (\$24,443,000) • Includes efforts from FY 2016 as well as new funding for network security modernization detailed in the body of the document.	Protecting Networks and Information (+\$21,263,000) • Increase supports network security modernization which will enable DOE transition to managed cloud services and increase availability of efficient, scalable services.

FY 2016 Enacted	FY2016 Comparable Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Detect, Analyze, and Mitigate Intrusions (Detect and Respond)			
Detect, Analyze, and Mitigate Risk (\$0)	Detect, Analyze, and Mitigate Risk (\$5,816,000) <ul style="list-style-type: none"> • Technical Initiatives (\$4,376,000) These initiatives are designed to introduce, test, and operationalize new cybersecurity products or services, such as hardware, software, applications, and equipment, designed to protect the DOE IT infrastructure. • Expand the Department’s ability support Continuous Monitoring and share information with departmental and federal entities. (\$1,440,000) 	Detect, Analyze, and Mitigate Risk (\$3,700,000) <ul style="list-style-type: none"> • Continued prior year efforts on technical initiatives, and incident response and reporting improvements 	Detect, Analyze, and Mitigate Risk (-\$2,116,000) <ul style="list-style-type: none"> • The funding provided will support the development and implementation of an enterprise continuous monitoring strategy and IT security tools that will support Federal requirements.
Shaping the Cybersecurity Environment (Identify and Recover)			
Shaping the Cybersecurity Environment (\$0)	Shaping the Cybersecurity Environment (\$17,528,000) <ul style="list-style-type: none"> • Continue the OCIO efforts in establishing cybersecurity vision and strategic plans to meeting federal requirements; establish policies and programs in support of the plans; ensure the workforce is trained and aware; and promote outreach and innovation through public- private partnerships. 	Shaping the Cybersecurity Environment (\$6,000,000) <ul style="list-style-type: none"> • Continue Planning, Policy and Management as well as Analysis and Integration Requirements activities. 	Shaping the Cybersecurity Environment (-\$11,528,000) <ul style="list-style-type: none"> • Reductions to the areas of Outreach and Innovation and Strategic Initiatives.

**Chief Information Officer
Corporate IT Program Support**

Overview

OCIO is requesting \$20,495,000 for this decision unit. Corporate IT Program Support provides capital planning guidance, strong privacy and records management, IT products and services, and an efficient and effective IT platform.

Highlights of the FY 2018 Budget Request,

- \$5.8M for IT infrastructure, including network upgrade (\$3.3M) to replace end-of-life core switches and wiring and data center migration (\$2.0M) to initiate transition of DOE corporate data centers to commercial data centers

Budget Line: IT Portfolio Summary (\$11,985,000 – Request; \$4,000,000 – WCF) (TOTAL = \$15,985,000)

Activity: IT Investments for Mission Delivery and Management Support (\$3,245,000)

- Provide CIO governance advice and strategic recommendations and maintain project management reports.
- Identify and research emerging and disruptive technology trends.
- Develop a comprehensive vision of next-generation IT with a focus on cross-cutting initiatives such as geospatial science and open data activities to support CIO in interagency and intergovernmental sharing of geospatial data.
- Lead implementation of IRM Strategic Plan with relevant stakeholders, obtain feedback, and refine strategic documentation as necessary.
- Provide analysis/assessment support and data analysis to aid in leadership decisions.
- Provide partnership engagement and facilitated analysis support to maintain collaborative dialog with Program Office stakeholders.

Activity: IT Investments for IT Infrastructure, Security, and Management (\$4,000,000)

Sub-Activity: Spectrum Management (\$700,000)

The DOE Spectrum Program is mandated under Title 47, U.S. Code of Federal Regulations, 901, et. seq., and manages DOE radio frequency spectrum-dependent resources for the National Nuclear Security Administration, Power Marketing Administrations, Office of Secure Transportation, and National Laboratory spectrum-dependent assets.

Sub-Activity: Network Refresh (\$3,300,000)

Continues the three-year (FY 2016- 2018) modernization of the core network infrastructure, including future expansion of capacity and bandwidth, that includes:

- **Cabling:** Legacy wiring is pervasive throughout DOE and imposes technology and performance limitations. Upgraded wiring is foundational for future modernization activities to support enhanced data delivery, connectivity, and performance.
- **Equipment:** The majority of DOE access, distribution, aggregation, and core switches have critical end-of-life deadlines within the next year and do not support modern protocols, including Unified Communications requirements, and will not meet continued demand.
- **Resiliency:** The existing infrastructure lacks extensive fault-tolerant design and support for converged capabilities, allowing infrastructure investments including security to provide benefits for multi-protocol capabilities.

Activity: IT Investments for Enterprise Architecture, Capital Planning, and CIO Functions (\$4,740,000)

- Manage governance of DOE strategic IT investment portfolio to ensure alignment with DOE missions; oversee Capital Planning and Investment Control programs; conduct portfolio analyses to drive IT investment decision-making.
- Lead IT planning, policy, and performance evaluation and manage strategic and tactical IT policy development, maintenance, and implementation through coordination with internal and external governance groups; ensure DOE compliance with E-Government requirements.

- Provide DOE enterprise oversight, support, and coordination on cybersecurity and information management issues; technical and administrative services for governance organizations to yield effective, efficient, and secure application of information and IT for mission enhancement, operational excellence, and risk management.

Summary of funding from Working Capital Fund – Network Refresh – (\$4,000,000)^a

Network refresh is necessary to address current risks in the areas of security and availability in the core and distribution layers of existing DOE (Headquarters in particular) network infrastructure. By investing in a more modern network infrastructure, the Department will enhance network cybersecurity controls and will further support the collaboration capabilities being requested within the Department.

Budget Line: IT Infrastructure (\$2,000,000)

Activity: Data Center Migration (\$2,000,000)

Initiate data center migration to commercial centers to address power, cooling and floor space issues at 2 DOE-owned data centers to ensure ongoing support for approximately 9,000 Federal employees and support service contractors.

Budget Line: End User- EITS (\$5,230,000 – Request; \$33,059,000 – WCF; \$57,162,000 - Customer) (TOTAL = \$95,451,000)

Activity: EITS Payment (\$5,230,000)

Funds desktop services for the EITS business line.

Summary of Funding from Working Capital Fund – Telecommunications business line (\$33,059,000)^b

Provides connectivity for DOE Headquarters and Field operations through Local and Wide Area Networks and telecommunications (telephone) services. LAN connections provide access to the EITS application host systems and cybersecurity for the internet, electronic mail, and other applications.

Summary of Funding from Customers – Shared Services direct billing (\$57,162,000)^c

End User Services

Includes asset management, Tier 1/Tier 2 phone and deskside support, platinum support, and ServiceNow support.

IT Backend Infrastructure

Includes application hosting support for corporate applications such as iManage, STARS, STRIPES, CHRIS, iPortal/IDW, as well as, Database, Enterprise Services, Messaging, Platform, Storage, and VTC support.

Program Management and Governance

Includes budget and financial support, customer service, and program management and governance.

Budget Line: Policy and Performance Management (\$1,280,000 - Request; \$5,807,000 - WCF) (TOTAL = \$7,087,000)

Activity: Records Management (\$580,000)

Provides records management activities in accordance with National Archives and Records Administration (NARA), the Office of Management and Budget (OMB) and other Federal agency requirements.

^a WCF and customer fund dollars included in OCIO contributions

^b WCF and customer fund dollars included in OCIO contributions

^c WCF and customer fund dollars included in OCIO contributions

Activity: Privacy Information Management (\$700,000)

Funds privacy information management activities in accordance with Privacy Act, E-Government Act, and OMB Privacy directives to ensure compliance with federal regulations.

Summary of Funding from Working Capital Fund – Interagency Transfers business line (\$5,807,000)^d

Records Storage at NARA

Funds annual agreement with NARA to provide records services and storage consistent with approved records schedules.

Integrated Acquisition Environment (IAE)

Funds required Interagency Agreement with the General Services Administration (GSA) to provide packaged services.

E- Government initiatives

Initiatives include consolidation studies of lines of businesses and other intergovernmental systems.

^d WCF and customer fund dollars included in OCIO contributions

Corporate IT Program Support

Activities and Explanation of Changes

FY 2016 Enacted	FY 2016 Comparable Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
\$20,224,000	\$14,706,000	\$20,495,000	+\$5,789,000
IT Policy and Governance			
IT Policy and Governance (\$4,968,000)	IT Policy and Governance (\$0)	IT Policy and Governance (\$0) <ul style="list-style-type: none"> Funding realigned to new budget structure 	IT Policy and Governance (\$0) <ul style="list-style-type: none"> Funding to this element has been realigned to accommodate the restructured CIO budget lines. Funding was shifted to IT Portfolio Summary and Policy and Performance Management line items.
Technology and Innovation			
Technology and Innovation (\$3,247,000) <ul style="list-style-type: none"> Specific details of planned activities are provided in the highlighted section of the budget. 	Technology and Innovation (\$0)	Technology and Innovation (\$0) <ul style="list-style-type: none"> Funding realigned to new budget structure 	Technology and Innovation (\$0) <ul style="list-style-type: none"> Funding to this element has been realigned to accommodate the restructured CIO budget lines. Funding was shifted to IT Portfolio Summary line item.
Energy IT Services			
Energy IT Services (\$9,965,000) <ul style="list-style-type: none"> From FY 2016 onwards, the EITS direct appropriation will pay the EITS bill (EITS as their own customer). All service-related costs will be covered by customer funds. 	Energy IT Services (\$0)	Energy IT Services (\$0) Funding realigned to new budget structure	Energy IT Services (\$0) <ul style="list-style-type: none"> Funding to this element has been realigned to accommodate the restructured CIO budget lines. Funding was shifted to End-User-EITS line item.
IT Modernization			
IT Modernization (\$2,044,000)	IT Modernization (\$0)	IT Modernization (\$0) <ul style="list-style-type: none"> Funding realigned to new budget structure 	IT Modernization (\$0) <ul style="list-style-type: none"> Funding to this element has been realigned to accommodate the restructured CIO budget lines. Funding was shifted to IT Portfolio Summary and IT Infrastructure line items.

FY 2016 Enacted	FY 2016 Comparable Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
IT Portfolio Summary			
IT Portfolio summary (\$0)	IT Portfolio summary (\$8,252,000) <ul style="list-style-type: none"> • IT Investments for Mission Delivery and Management Support: \$3,288,000 • IT Investments for Infrastructure, IT Security, Office Automation and Telecommunications: \$625,000 • IT Investments for EA, Capital Planning, and CIO Functions: \$4,339,000 	IT Portfolio summary (\$11,985,000) <ul style="list-style-type: none"> • Funding is for the continuation of projects and activities from prior years. 	IT Portfolio summary (+\$3,733,000) <ul style="list-style-type: none"> • New line item; we are providing a functional allocation of resources versus an organizational allocation. • Funding is requested for network refresh - to modernize the access, distribution, and core networking layers of the existing infrastructure.
IT Infrastructure			
IT Infrastructure (\$0)	IT Infrastructure (\$0)	IT Infrastructure (\$2,000,000) <ul style="list-style-type: none"> • Detailed explanation of planned activities provided within narrative. 	IT Infrastructure (+\$2,000,000) <ul style="list-style-type: none"> • Funding for data center migration.
End User- EITS			
End User- EITS (\$0)	End User- EITS (\$5,224,000) <ul style="list-style-type: none"> • Funding supports: • EITS payment (\$5,224,000) This funding pays for the EITS staff as customers of their own products.	End User- EITS (\$5,230,000) <ul style="list-style-type: none"> • Continued funding support for EITS payments. 	End User- EITS (+\$6,000) <ul style="list-style-type: none"> • New line item; we are providing a functional allocation of resources versus an organizational allocation. This funding allows the EITS program to pay its own bill just like any other customer.
Policy and Performance Management			
Policy and Performance Management (\$0)	Policy and Performance Management (\$1,230,000) <ul style="list-style-type: none"> • Funding supports Records and Privacy Management and Training 	Policy and Performance Management (\$1,280,000) <ul style="list-style-type: none"> • Funding continues current efforts in records and privacy. 	Policy and Performance Management (+\$50,000) <ul style="list-style-type: none"> • New line item; we are providing a functional allocation of resources versus an organizational allocation. • Funding provides for records and privacy information management.

Program Direction

Overview

Program Direction provides \$36,805,000 for CIO federal staffing and associated costs for the overall management of CIO activities.

Highlights of the FY 2018 Budget Request

Funds CIO corporate program management and operations, acquisitions/contract administration, human capital management, and budget support, 113 FTEs, and Working Capital Fund requirements.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR*	FY 2018 Request	FY 2018 vs FY 2016
Headquarters				
Salaries and Benefits	19,663	-	20,092	+ 426
Travel	208	-	230	+22
Support Services	3,424	-	3,500	+76
Other Related Expenses	8,693	-	12,983	+4,290
Total, Program Direction	31,988	31,927	36,805	+4,817
Federal FTEs				
Federal FTEs- Program Direction Funded	113	113	113	0
Federal FTEs- WCF Funded	8	8	8	0
Total FTEs	121	121	121	0
Support Services				
Technical Support Services	1,549	-	1,595	+46
Business, Finance, and Procurement	1,875	-	1,905	+30
Total, Support Services	3,424	-	3,500	+76
Other Related Expenses				
Training	120	-	120	0
Working Capital Fund (WCF)	7,714	-	11,106	+3,392
Desktop Services	859	-	1,757	+898
Total, Other Related Expenses	8,693	-	12,983	+4,290

*FY 2017 amounts shown reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the "congressional control" level and above, below that level, a dash (-) is shown.

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Program Direction \$31,988,000	\$36,805,000	+\$4,817,000
Salaries and Benefits		
(\$19,663,000) funding supports federal staff and related benefits requirements for 113 FTEs	(\$20,092,000) Funding requested will support 113 federal FTEs.	(+\$429,000) Funding supports 113 FTEs, same as prior years. Increase for within grade, promotions, and COLAs for existing staff.
Travel		
(\$208,000) supports mission-critical travel for federal staff	(\$230,000) Continuation of activities.	(+\$22,000) Reflects anticipated increased costs for additional travel.
Support Services		
(\$1,549,000) Sustain operations within the front office of the CIO. Funds support contractor activities and memberships/subscription services for the CIO and senior staff.	(\$1,595,000) Continuation of activities	(+\$46,000) Increase for support service contractors.
(\$1,875,000) Funding used to maintain contractor activities in the areas of Financial Management, Budget and Internal Controls; Acquisitions; and Human Capital. These activities are critical to programmatic operations and accomplishment of program goals.	(\$1,905,000) Continuation of activities	(+\$30,000) Reflects increased costs for support service contractors.
Other Related Expenses		
(\$120,000) Training costs to ensure all FTEs are appropriately trained to perform their duties, and development opportunities are available to CIO's federal staff.	(\$120,000) Continuation of FY 2016 training activities.	(+\$0) No change.
(\$7,714,000) WCF funding level accounts for estimated OCIO as the customer costs, as well as overhead expenses. <i>(Actual WCF costs were \$9,492,885).</i>	(\$11,106,000) Continuation of activities.	(+\$3,392,000) Address the projected requirements for the CIO as identified by the WCF.
(\$859,000) Desktop Services funds are used to provide IT services and hardware to employees.	(\$1,757,000) Continuation of activities.	(+\$898,000) Additional funding required to cover anticipated price increases to the EITS program in FY 2018.

**Chief Information Officer
Departmental Administration Performance Measures**

In accordance with the GPRA Modernization Act of 2010, the Department sets targets for, and tracks progress toward, achieving performance goals for each program. Starting in FY 2017, the OCIO added additional measures for clarity and improved tracking. As final annual results are tabulated, they will be captured in future reports.

	FY 2016	FY 2017	FY 2018
Performance Goal (Measure)	Anti-Phishing - Performance of Anti-Phishing measurements must be greater than or equal to 90% on at least 5 of 7 capabilities.		
Target	≥ 5 capabilities greater than 90%	≥ 5 capabilities greater than 90%	≥ 5 capabilities greater than 90%
Result	Not Met - 2	TBD	TBD
Endpoint Target	The target performance on at least 5 of 7 anti-phishing capabilities should be 90% or greater.		
Performance Goal (Measure)	Anti-Phishing and Malware Defense (APMD) - Implement technologies, processes, and training that reduces the risk of malware being introduced through email and malicious or compromised web sites. (Replaced by other goals, so no further reporting after '16)		
Target	= 71%	N/A	N/A
Result	Not Met – 61%	N/A	N/A
Endpoint Target	Establish and maintain an Anti-Phishing and Malware Defense performance measure of 90% or better by Q1 in FY 2018.		
Performance Goal (Measure)	Continuous Monitoring - Provide ongoing observation, assessment, analysis, and diagnosis of an organization's cybersecurity. (Replaced by other goals, so no further reporting after '16)		
Target	= 69%	N/A	N/A
Result	Met – 69%	N/A	N/A
Endpoint Target	Establish and maintain a Continuous Monitoring performance measure of 95% or better by Q2 in FY 2018.		
Performance Goal (Measure)	Federated Identity Management Infrastructure - Implement Federated Identity Management Infrastructure linking identity sources across DOE		
Target	N/A	= 75%	= 95%
Result	N/A	TBD	TBD
Endpoint Target	The target is for all identity sources across DOE to be linked to OneID.		

	FY 2016	FY 2017	FY 2018
Performance Goal (Measure)	Hardware Asset Management - Achieve performance of 95% or greater for both Hardware Asset Management metrics (asset detection and asset meta data collection)		
Target	≥ 95%	≥ 95%	≥ 95%
Result	Not Met – 60%	TBD	TBD
Endpoint Target	Performance must be greater than or equal to 95%.		
Performance Goal (Measure)	High-Priority Enablement-Ready Applications - Implement High-Priority Enablement-Ready Applications into the federated access management framework		
Target	N/A	= 10%	= 30%
Result	N/A	TBD	TBD
Endpoint Target	The endpoint target is to integrate all high priority enablement-ready applications into the federated access management framework.		
Performance Goal (Measure)	MFA - Privileged Network Account performance - LOA 4 for Privileged Network Accounts must be equal to 100%.		
Target	= 100%	= 100%	= 100%
Result	Not Met – 82%	TBD	TBD
Endpoint Target	Endpoint Target Performance must be equal to 100%.		
Performance Goal (Measure)	MFA - Unprivileged Network Account performance - LOA 4 for Unprivileged Network Accounts must be equal to 100%.		
Target	= 85%	= 85%	= 90%
Result	Not Met – 52%	TBD	TBD
Endpoint Target	Endpoint Target Performance must be equal to 100%.		
Performance Goal (Measure)	Malware Defense - Performance of Anti-Phishing measurements must be greater than or equal to 90% on at least 3 of 5 capabilities.		
Target	≥ 3 capabilities greater than 90%	≥ 3 capabilities greater than 90%	≥ 3 capabilities greater than 90%
Result	Not Met – 0	TBD	TBD
Endpoint Target	The target performance on at least 3 of 5 malware defense capabilities should be 90% or greater.		

	FY 2016	FY 2017	FY 2018
Performance Goal (Measure)	Other Defenses - Performance of "Other Defenses" measurements must be greater than or equal to 90% on at least 2 of 4 capabilities.		
Target	≥ 2 capabilities greater than 90%	≥ 2 capabilities greater than 90%	≥ 2 capabilities greater than 90%
Result	Not Met - 1	TBD	TBD
Endpoint Target	The target performance on at least 2 of 4 other defense capabilities should be 90% or greater.		
Performance Goal (Measure)	Secure Configuration Management - Achieve performance of greater than or equal to 95% for Secure Configuration Management		
Target	≥ 95%	≥ 95%	≥ 95%
Result	Not Met - 77%	TBD	TBD
Endpoint Target	Performance must be greater than or equal to 95%.		
Performance Goal (Measure)	Software Asset Management - Achieve performance of greater than or equal to 95% for both Software Asset Management metrics (software inventory and software white-listing)		
Target	≥ 95%	≥ 95%	≥ 95%
Result	Not Met – 44%	TBD	TBD
Endpoint Target	Performance must be greater than or equal to 95%.		
Performance Goal (Measure)	Standards Based Federated Access Management Infrastructure - Implement Standards Based Federated Access Management Infrastructure across DOE to enable single sign-on		
Target	N/A	= 50%	= 95%
Result	N/A	TBD	TBD
Endpoint Target	The target is for the entire infrastructure across DOE to enable single sign-on.		

	FY 2016	FY 2017	FY 2018
Performance Goal (Measure)	Strong Authentication (PIV) - Implement a set of capabilities that ensures users must authenticate to information technology resources and have access to only those resources that are required for their job function. (Replaced by other goals, so no further reporting after '16)		
Target	= 93%	N/A	N/A
Result	Not Met – 47%	N/A	N/A
Endpoint Target	Establish and maintain a Strong Authentication performance measure of 100% for Privileged Network Users and 85% or better for Unprivileged Network Users.		
Performance Goal (Measure)	Vulnerability Management - Achieve performance greater than or equal to 95% for Vulnerability and Weakness Management		
Target	≥ 95%	≥ 95%	≥ 95%
Result	Not Met – 64%	TBD	TBD
Endpoint Target	Performance must be greater than or equal to 95%.		



Department of Energy
Washington, DC 20585

May 10, 2017

**U.S. Department of Energy Fiscal Year 2018 President's Budget
Information Technology Resource Statement**

In accordance with Office of Management and Budget (OMB) Circular A-11, Section 51.3, and as described in OMB Memorandum M-15-14, the U.S. Department of Energy hereby affirms that its Chief Information Officer (CIO) reviewed and approved the Department's major information technology (IT) investments as detailed in its budget request. Further, the Department's Chief Financial Officer and CIO jointly affirm that: (1) the CIO had a significant role in reviewing planned IT support for major program objectives and significant changes to IT resources; and (2) that the Department's IT Portfolio Summary includes estimates of all of its IT resources included in its budget request.

A blue ink signature of Robert G. Green, consisting of a large, stylized 'R' followed by 'Green'.

Robert G. Green
Chief Information Officer (*Acting*)
U.S. Department of Energy

A blue ink signature of Alison L. Doone, written in a cursive style.

Alison Doone
Chief Financial Officer (*Acting*)
U.S. Department of Energy

Congressional and Intergovernmental Affairs Program Direction

Overview

The Office of Congressional and Intergovernmental Affairs (CI) contributes to the success of the Department by focusing on accurate and timely communication of Administration and Departmental objectives and activities with Congress, state, local and Tribal governments, and other stakeholder organizations. Specifically, CI:

- Directs, manages and ensures coordination of relationships between all Departmental organizations in their interaction with external stakeholders.
- Develops and recommends legislative strategies and engagements in connection with the Department's policy and program initiatives.
- Monitors legislative activity to inform and advocate on behalf of the Department in the legislative process. Works with Members of Congress, their staffs, and committees to define, articulate and advance DOE's position on pending legislation and to implement national policy priorities as enacted into law by the Congress.
- Provides timely notifications to Members of Congress, Governors, Mayors, and Tribal officials on DOE matters of specific interest including pending awards/grants/contracts that have an impact upon the State, congressional district and other constituencies. Provides timely and complete response to inquiries, requests for information, and constituents' concerns.
- Coordinates and prepares Departmental officials for congressional briefings and meetings as well as gubernatorial and Tribal events.
- Directs and coordinates the preparation of congressional testimony, transcripts, pre- and post-hearing questions and answers, and inserts for the record.
- Works with Governors and their staffs, local elected and appointed officials, as well as Tribal leaders to provide information on DOE activities and decisions; and to elicit concerns and interests to assure their consideration in DOE decision processes.
- Coordinates engagement with private industry and public interest groups to provide information and assistance in regard to Department programs and activities of special concern.

Highlights of the FY 2018 Budget Request

The Department requests \$6,200,000 in FY 2018 for CI to maintain operational levels consistent with Departmental needs and Secretarial priorities. Funding will ensure CI can continue to provide accurate and timely communications of Administration and Departmental activities and objectives to Congress, State, local and tribal governments and external organizations.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Washington Headquarters				
Salaries and Benefits	4,663	-	4,663	0
Travel	95	-	65	-30
Support Services	254	-	250	-4
Other Related Expenses	1,288	-	1,222	-66
Subtotal, Washington Headquarters	6,300	-	6,200	-100
Total, Program Direction	6,300	6,288	6,200	-100
Federal FTEs	33	33	33	0
Support Services				
Management Support				
Print and electronic information subscription services	86	-	100	+14
14Contractor support	102	-	130	+28
Ot28her, including office maintenance, furniture, etc.	66	-	20	-46
Total, M-46anagement Support	254	-	250	-4
Total, Support Services	254	-	250	-4
Other Related Expenses				
Training	25	-	25	0
DOECOE	243	-	195	-48
Working Capital Fund	1,020	-	1,002	-18
Total, Other Related Expenses	1,288	-	1,222	-66

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Program Direction \$6,300,000	\$6,200,000	-\$100,000
Salaries and Benefits \$4,663,000	\$4,663,000	\$0
<ul style="list-style-type: none"> Provides funding for 33 FTEs to include salaries and benefits. 	<ul style="list-style-type: none"> Continuation of current activities. 	<ul style="list-style-type: none"> No change
Travel \$95,000	\$65,000	-\$30,000
<ul style="list-style-type: none"> Funding for travel requirements to support the Department's engagements with congressional, intergovernmental and other stakeholders. 	<ul style="list-style-type: none"> Continuation of current activities. 	<ul style="list-style-type: none"> Reduced level of travel
Support Services \$254,000	\$250,000	-\$4,000
<ul style="list-style-type: none"> The majority of costs associated with CI's support services are related to the acquisition of annual subscriptions to information sources which are essential resources to ensure CI staff is well-informed of congressional and intergovernmental activities and interests. 	<ul style="list-style-type: none"> Continuation of current activities. 	<ul style="list-style-type: none"> Slight reduction reflects reduced need in support services
Other Related Expenses \$1,288,000	\$1,222,000	-\$66,000
<ul style="list-style-type: none"> Funds support business costs associated with the Department's Working Capital Fund (office space, phones, utilities, etc.); IT equipment and support; as well as staff development and training. 	<ul style="list-style-type: none"> Continuation of current activities. 	<ul style="list-style-type: none"> Reflects decrease in WCF and IT estimates.

**Office of Small and Disadvantaged Business Utilization
Program Direction**

Overview

The Office of Small and Disadvantaged Business Utilization (OSDBU) is responsible for advocating the use of small businesses, including Small Disadvantaged Businesses (SDB), certified 8(a) businesses, small businesses from Historically Underutilized Business Zones (HUBZone), Service Disabled Veteran-Owned Small Businesses (SDVOSB), and Women-Owned Small Businesses (WOSB). This involves promoting small business prime and subcontracting opportunities in accordance with Federal laws, regulations, and policies and reporting to Congress on DOE utilization of small business.

The goals of the OSDBU are to institutionalize the use of small businesses and to fully integrate them into the U.S. Department of Energy's (DOE) competitive base of contractors and to help the Department of Energy meet statutory goals for small business utilization.

The DOE OSDBU is not a procurement office, but serves as a liaison between the small business community and the DOE procurement offices. The Small Business Act of 1953 as amended by Public Law 95-507 established the OSDBU.

Highlights of the FY 2018 Budget Request

No major changes.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Washington Headquarters				
Salary & Benefits	1,545	-	1,980	+435
Travel	34	-	44	+10
Support Services	1,022	-	516	-506
Other Related Expenses	399	-	460	+61
Total, Program Direction	3,000	2,994	3,000	0
Federal FTEs	9	9	12	+3
Other Related Expenses				
EITS	40	-	40	0
Working Capital Fund	333	-	400	+67
Training	26	-	20	-6
Total, Other Related Expenses	220	-	460	+240

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (–) is shown.

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Program Direction \$3,000,000	\$3,000,000	\$0
Salaries and Benefits \$1,545,000	\$1,980,000	+435,000
Provides funding for salaries and benefits for 9 FTEs.	Provides funding for 12 FTEs.	Increase reflects COLA and additional staff (3 FTEs).
Travel \$34,000	\$44,000	+10,000
Funds travel for small business training, event participation and outreach, and one to one small business counseling.	Funds travel for small business training, event participation and outreach, and one to one small business counseling.	Increase reflects inflation and additional staff travel.
Support Services \$1,022,000	\$516,000	-\$506,000
Funds contractor support for communications and management support services, and subscription services.	Funds contractor support for communications and management support services, and subscription services.	Decrease reflects support need.
Other Related Expenses \$399,000	\$460,000	+61,000
Funds Working Capital Fund, IT services, and staff training and development, and other services.	Funds Working Capital Fund, IT services, and staff training and development, and other services.	Increase reflects inflation and increase in staff.

Economic Impact and Diversity Program Direction

Overview

The Office of Economic Impact and Diversity (ED) advises the Secretary of Energy on the impact of energy policies, regulations, and Department of Energy (DOE) programs on minority communities, minority institutions, and specific segments of the U.S. population. ED is tasked with facilitating involvement of minority serving institutions, minority businesses, and other organizations in all aspects of the energy sector, and monitoring and strengthening DOE programs and policies by implementing a wide range of initiatives that address underrepresented populations in the Department's activities, and in the energy sector workforce.

ED ensures DOE compliance with Titles VI & VII of the Civil Rights Act of 1964 and Title IX of the Education Amendments Act of 1972. ED is also responsible to the Secretary of Energy for planning and executing a strategy that promotes a diverse DOE workforce and an inclusive work environment. ED is responsible for planning and leading a national initiative supporting minority and tribal participation in the energy sector, including business opportunities; science, technology, engineering, and mathematics (STEM) engagement; energy economic development; and minority serving institution programs. The Office of Minority Economic Impact links academia, industry, government, and nonprofits to address future challenges related to the energy workforce.

Highlights of the FY 2018 Budget Request

There are no major programmatic changes for the Office of Economic Impact and Diversity in FY 2018.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Washington Headquarters				
Salaries and Benefits	5,750	-	5,860	+110
Travel	120	-	123	+3
Support Services	2,155	-	2,155	0
Other Related Expenses	1,975	-	1,862	-113
Total, Program Direction	10,000	9,981	10,000	0
Federal FTEs	37	37	37	0
Support Services				
Management support				
Minority Economic Impact (OMEI)	1,009	-	1,009	0
Minority Business & Economic Development (MBED)	300	-	300	0
Office of Civil Rights and Equal Opportunity (OCR)	596	-	620	+24
Diversity and Inclusion (D&I)	100	-	100	0
Other Support Services	150	-	126	-24
Total Support Services	2,155	-	2,155	0
Other Related Expenses				
Training	75	-	75	0
DOECOE	370	-	554	+184
Working Capital Fund	1,530	-	1,233	-297
Total, Other Related Expenses	1,975	-	1,862	-113

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown.

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Program Direction \$10,000,000	\$10,000,000	+\$0
Salaries and Benefits \$5,750,000	\$5,860,000	+\$110,000
Provides funding for 37 FTEs who directly support the ED mission.	Request provided funding for FTEs who directly support the ED mission.	This change reflects a 1.9% pay increase.
Travel \$120,000	\$123,000	+\$3,000
Request reflects the mission requirements for outreach as well as regulatory activities of the Office of Civil Rights and the Equal Employment Opportunity function of the Office.	Continuation of FY 2016 activities.	Inflationary increase.
Support Services \$2,155,000	\$2,155,000	+\$0
<i>(\$1,009,000) Minority Economic Impact (OMEI) (includes MIE)</i>	<i>(\$1,009,000)</i>	<i>+\$0</i>
Funding supports the following activities:	Continuation of FY 2016 activities	No increase
<ul style="list-style-type: none"> • MSI Grant Program that provides financial assistance to minority educational institutions and 501(3)(c) entities engaging in STEM-related programs and activities. • Outreach to pre-college programs, primarily in minority communities, that promote energy literacy, academic excellence, and interest in STEM disciplines relevant to energy (e.g., Science Bowl competitions are conducted at middle and high schools). • Socioeconomic research and analysis that includes addressing environmental and energy-related concerns in underserved communities. 		
<i>(\$300,000) Minority Business & Economic Development (MBED)</i>	<i>(\$300,000)</i>	<i>+\$0</i>
Request supports development of technical assistance programs to encourage, promote, and assist minority business enterprises in establishing and expanding energy-related business	The Office of Minority Business and Economic Development (MBED) supports the nation's energy goals by fostering entrepreneurship, innovation, and job creation for diverse communities in the energy sector. The pace of	No increase

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>opportunities in minority communities that can provide jobs to residents. ED will bring together communities and corporations to support minority participation in major energy development projects. Resource applications include support of ED's partnerships to plan and execute local and regional programs that prepare minority businesses to participate in energy sector work.</p>	<p>change within the nation's energy landscape and demographic makeup demands better utilization of our economic and human capital resources. To meet the nation's growing energy demands, there must be a concerted policy effort to bring diverse businesses to fuller participation in the energy and innovation economy. The FY18 Request will spur American ingenuity, create new jobs, and promote economic growth. The request supports MBED's Energy Sector Business Opportunity Program, collaboration with DOE programs and other partners to increase diverse participation in entrepreneurship, innovation and research opportunities, and cultivation of partnerships with industry, colleges and universities, non-profits, and trade associations to develop tools and strategies that increase economic prosperity.</p>	
<p><i>(\$596,000) Office of Civil Rights and Equal Opportunity (OCREO)</i> Request supports developing and delivering Civil Rights training tailored to the DOE enterprise. Funds support conducting investigations of civil rights issues and contractual resources to assist with integration of Headquarters EEO site-based EEO functions, as outlined in Management Directive 715 and other EEOC directives.</p>	<p>(\$620,000) Continue to provide Civil Rights support to DOE staff, DOE employees seeking redress, and address statutory requirements under Title VI, Title VII, and Title IX. Continue to manage processing of EEO complaints</p>	<p>+\$24,000 Additional OCR funding is included for contract support (including training and records management) for EEO complaint investigations. Increase also supports Title IX investigations and new Title VI reviews, which address requirements associated with external recipients of federal funding, and include exploratory visits and investigations</p>
<p><i>(\$100,000) Diversity & Inclusion (D&I)</i> The Diversity and Inclusion staff will continue to work closely with EEO staff to extend the EEO principles and practices from a model EEO program to a fully inclusive DOE work environment that supports high performance and high employee satisfaction, while positioning DOE to attract a diverse workforce necessary to accomplish the mission responsibilities.</p>	<p>(\$100,000) Continue to work closely with the EEO staff to extend the EEO principles and practices from a model EEO program to a fully inclusive DOE work environment that supports high performance and high employee satisfaction. The Request fully implements a multi-year action plan for achieving DOE and OPM diversity and inclusion objectives.</p>	<p>+\$0 No increase.</p>
<p><i>(\$150,000) Other Support Services</i> Funding for internal evaluation and performance</p>	<p>(\$126,000)</p>	<p>-\$24,000 Decrease to absorb increased requirements for</p>

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
reviews		EEO Office
Other Related Expenses \$1,975,000	\$1,862,000	-\$113,000
<i>(\$75,000) Training</i>	(\$75,000)	+\$0
Funding for existing FTE count.		No change
<i>(\$370,000) DOE-COE</i>	(\$554,000)	+\$184,000
Energy IT Services request supports the office desktop and any departmental mobile capabilities.	Continuation of FY 2016 activities.	Increase supports cost estimate based on FTEs, contractors and increased space for EEO Office.
<i>(\$1,530,000) Working Capital Fund</i>	(\$1,233,000)	-\$297,000
Working Capital Fund request supports rent and overhead costs associated with the office.	Projected costs in FY 2018.	Adjustments to WCF projected costs.

General Counsel Program Direction

Overview

The Office of the General Counsel (GC) is responsible for providing legal services to all Department of Energy offices, and for determining the Department's authoritative position on any question of law with respect to all Department offices and programs, except for those belonging exclusively to the Federal Energy Regulatory Commission. GC's responsibilities include the provision of legal opinions, advice, and services to administrative and program offices, and participation in or management of both administrative and judicial litigation. GC is responsible for the coordination and clearance of proposed legislation affecting energy policy and Department activities. The General Counsel serves as the Department's Regulatory Policy Officer under Executive Order 12866, and is responsible for ensuring consistency and legal sufficiency of the Department's regulations. GC administers and monitors standards of conduct requirements, conducts patent program and intellectual property activities, and coordinates rulemaking actions of the Department with other federal agencies.

GC includes the Office of NEPA (National Environmental Policy Act) Policy and Compliance, which provides independent technical and policy reviews to ensure that proposed Department actions comply with the NEPA and related environmental requirements. This office also serves as the focal point of the Department's NEPA expertise, develops NEPA compliance strategies, coordinates with other agencies on key policy matters, and prepares guidance and provides technical assistance to improve the efficiency and effectiveness of DOE's implementation of the NEPA process. GC also includes the Office of Standard Contract management which manages the Standard Contracts for Disposal of Spent Nuclear Fuel and/or High-Level Radioactive Waste between the Department and the nuclear industry under the Nuclear Waste Policy Act. This office also manages the Department's Nuclear Waste Fund activities.

Highlights of the FY 2018 Budget Request

There are no major programmatic changes proposed for General Counsel.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR ^a	FY 2018 Request	FY 2018 vs FY 2016
Washington Headquarters				
Salaries and Benefits	22,984	-	22,640	-344
Travel	87	-	88	+1
Support Services	938	-	951	+13
Other Related Expenses	8,991	-	9,321	+330
Total, Program Direction	33,000	32,937	33,000	0
Federal FTEs	145	145	145	0
Support Services				
Technical Support				
NEPA Contract Services	928	-	941	+13
Intellectual Property Contract Services	10	-	10	0
Total, Support Services	938	-	951	+13
Other Related Expenses				
Information Technology	1,405	-	1,411	+6
Working Capital Fund	6,158	-	6,461	+303
Other Services	1,428	-	1,449	+21
Total, Other Related Expenses	8,991	-	9,321	+330

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown.

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Program Direction \$33,000,000	\$33,000,000	\$0
Salaries and Benefits \$22,984,000	\$22,640,000	-\$344,000
Provides funding for 145 FTE to include salaries, benefits, overtime, etc.	Slight decrease due to anticipated attrition.	Prior year balances will be used to provide for any cost increase.
Travel \$87,000	\$88,000	+\$1,000
Provides funding for travel for hearings, depositions, court proceedings, site visits, conferences, and training.	Slight increase from FY 2016	Level of activity expected to remain the same. Increase due to anticipated GSA per diem increases.
Support Services \$938,000	\$951,000	+\$13,000
<i>(\$928,000) NEPA</i> Provides contractor support for technical analysis of Environmental Impact Statements and other information required by the National Environmental Policy Act.	<i>(\$941,000)</i> Slight increase from FY 2016	<i>(+\$13,000)</i> Level of services expected to remain the same. Costs of services are expected to increase.
<i>(\$10,000) Intellectual Property</i> Provides for outside patent law firms to process the Department's intellectual property actions.	<i>(\$10,000)</i> Slight increase from FY 2016.	No change.
Other Related Expenses \$8,991,000	\$9,321,000	+\$330,000
<i>(\$1,405,000) Information Technology</i> Provides for all GC IT service including desktop workstations and support (DOE/COE), database systems hosting, FISMA reviews and reporting, etc.	<i>(\$1,411,000)</i> . Slight increase from FY 2016.	<i>(+\$6,000)</i> Level of service expected to remain about the same. Cost of services received recently increased.
<i>(\$6,158,000) Working Capital Fund</i> Provides for rent, telecommunications, I-Manage, supplies, copiers, printing, etc.	<i>(\$6,461,000)</i> . Slight increase from FY 2016.	<i>(+\$303,000)</i> Increase due to GSA rent increase and increased cost of other services received.
<i>(\$1,428,000) Other Services</i> Provides for Online Legal Services, Government Agencies – Intellectual Property, Law Library Materials, US Patent Office charges for DOE patents, training, E-Gov, office furniture, etc.	<i>(\$1,449,000)</i> . Slight increase from FY 2016.	<i>(+\$21,000)</i> Level of activity expected to remain the same. Increase due to anticipated Inflationary factors.

**Energy Policy and Systems Analysis
Program Direction**

Overview

The Office of Energy Policy and Systems Analysis (EPSA) has served as the principal policy advisor to the Secretary of Energy on energy and related integration of energy systems.

Highlights of the FY 2018 Budget Request

In an effort to eliminate redundancies and increase efficiencies across the Department, EPSA's activities will be phased out during FY 2018 in order to close the program by the end of the fiscal year.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR*	FY 2018 Request	FY 2018 vs FY 2016
Washington Headquarters				
Salaries and Benefits	10,200	-	7,600	-2,600
Travel	400	-	50	-350
Support Services	18,877	-	1,200	-17,677
Other Related Expenses	1,820	-	1,582	-238
Total, Program Direction	31,297	31,238	10,432	-20,865
Federal FTEs	67	67	40	-27

*FY 2017 amounts shown reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the “congressional control” level and above, below that level, a dash (-) is shown.

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Salaries and Benefits \$10,200,000	\$7,600,000	-\$2,600,000
Funding supports 67 FTEs in carrying out the mission of the Office. Funding provides for salaries and benefits, performance awards, and other personnel-related costs.	Funding covers salaries and benefits and severance costs during the closing of the program.	Reduction in FTE anticipated during program close out.
Travel \$400,000	\$50,000	-\$350,000
Funding supports travel for mission activities related to technical and analytical support.	Travel anticipated during program closing.	Minimal travel expected during program closing.
Support Services \$18,877,000	\$1,200,000	-\$17,677,000
EPSA has a portfolio of analytical requirements related to advising the Secretary on a broad-range of energy security and other energy policy issues. Funds also provide for management support services; subscriptions; and other support services (\$200,000).	Minimal support services needed during the program closing.	Funding not needed for support services during program closing.
Other Related Expenses \$1,820,000	\$1,582,000	-\$238,000
Funding supports Working Capital Fund (WCF) expenses, DOECOE/IT services, staff training costs, and other necessary operational costs. (\$1,820,000)	Funding supports WCF expenses, IT costs and other necessary operational costs.	Reduction reflects anticipated decrease in operational costs as staff leave the program.

International Affairs Program Direction

Overview

DOE's Office of International Affairs (IA) performs a combination of strategy development, coordination, execution, and support functions for international engagements of the U.S. Department of Energy. IA integrates the institutional capacity found across DOE's program elements and national laboratories – capacity in science, technology, markets, and policies – to pursue United States Government (USG) objectives on energy and national security issues. IA develops and manages DOE's energy engagements with its counterparts in other countries, in close coordination with the Department of State and other USG agencies.

IA has primary responsibility for DOE international engagements in energy, science, and technology. IA advises the Secretary, Deputy Secretary and other DOE leadership on implementation of USG international energy and national security policies. IA leads DOE's bilateral and multilateral energy, science & technology (S&T) cooperation activities and represents the Department in interagency processes and intergovernmental fora. IA serves a vital interagency function by informing the National Security Council, Department of State, and others on how U.S. energy security and energy relations and energy developments with other countries could impact or be affected by national security decisions.

IA leads DOE's efforts to cooperate with governments of other key nations, directly and through international organizations. IA leads preparation for high level Bilateral Energy Dialogues with China, India, Brazil, Japan, Korea, Indonesia, Chile, Iraq, Israel, United Arab Emirates, Saudi Arabia, and South Africa and implements cooperation with these key partners. IA contributes to progress on high-profile initiatives such as international energy cyber cooperation, markets for U.S. energy exports, a North America Energy Strategy, Ukraine contingency planning, DOE's Africa Task Force, and strengthening innovation initiatives. It supports technical analysis for U.S. leadership and contributions to integrated assessment reports.

Highlights of the FY 2018 Budget Request

IA's FY 2018 Budget Request of \$18,878,000 is \$878,000 more than the FY 2016 Enacted, due to the transfer of Energy Efficient and Renewable Energy's (EERE) International Office, including 8 FTEs. Staff transferred from EERE will be positioned in IA's regional offices and assist with international activities related to renewable power and energy efficiency. IA will promote greater energy security among allies and key partners in Europe, Africa, the Americas, Asia, Eurasia, and the Middle East; further encourage government actions that facilitate additional U.S. corporate investment and trade opportunities in emerging markets such as Africa, Eastern Europe, the Middle East, South America and Southeast Asia; strengthen multilateral energy collaboration with key country partners through multilateral efforts to foster economic growth; and enhance S&T cooperation that boosts energy and environmental security and spurs innovative technological progress of the US and our key partners.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Washington Headquarters				
Salaries and Benefits	10,454	-	12,200	+1,746
Travel	700	-	700	0
Support Services	2,959	-	2,128	-831
Other Related Expenses	3,887	-	3,850	-37
Total, Program Direction	18,000	17,966	18,878	+878
Federal FTEs	72	72	69	-3
Support Services				
Energy Security and Clean Energy Technology	2,371	-	0	-2,731
Subscriptions/Publications Services	45	-	100	+55
Management Support Services	221	-	0	-221
EERE programs	75	-	2,000	+1,925
EERE/IA programs	247	-	28	-219
Total, Support Services	2,959	-	2,128	-831
Other Related Expenses				
Working Capital Fund	3,217	-	3,230	+13
Energy IT Services	600	-	550	-50
SIPR	70	-	70	0
Total, Other Related Expenses	3,887	-	3,850	-37

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (–) is shown.

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Program Direction \$18,000,000	\$18,878,000	+\$878,000
Salaries and Benefits \$10,454,000	\$12,200,000	+\$1,746,000
The IA budget for salaries and benefits supports full-time equivalent staff to provide professional expertise required to execute the Office mission.	Includes potential severance costs for eliminating 11 FTE from the Climate and Technology Office, plus salaries and benefits for 8 FTE transferred from EERE and inflationary adjustments for existing staff salaries and benefits.	Severance costs, additional salaries and benefits for 8 FTE transferred from EERE, and inflationary adjustments.
Travel \$700,000	\$700,000	+\$0
Travel funding is used for international travel to meetings and events relevant to international energy policy, science and technology, and multilateral national security engagements.	Continuation of FY 2016 activities.	Travel is critical to IA and efforts are being made to minimize costs.
Support Services \$2,959,000	\$2,128,000	-\$831,000
IA is the DOE lead representative in international efforts relating to energy security and clean energy. Promote U.S. company investment and trade throughout key international markets; <ul style="list-style-type: none"> • Support multilateral efforts to advance S&T expertise to accelerate clean energy deployment, encourage greater efficiency, promote grid integration and resilience, and boost economic opportunities. • Subscriptions/Publications. • Management Support – Provide administrative support services and technical experts for critical and complex initiatives (clean energy, innovation, energy security analysis, and infrastructure resilience. 	Addition of EERE programs and elimination of climate change initiatives.	Elimination of climate change initiatives.
Other Related Expenses \$3,887,000	\$3,850,000	-\$37,000
Funds support Working Capital Fund expenses (including overseas presence), IT Services, and staff training.	Continuation of FY 2016 activities.	Reduction due to realigning computer and telephone inventories from prior reorganization.

Public Affairs Program Direction

Overview

The mission of the Office of Public Affairs (PA) is to communicate information about DOE's work in a timely, accurate, and accessible way to the news media and the general public.

The Office of Public Affairs (PA) directly supports the mission of the Department and the Secretary of Energy by developing and implementing strategies for communicating the Department's message, its policies, initiatives and information to the news media and the general public. PA is also responsible for managing and coordinating public affairs activities for DOE headquarters, field offices, and DOE laboratories; serving as DOE's primary spokesperson in the news media; responding to requests for information from the public and the news media; arranging interviews with Department officials; providing speechwriting and media support services to the Secretary, Deputy Secretary and Under Secretaries; and preparing written press releases, fact sheets, electronic media and other products that communicate Departmental activities.

Through its Digital Strategy and Communications Office, PA continues to affect cost savings at the Department by consolidating website platforms, reducing duplication and improving accessibility of information. The Digital Strategy and Communications Office drives the Department's mission online via the Energy.gov website, social networking tools, blog outreach, citizen engagement tools, and other emerging online communication technologies. Digital Strategy and Communications is an innovative and growing part of the mission, as PA seeks to serve the public in more efficient and effective ways online. It is through the Digital Strategy Office that PA is making government more, collaborative and participatory.

Highlights of the FY 2018 Budget Request

The \$6,589,000 request which is \$3,158,000 increase from FY16 Enacted includes the transfer of communication functions and personnel from Energy Efficiency and Renewable Energy (EERE) Communications to the Office of Public Affairs.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Washington Headquarters				
Salaries and Benefits	2,339	-	3,410	+1,071
Travel	150	-	190	+40
Support Services	90	-	1,340	+1,250
Other Related Expenses	852	-	1,649	+797
Total, Program Direction	3,431	3,424	6,589	+3,158
Federal FTEs	24	24	30	+6
Support Services				
Digital Communication and website support	90	-	1,340	+1,250
Total, Support Services	90	-	1,340	+1,250
Other Related Expenses				
Energy IT Services	58	-	113	+55
Working Capital Fund	794	-	1,536	+742
Total, Other Related Expenses	852	-	1,649	+797

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown.

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Salaries and Benefits \$2,339,000	\$3,410,000	\$1,071,000
Provides funding for 24 full time employees (FTE). This includes the Department's team of media spokespersons, a New Media team managing an innovative and cost-saving effort to help upgrade DOE's digital communications and website efforts, the speechwriting team that supports the Secretary and other senior officials, and the administrative staff required to support DOE's public affairs mission.	Provide funding for 30 FTE. This includes DOE's team of media spokespersons, a New Media team managing digital communications and website efforts, the speechwriting team that supports the Secretary and other senior officials and program offices, and the administrative staff required to support DOE's public affairs mission.	Increase due to transfer of EERE FTEs and consolidation of Communications Functions as well as anticipated pay increases and cost of living adjustments.
Travel \$150,000	\$190,000	\$40,000
Travel expenses support the office's ability to provide appropriate staffing and support when the Secretary and Deputy Secretary travel.	Travel expenses support the office's ability to provide appropriate staffing to the Secretary and Deputy Secretary; Staff travel for video production and presentations at conferences to enhance the DOE mission; enhanced video projects across complex; and other media projects.	The increase accounts for additional FTEs and greater forecasted travel schedule to support more personnel and increased mission scope.
Support Services \$90,000	\$1,340,000	\$1,250,000
Support Services includes the contractors utilized to lead a cost-saving effort to help upgrade the Department's digital communications and website efforts, reducing costly duplications while improving transparency and customer service to the public.	Support services include continued contractor support to upgrade and maintain the Department's digital communications and website efforts. Additional funding will be needed to initiate contract modification to bring on additional digital media and video support staff to accomplish increased mission scope.	The increase accounts for additional personnel and missions transfer from EERE program office to Office of Public Affairs.
Other Related Expenses \$852,000	\$1,649,000	\$797,000
Funding to support Working Capital Fund (WCF) and Energy IT Services costs. WCF contribution provides for shared service cost and Departmental overhead expenses.	Funding of Working Capital Fund and Energy IT services for 30 FTEs.	The increase is due to the consolidation of communications functions and related costs for additional FTEs.

Project Management Oversight and Assessments Program Direction

Overview

The Office of Project Management Oversight and Assessments (PM) now resides within the Office of the Under Secretary for Management and Performance. PM provides the Department of Energy (DOE) corporate oversight, managerial leadership and assistance in developing and implementing DOE-wide policies, procedures, programs, and management systems pertaining to project management, and manages the Department's project management career development program for DOE's Federal Project Directors. It also assumes responsibility for Department-wide cost estimating and program evaluation. PM is directly accountable to and supports the Deputy Secretary as the Executive Secretariat of the Department's Energy Systems Acquisition Advisory Board (ESAAB) and the Project Management Risk Committee (PMRC). The Deputy chairs the ESAAB.

In FY 2018, PM will accomplish its mission through its program office components and associated Departmental budget lines:

- Energy Systems Acquisition Advisory Board (ESAAB). Serve as Executive Secretariat (and member) of the ESAAB and the PMRC for the Deputy Secretary. The Board reviews all capital asset projects with a Total Project Cost (TPC) of \$100,000,000 or greater, focusing on those projects at risk of not meeting their performance baselines, and making critical decisions for capital asset projects with a TPC of \$750,000,000 or greater. The ESAAB is a standing board, meeting at least once a quarter, if not more frequently. The ESAAB is supported by the PMRC, which will meet at least monthly, if not more frequently.
- Project Management Policy and Systems. Provide DOE policy, guidance and oversight for project management. Provide monthly project status report for senior leaders with independent assessments of capital asset projects with a TPC of \$10,000,000 or greater. Drive improvements in project management systems. Maintain independent central repository, known as the Project Assessment and Reporting System (PARS II), of all relevant project data and performance metrics.
- Independent Cost Reviews/Estimates. Conduct statutorily-required independent cost reviews (ICRs) or prepare independent cost estimates (ICEs) at critical decisions and upon re-baselining as required by DOE Order 413.3B for capital asset projects with a TPC of \$100,000,000 or greater. All costs associated with the conduct of ICRs/ICEs, are funded by the Program Office/Project requiring the ICR/ICE.
- Project Oversight. Conduct External Independent Reviews (EIRs) that validate the project performance baselines (to include scope, cost, and schedule) of all capital asset projects with a TPC of \$100,000,000 or greater, and ensure they are ready to be brought forward to the appropriate Project Management Executive (PME) for authorization to proceed.
- Project Assessments. Conduct annual independent Project Peer Reviews (PPRs) of each active EM capital asset project with a TPC of \$100,000,000 or greater. All costs associated with conducting PPRs, to include PM federal staff travel, will need to be funded by EM.
- Earned Value Management System (EVMS) Certification. Conduct initial certification and periodic surveillance reviews to ensure contractor's EVMS for capital asset projects comply with industry standards. All costs associated with the conduct of Reviews for Cause (RFC) and recertification of a contractor's system that had its certification withdrawn, to include PM federal staff travel, will be funded by the Program Office/Project requiring the RFC or recertification reviews.
- Professional Development. Manage the Department's Project Management Career Development Program (PMCDP) to include the professional development, training and certification of our Federal Project Directors (FPDs). Serve as the co-chair and as Executive Secretariat for the FPD Certification Review Board.
- Cost Estimating and Program Evaluation (CEPE). Within PM \$2,000,000 will establish the independent statutory, DOE-wide capabilities of Cost Estimating and Program Evaluation in recognition of a gap in DOE's capacity to independently determine accurate cost of programs and acquisitions within the Department. CEPE will be modeled on the authorities, responsibilities, requirements and accountability of the DOD Cost Assessment and Program Evaluation (CAPE) Office, and complement but not be

duplicative of NNSA's Office of Cost Estimating and Program Evaluation established by the 2014 National Defense Authorization Act (50 USC 2411). CEPE will provide independent analytic advice on all aspects of DOE programs, including cost-effectiveness, and the development and evaluation of program alternatives. It will develop DOE-wide cost estimating policy and practices, provide timely and unbiased analysis, and perform independent cost estimation for the Department. It should also ensure that DOE's cost estimation and analysis processes provide accurate information and realistic estimates of cost for all DOE programs and acquisitions.

Highlights of the FY 2018 Budget Request

The Department requests \$15,192,000 in FY 2018 for PM, including \$2,000,000 for the establishment of the Cost Estimating and Program Evaluation capability. This Office is accountable to and serves the Deputy Secretary as the Executive Secretariat for the Department's Energy Systems Acquisition Advisory Board (ESAAB) and the Project Management Risk Committee (PMRC) in addition to other critical Department-wide functions to include preparing independent cost estimates, performing external independent reviews to validate performance baselines, conducting earned value management system certification and surveillance reviews, providing project management policy, guidance and oversight of all capital asset projects, and overseeing the Project Management Career Development Program (PMCDP). The Office also conducts annual independent project peer reviews of each active EM capital asset project that are greater than \$100,000,000. PM will continue to support FY 2017 activities. PM's activities were previously funded within the Office of Management's (MA) budget, but is now requested as an office within the Departmental Administration account.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Program Direction				
Salaries and Benefits	-	-	6,168	+6,168
Travel	-	-	485	+485
Support Services	-	-	6,389	+6,389
Other Related Expenses	-	-	2,150	+2,150
Total, Program Direction	-	-	15,192	+15,192
Federal FTEs	-	-	34	+34
Support Services				
External Independent Reviews (EIRs)	-	-	2,203	+2,203
Earned Value Management System (EVMS) Certification	-	-	2,029	+2,029
Project Assessment and Reporting System (PARS II)	-	-	2,000	+2,000
Other Support Services	-	-	157	+157
Total, Support Services	-	-	6,389	+6,389
Other Related Expenses				
Training	-	-	20	+20
Energy IT Services	-	-	430	+430
Working Capital Fund (WCF)	-	-	1,700	+1,700
Total, Other Related Expenses	-	-	2,150	+2,150

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown.

**Program Direction
Funding (\$K)**

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request ^b	Explanation of Changes FY 2018 vs FY 2016
Program Direction \$ -	\$15,192,000	+\$15,192,000
Salaries and Benefits \$ -	\$6,168,000	+\$6,168,000
PM's activities were previously funded within the Office of Management's (MA) budget.	Funding in support of 34 FTEs. Funding provides for salaries/benefits, overtime, lump sum leave, and performance awards.	PM's activities were funded within MA in FY 2016.
Travel \$ -	\$485,000	+\$485,000
PM's activities were previously funded within the MA budget.	Funding in support of PM staff travel. Travel is necessary to support review activities (excluding Project Peer Reviews (PPRs), Baseline Change Proposals (BCPs), Reviews for Cause (RFC), and Earned Value Management System (EVMS) recertification reviews) of program/ project activities in the field.	PM's activities were funded within MA in FY 2016.
Support Services \$ -	\$6,389,000	+\$6,389,000
PM's activities were previously funded within the MA budget.	Funding in support of contractual requirements, including External Independent Reviews (EIRs), Earned Value Management System (EVMS) certification and surveillance reviews, Project Assessment and Reporting System (PARS II), and other support services.	PM's activities were funded within MA in FY 2016.
Other Related Expenses \$ -	Other Related Expenses \$2,150,000	+\$2,150,000
PM's activities were previously funded within the MA budget.	Other related expenses to cover Energy IT Services (EITS), Working Capital Fund (WCF) and other services.	PM's activities were funded within MA in FY 2016.

^b The FY18 Request includes \$2,000,000 for the CEPE function spread across the PM activity lines.

Support Services Descriptions and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
<p>External Independent Reviews (EIRs) \$ - PM's activities were previously funded within the MA budget.</p>	<p>External Independent Reviews (EIRs) \$2,203,000 Finances EIRs, which provide assurance that projects can be executed at the proposed performance baseline (including scope, cost, and schedule). EIRs are conducted for projects greater than \$100,000,000 for major programs and greater than \$10,000,000 for others lacking a Project Management Support Office. Focused attention will be on the Department's largest, most complex projects. These reviews will be commensurate with the project cost and complexity.</p>	<p>+\$2,203,000 PM's activities were funded within MA in FY 2016.</p>
<p>Earned Value Management System (EVMS) Certification \$ - PM's activities were previously funded within the MA budget.</p>	<p>Earned Value Management System (EVMS) Certification \$2,029,000 Finances EVMS certification and surveillance reviews to ensure contractor's EVMS complies with industry standards for capital asset projects. EVMS is an industry-accepted process to ensure that projects are completed on cost, schedule, and within scope against a baseline. EVMS enables trend analysis and evaluation of estimated cost at completion and provides a sound basis for problem identification, corrective actions, and management re-planning.</p>	<p>+\$2,029,000 PM's activities were funded within MA in FY 2016.</p>
<p>Project Assessment and Reporting System (PARS II) \$ - PM's activities were previously funded within the MA budget.</p>	<p>Project Assessment and Reporting System (PARS II) \$2,000,000 PARS II is the Department's central repository for project documentation and performance reporting. It provides project status and assessment information for senior management and other stakeholders. Current funding will be used to provide operations and maintenance for the existing system. This system is critical to enable appropriate project execution oversight, accurate monthly project assessments, and recommendations for senior management decision-making.</p>	<p>+\$2,000,000 PM's activities were funded within MA in FY 2016.</p>
<p>Other Support Services \$ - PM's activities were previously funded within the MA budget.</p>	<p>Other Support Services \$157,000 Other related expenses to cover training, workshops, and other services.</p>	<p>+\$157,000 PM's activities were funded within MA in FY 2016.</p>

Project Management Oversight and Assessments Performance Measures

In accordance with the GPRA Modernization Act of 2010, the Department established FY 2014-2015 agency priority goals (APGs) in the 2014-2018 Strategic Plan published in April 2014. APGs support improvements in near-term outcomes and advance progress toward longer-term, outcome-focused strategic goals and objectives in the Strategic Plan. For more information, including quarterly progress updates, planned milestones, and indicators, see the interagency website www.performance.gov.

The Office of Project Management Oversight and Assessments is responsible for part of the following agency priority goal.

Agency Priority Goal: Increase the focus on efficient and effective management across the DOE enterprise and improve performance in the areas of environmental cleanup, project management, and cybersecurity. In support of this goal, DOE will:

- On a three-year rolling basis, complete at least 90% of departmental projects baselined since the start of FY 2008 within the original scope baseline and not to exceed 110% of the cost as reflected in the performance baseline established at Critical Decision 2.

	FY 2016	FY 2017	FY 2018
Performance Goal (Measure)	Project Management Success – On a three-year rolling basis, the percentage of departmental construction projects that were completed within the original scope baseline and within 10% of the original approved cost baseline established at Critical Decision (CD)-2, Performance Baseline.		
	The measure is taken at CD-4, Project Completion. This measure was created for the purpose of tracking progress on this Agency Priority Goal. It tracks all construction projects post-Root Cause Analysis (RCA).		
Target	90%	90%	90%
Result	91% (Met)	TBD	TBD
Endpoint Target	On a three-year rolling basis, complete at least 90% of departmental construction projects within the original scope baseline and not to exceed 110% of the cost as reflected in the performance baseline established at Critical Decision 2.		

Office of Technology Transitions Program Direction

Overview

The Office of Technology Transitions (OTT) facilitates availability of the Department of Energy's wide-ranging capabilities and technologies for private sector commercialization, strengthening the security and economic prosperity of the Nation. To achieve high-impact outcomes, OTT coordinates technology transitions activities across DOE Programs, NNSA, field offices and the National Laboratories, as well as with other federal agencies. Coordination reduces redundancies and improves likelihood and speed of outcomes toward technology transfer and development of DOE's research outputs.

The priorities of OTT are to strengthen the National Laboratories' capabilities and the researchers' competencies in engaging with industry and other partners, to reduce barriers to industry engagement with the National Laboratories, and to enhance the transfer of technologies from the laboratories to the private sector for commercialization.

Highlights of the FY 2018 Budget Request

The Department requests \$6,876,000 for the OTT in FY 2018. The Office was established in FY 2015 and the technology transition activities were previously funded through assessments of the DOE's applied energy programs. The FY 2018 request within the Departmental Administration account includes a transfer of Energy Efficiency and Renewable Energy's (EERE) Technology-to-Market office, including 6 FTE. DOE's FY 2018 OTT funding level is consistent with OTT's operational requirements, and will maintain adequate staffing to fulfill Congressional and Administration direction to increase Departmental engagement for the transition of new and evolving energy technology to the U.S. markets.

Technology Transitions Activities

Technology Transfer

To achieve its priorities, in FY 2018, OTT will streamline central policies and procedures to ease and expand private sector access to capabilities and resources of the DOE/NNSA National Laboratories, facilitate information critical to stakeholder engagement, and connect with stakeholders. OTT will assess and implement best practices, and update the annual *Technology Transfer Execution Plan* submitted to Congress in FY 2017.

OTT is streamlining industry-lab connections and access with a broad strategy of live interaction and development of tools to increase, improve and integrate digital information flow for stakeholders, such as investors, tech scouts and collaborators who develop and commercialize technologies. OTT works with stakeholders in the private sector and the National Laboratories to identify effective ways to address gaps to accessing National Laboratory capabilities, expertise, technologies and facilities. This knowledge is further incorporated in the Lab Partnering Service (LPS), a tool to streamline the ability to locate laboratory capabilities and expertise.

LPS is an online tool that serves as a platform to ease access for the private sector to identify specialized capabilities at the National Laboratories. It is a single point of access that streamlines searching across the distributed network of scientific expertise within the DOE enterprise. In FY 2018, OTT will expand the range of technological areas presented in LPS to include capabilities not previously represented in the tool, such as cybersecurity. OTT will expand the content deployed in LPS to include in-depth, market-focused analyses, by technology area, further easing and driving increased information flow on energy technologies for private investors.

In FY 2018, OTT will integrate LPS with the Energy Innovation Portal. The Portal is a complementary tool that provides access for the private sector to technologies available for licensing from the National Laboratories. The Portal delivers business-focused summaries of the technologies as well as the underlying patent information. Integrating the LPS with the Portal further supports easing and streamlining of access to the National Laboratories by delivering information on available technologies and expertise across the enterprise from a single source. OTT will continue to work with external stakeholders to identify additional complementary tools to integrate with LPS.

Using National Laboratory and Facility data gathered, verified and validated annually by OTT for statutory annual reporting, OTT conducts analyses that inform goals, objectives, best practices, policies and effective metrics for the National Laboratories, other partners and the Department. OTT further uses the data to supplement Department-wide reports and to inform impact studies and other activities across the enterprise.

Stakeholder engagement is assisted by a clear understanding of the capabilities and possibilities available at the National Laboratories. To supplement information on and streamlined access to the National Laboratories, OTT is developing the information and tools necessary to showcase the DOE innovation story threaded across the entire complex. This will help bring to life the impacts that the National Laboratories have had on companies, industries, the nation and the world, further underscoring the future potential with streamlined access and strengthened technology transitions capabilities.

Technology Commercialization Fund (TCF)

In FY 2018, OTT will continue to implement the statutory Technology Commercialization Fund (TCF), which attracts matching funds from private partners to further develop promising National Laboratories' energy technologies with the potential for high impact commercialization. The fund is derived from using 0.9 percent of the amount available to the Department's applied energy research, development, demonstration, and commercial application budget for each fiscal year. These funds are from the Office of Electricity, Office of Energy Efficiency and Renewable Energy, Office of Fossil Energy, and Office of Nuclear Energy and ARPA-e and allocated in relative proportion to the intended purpose of the appropriated accounts. In FY 2016, the fund was valued at \$19.7 million.

The TCF focuses on commercializing promising energy technologies from the National Laboratories in order to (1) increase the commercial impact and the number of National Laboratory-developed energy technologies transitioned into commercial development; and (2) enhance the outcomes of the Department's technology transitions system with a competitive and proactive approach to lab-industry partnerships.

The TCF assists in overcoming hurdles where there is not yet sufficient maturity in a technology for a private sector company to provide all the investment needed to move the technology toward the market. This shared risk approach requires the TCF funds be matched by private sector capital. The TCF will increase the number of National Laboratory technologies transitioned into private sector development and commercialization and increase taxpayer return on investment in National Laboratory research.

OTT will also begin evaluating the Technology Commercialization Fund (TCF), focusing on outcomes of the TCF awards over several years. This TCF Evaluation is one of several evaluations that OTT will continue to conduct to determine the effectiveness and efficiency of DOE technology transfer programs and mechanisms. These evaluations will inform improvements for or discontinuation of the relevant activity.

OTT's mission spans the spectrum of the entire DOE enterprise, including NNSA. In 2018, it will focus the efforts initiated by the EERE Technology-to-Market (T2M) Program for continuation across, and coordination with, all DOE programs. Continued implementation of T2M activities will be led by OTT for a broader range of technology areas, such as expansion of Energy I-Corps to include technologies arising from early-stage basic science research, from nuclear and fossil energies, as well as electricity delivery and energy reliability. The focus will be on the activities that strengthen the capabilities of the National Laboratories, their researchers and their engagement with the private sector. Energy I-Corps is the primary T2M program that fosters a market-based commercialization mindset among DOE National Laboratory researchers. Since the program's inception (formerly EERE's Lab-Corps) in 2015, 63 teams from 10 national labs have worked with industry to discover the commercial impact of technologies they have developed at the National Laboratories. Because of the teams' participation in the program, these technologies have reached a point of commercial viability that has already attracted nearly \$10 million in follow-on funding.

T2M strengthens the National energy innovation ecosystem with new, innovative, high-impact partnerships and programs across startups and small businesses, industry, universities, DOE National Laboratories, investors, and non-profit organizations. This will reduce technology commercialization barriers, improve private investment in the U.S. innovation ecosystem and lead to increased jobs and U.S. competitiveness. T2M catalyzes successful energy commercialization,

entrepreneurship, technology transfer, and manufacturing competitiveness outcomes from DOE's portfolio of research and development.

Coordinating and Streamlining Across Agencies

National policy priorities of the Administration related to technology transfer and as enacted into law by Congress, are implemented by OTT, often in coordination with other federal agencies. This provides an opportunity for additional insights that can be shared across the federal government. The NSF iCorps program is an example of inter-agency sharing of best practices. DOE, working with NSF, tailored the original program to the needs of the DOE National Laboratories with Energy iCorp (formerly Lab-Corps), a T2M initiative, to strengthen the National Laboratory researchers' capabilities in working with the private sector to move technologies toward the market.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Washington Headquarters				
Salaries and Benefits	-	-	2,835	+2,835
Travel	-	-	97	+97
Support Services	-	-	3,295	+3,295
Other Related Expenses	-	-	649	+649
Total, Program Direction	-	-	6,876	+6,876
Total FTEs	-	-	16	+16
Support Services				
Technology Transition Activities	-	-	2,550	+2,550
Technology Commercialization Fund Execution	-	-	745	+745
Total, Support Services	-	-	3,295	+3,295
Other Related Expenses				
Working Capital Fund (WCF)	-	-	518	+518
Other Services	-	-	131	+131
Total, Other Related Expenses	-	-	649	+649

Authorizations

Public Law 109–58, “Energy Policy Act of 2005,” Title V
15 U.S. Code § 3708(b & c) - Administrative arrangements – Corporation & Administrative authorization
15 U.S. Code § 3710(a) - Utilization of Federal technology
42 U.S. Code § 2121(a) - Authority of Commission
42 U.S. Code § 16391(e) - Establishes the Energy Technology Commercialization Fund
42 U.S. Code § 16391 - Improved technology transfer of energy technologies & Technology Transfer Coordinator

Activities and Explanation of Changes

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (–) is shown.

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Salaries and Benefits \$0	\$2,835,000	+\$2,835,000
	Funding will be used to support the FY 2018 staffing level of 16 FTEs, which includes the transfer of 6 FTE from EERE's Technology-to-Market office.	Funding will support the FY 2018 staffing level of 16 FTEs.
Travel \$0	\$97,000	+\$97,000
	Funding supports travel requirements for the OTT engagement, and information gathering and sharing activities.	Funding supports travel requirements for the bi-annual Technology Transfer Working Group meetings for OTT engagement with the Labs, Energy Investor Center information gathering, presentations needed for outreach, and lab events.
Support Services \$0	\$3,295,000	+\$3,295,000
	Funding supports activities associated with the industry-laboratory technology transitions activities, including technology transfer, Lab Partnering Service (LPS) and related information system integration, initiating assessments, developing guidance and policies, implementing the Administration's technology transfer priorities and best practices, executing the Technology Commercialization Fund (TCF), Technology-to-Market activities with a focus on strengthening National Laboratory capabilities, and other statutory requirements of data collection, verification, validation and reporting.	Funding supports OTT technology transfer, Technology Commercialization Fund (TCF) execution, Technology-to-Market activities, and other statutory requirements.
Other Related Expenses \$0	\$649,000	+\$649,000

Supports the business costs associated with the Department's Working Capital Fund (office space, phones, utilities, etc.); the Energy IT Services (IT equipment and support); specialized software licensing; E-Gov costs; as well as staff development and training to maintain and enhance work related skills and capabilities.

Reflects the anticipated needs for overhead, IT equipment, network/LAN access/usage cost, and maintenance/enhancement of staff knowledge, skills and abilities.

Office of Indian Energy Program Direction

Overview

The Office of Indian Energy Policy and Programs (hereafter referred to the Office of Indian Energy, or IE) serves all 567 Federally-recognized Indian tribes including Alaska Native villages, Village and Regional Corporations, and other tribal and intertribal organizations and associations. Energy and infrastructure development in Indian Country are limited due to a number of reasons including lack of access to capital, absence of tribal capacity for energy and economic development, and a complicated legal and regulatory structure governing the use of Indian lands. More than 175 Alaska Native villages rely almost exclusively on diesel fuel for electricity and heating oil for heat. In some communities, electricity costs exceed \$1.00/kilowatt-hour, more than eight times the national average, and 14.2 percent of tribal households lack access to basic electricity. However, an estimated 86% of Indian lands with energy or mineral potential remain untapped^a. For example,

- According to the U.S. Department of the Interior, there are “15 million acres of potential energy and mineral resources” that are undeveloped on Indian lands and only 2.1 million acres of Indian land are being tapped for their energy resources.”
- Revenue projects for energy resources on Indian lands amounted to nearly \$1.5 trillion.

IE assists in addressing these staggering gaps and barriers for Indian tribes interested in developing their vast undeveloped resources. The Office of Indian Energy accomplishes this through technical assistance, education and capacity building, financial assistance, and through policy initiatives, coordination with tribal, federal, and state governments, private industry initiatives, and related research and analysis.

Under technical assistance, subject matter experts assist Indian tribes, including Alaska Native villages with deploying energy projects, and provide high-level technical support for energy planning, project development, transmission interconnection, utility formation and intertribal coordination to (1) improve energy systems and economic conditions on tribal lands, (2) contribute to domestic energy production, and (3) enhance national energy security and resilience of remote, rural tribal communities. Research and analysis involves surveying energy needs and energy resources on Indian lands, including available infrastructure support, and developing strategies for electrification and energy deployment.

Financial assistance via cooperative agreements and grant awards to Indian tribes support the deployment of energy generation and energy efficiency projects, reducing the cost/use of energy on Indian lands and building the essential governmental and business capacity within and between tribes to foster sustainable tribal energy programs and infrastructure within tribal communities.

Policy initiatives include coordination and collaboration with various sectors of private industry and government that are critical to investment, job creation, project development and operation of energy systems and related natural resources throughout Indian Country, including the Indian Country Energy and Infrastructure Working Group (ICEIWG). ICEIWG advises the Secretary of Energy on behalf of Indian tribes and Alaska Natives throughout the nation regarding policy priorities. Industry sectors include finance (lending/debt, institutional and venture capital investment, foundation and other sources of capital), fossil fuel and technology. Additionally, efforts associated with the National Strategy for the Arctic Region will include increased collaboration with the U.S. Department of Defense in potential co-location of energy projects to serve both DOD facilities and Alaska Native communities, and allow for greater focus on technical assistance.

Program Direction provides federal staff responsible for the management and execution of IE’s programs and activities, as well as the associated support contractors, rent, supplies, and travel, and other related expenses. The staff is responsible for providing overall guidance and direction for DOE program offices on Tribal energy activities and initiatives necessary to achieve IE’s program objectives, and provide day-to-day management of national technical assistance, educational activities, and capacity building programs.

^a Regan, S. E., & Anderson, T. L. (2014). The Energy Wealth of Indian Nations. *LSU J. Energy L. & Resources*, 3, 195. <http://digitalcommons.law.lsu.edu/cgi/viewcontent.cgi?article=1048&context=ielr>.

The FY 2018 Budget anticipates 9 federal staff: 4 FTEs in Washington, D.C., 2 FTEs in Anchorage, Alaska, and 3 FTEs in Golden, Colorado. The Washington, D.C. staff includes executive leadership, operations, and policy analysis. The Anchorage, Alaska staff provide education, outreach, capacity building, and technical assistance to the nearly 230 Alaska Native villages, over 200 Alaska Native regional and village corporations, 13 Alaska Regional Corporations and 13 regional associations, and organizations to promote Indian energy policies and initiatives. The Golden, Colorado staff provide supervision, technical assistance, education, outreach, and capacity building delivered to within the contiguous US to nearly 340 Indian tribes and dozens of tribal and intertribal organizations, and manage over 70 existing grant awards throughout the nation.

Highlights and Major Changes in the FY 2018 Budget Request

The FY 2018 Request of \$10 million to fund the Office of Indian Energy includes: \$7.1 million to provide technical assistance and financial assistance to support energy development, energy efficiency improvements, electrification projects, remote community energy hybrid systems, and micro grid deployment; and \$2.9 million for Program Direction to support 9 FTEs.

**Office of Indian Energy
(\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Tribal Energy Deployment Program				
Technical Assistance	3,767	-	3,958	+191
Tribal Energy Grant Program	8,192	-	3,150	-5,042
Intertribal Energy Program	1,267	-	0	-1,267
Total, Tribal Energy Deployment Program	13,226	-	7,108	-6,118
Program Direction				
Salaries and Benefits	1,391	-	1,732	+341
Travel	221	-	150	-71
Support Services	480	-	350	-130
Other Related Expenses	682	-	660	-22
Total, Program Direction	2,774	-	2,892	+118
Total, Office of Indian Energy	16,000	15,970	10,000	-6,000
Federal FTEs	9	9	9	0

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown.

**Office of Indian Energy
Tribal Energy Deployment Program**

Overview

The Tribal Energy Deployment Program’s financial and technical assistance is critical to advancing sustainable energy innovation and deployment on Indian lands, reducing energy costs, and assisting economic development in tribal communities where unemployment and poverty rates far exceed national averages. This assistance is intended to overcome barriers to deploying energy generation projects (used for heat and electric power), as well as energy efficiency projects that result in reduced or stabilized energy costs, and more efficient energy usage.

Technical assistance overcomes barriers to project development and builds knowledge and skills necessary to implement energy projects on tribal land. It is available in the following areas: energy planning, housing and building energy efficiency, project development, resilience, village power, and policy and regulation. Other activities will address Tribal leader and Tribal staff training, an internship program, and education efforts to build capacity that supports tribal self-determination, self-sufficiency, and energy security.

The grant program funds energy development and deployment; energy efficiency; and other energy projects to address electrification needs on Indian lands and to enable economic development within these predominately impoverished communities.

Between 2010 and 2016, the Office of Indian Energy co-funded the deployment of 43 tribal energy projects valued at more than \$70 million. DOE’s investment of \$25 million in these energy and energy efficiency projects resulted in tangible results^a, including:

- Approximately 18.5 MW of new tribal energy generation capacity
- Annual electricity savings of 51 million kilowatt-hours (kWh) – enough to power about 4,700 U.S. homes for 1 year.
- Lower electricity prices for more than 2,500 tribal buildings and more than 29,000 tribal members.
- Total cost savings of about \$10 million annually and more than \$0.5 billion over the life of the projects.
- Every \$1 of DOE funding results in \$7.22 savings for Indian tribes.
- Reduced the average price of electricity for Alaska Native communities from \$0.55/kWh to \$0.13/kWh – roughly equivalent to the current U.S. average electricity price.

Highlights of the FY 2018 Budget Request

In FY 2018, the Office of Indian Energy will continue its technical and financial assistance. It will continue to administer the 70 existing financial assistance awards and respond to technical assistance requests it receives.

^a U.S. Department of Energy Office of Indian Energy Policy and Programs. Tribal Energy Project Successes. Available at <https://energy.gov/indianenergy/tribal-energy-project-successes>.

Office of Indian Energy

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Office of Indian Energy \$16,000,000	\$10,000,000	-\$6,000,000
Tribal Energy Deployment Program \$13,226,000	\$7,108,000	-\$6,118,000
Technical Assistance \$3,767,000	\$3,958,000	+\$191,000
<p>Technical Assistance includes education and capacity building to disseminate information to Indian Country through on-line training, regional/national workshops, webinars, and printed guides and materials.</p> <p>The Strategic Technical Assistance Response Teams (START), provided subject matter experts to assist Tribes with deploying clean energy projects. On-request assistance efforts provided high-level support for energy planning, project development, finance education, transmission interconnection, micro-grid integration, renewable energy technical analysis, and utility formation.</p> <p>Maintain internships at DOE National Laboratories and field sites for Native American graduate students interested in careers in the energy sector.</p>	<p>Technical Assistance includes education and capacity building to disseminate information to Indian Country through on-line training, regional/national workshops, webinars, and printed guides and materials.</p> <p>On-request assistance efforts provides high-level support for energy planning, project development, finance education, transmission interconnection, micro-grid integration, renewable energy technical analysis, and utility formation.</p> <p>Maintain internships at DOE National Laboratories and field sites for Native American graduate students interested in careers in the energy sector.</p> <p>Efforts will also focus on building partnerships and leveraging resources to maximize education, training, and technical assistance.</p>	<p>The FY 2018 request increases on-request technical assistance and eliminates the competitive START efforts.</p>
Tribal Energy Grant Program \$8,192,000	\$3,150,000	-\$5,042,000
Competitive grant program supported clean energy and energy efficiency deployment on tribal lands and in Alaska Native villages.	Competitive grant program to support energy and energy efficiency deployment on tribal lands and in Alaska Native villages.	The grant program will continue to administer 70 existing grants funded in prior years and offer new awards.
Intertribal Energy Program \$1,267,000	\$0	-\$1,267,000
The Intertribal Energy Program assisted tribes in building capacity to develop and manage their own energy programs and to leverage their tribal expertise for more focused and efficient delivery of programs to tribes.	Existing networks (8) funded in previous years will be administered.	No new activities will be undertaken.
Program Direction \$2,774,000	\$2,892,000	+\$118,000
Salaries and Benefits \$1,391,000	\$1,732,000	+\$341,000

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Nine (9) FTEs perform program management functions, implement program activities, budget execution and procurement functions, monitor over 200 grantee and contractor activities, and cross-cut and remote community renewable energy program activities.	No major changes	Increase will cover anticipated payroll increases and inflationary adjustments.
Travel \$221,000	\$150,000	-\$71,000
Travel required for Federal staff delivery of program management and Tribal Energy Deployment activities, including outreach and education, technical assistance, and project management to support the 567 Indian tribes throughout the nation, many of which are located in remote and rural areas.	No major changes anticipated	Anticipates less travel needed.
Support Services \$480,000	\$350,000	-\$130,000
Management, administrative, and operations support for Headquarters.	Management, administrative, and operations support for Headquarters.	Decrease anticipates consolidation of management, administrative, and operations duties from support service contracts to federal employees.
Other Related Expenses \$682,000	\$660,000	-\$22,000
Maintain funding for computer hardware and software services, Working Capital Fund (WCF) contributions, necessary office supplies, and other miscellaneous costs.	No anticipated changes.	Decrease is due to a reduction in the utilization of shared services and office space.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted		FY 2017 Annualized CR^a		FY 2018 Request		FY 2018 vs FY 2016
Program Direction Summary							
Washington Headquarters							
Salaries and Benefits	1,391		-		1,732		+341
Travel	221		-		150		-71
Support Services	480		-		350		-130
Other Related Expenses	682		-		660		-22
Total, Washington Headquarters	2,774		-		2,892		+118
Total Program Direction							
Salaries and Benefits	1,391		-		1,732		+341
Travel	221		-		150		-71
Support Services	480		-		350		-130
Other Related Expenses	682		-		660		-22
Total, Program Direction	2,774		-		2,892		+118
Federal FTEs	9		9		9		0
Support Services							
Management Support							
Administrative Support Contract	480		-		350		-130
Total Management Support	480		-		350		-130
Total, Support Services	480		-		350		-130
Other Related Expenses							
Energy IT Services - Desktop Services	132		-		100		-32
WCF	500		-		530		+30
Other Services	50		-		30		-20
Total, Other Related Expenses	682		-		660		-22

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above; below that level, a dash (-) is shown.

Department Of Energy
FY 2018 Congressional Budget
Funding By Appropriation By Site
(\$K)

Departmental Administration	FY 2016 Enacted	FY 2017 Annualized CR	FY 2018 Request
Chicago Operations Office			
Strategic Partnership Projects			
Strategic Partnership Projects	200	200	200
Total, Chicago Operations Office	200	200	200
Golden Field Office			
Office of Indian Energy Policy & Programs			
Office of Indian Energy Policy & Programs	9,533	9,646	3,300
Total, Golden Field Office	9,533	9,646	3,300
Idaho Operations Office			
Strategic Partnership Projects			
Strategic Partnership Projects	1,000	1,000	1,000
Total, Idaho Operations Office	1,000	1,000	1,000
Lawrence Berkeley National Laboratory			
Strategic Partnership Projects			
Strategic Partnership Projects	4,634	4,634	3,500
Total, Lawrence Berkeley National Laboratory	4,634	4,634	3,500
National Energy Technology Lab			
Chief Financial Officer			
Program Direction	285	0	0
Strategic Partnership Projects			
Strategic Partnership Projects	150	150	150
Total, National Energy Technology Lab	435	150	150
National Renewable Energy Laboratory			
Office of Indian Energy Policy & Programs			
Office of Indian Energy Policy & Programs	1,500	1,950	2,583
Strategic Partnership Projects			
Strategic Partnership Projects	510	510	500
Total, National Renewable Energy Laboratory	2,010	2,460	3,083
NNSA Albuquerque Complex			
Strategic Partnership Projects			
Strategic Partnership Projects	6,630	6,630	8,500
Total, NNSA Albuquerque Complex	6,630	6,630	8,500

Department Of Energy
FY 2018 Congressional Budget
Funding By Appropriation By Site
(\$K)

Departmental Administration	FY 2016 Enacted	FY 2017 Annualized CR	FY 2018 Request
Oak Ridge Office			
Chief Financial Officer			
Program Direction	0	0	1,484
Strategic Partnership Projects			
Strategic Partnership Projects	8,968	8,968	9,025
Total, Oak Ridge Office	8,968	8,968	10,509
Pacific Northwest National Laboratory			
Strategic Partnership Projects			
Strategic Partnership Projects	10,000	10,000	10,325
Total, Pacific Northwest National Laboratory	10,000	10,000	10,325
Richland Operations Office			
Strategic Partnership Projects			
Strategic Partnership Projects	100	100	100
Total, Richland Operations Office	100	100	100
Sandia National Laboratories			
Office of Indian Energy Policy & Programs			
Office of Indian Energy Policy & Programs	825	750	700
Total, Sandia National Laboratories	825	750	700
Savannah River Operations Office			
Strategic Partnership Projects			
Strategic Partnership Projects	6,700	6,700	6,700
Total, Savannah River Operations Office	6,700	6,700	6,700
Undesignated Lab/Plant/Installation			
Office of Technology Transitions			
Program Direction	0	0	6,876
Total, Undesignated Lab/Plant/Installation	0	0	6,876

Department Of Energy
FY 2018 Congressional Budget
Funding By Appropriation By Site
(\$K)

Departmental Administration	FY 2016 Enacted	FY 2017 Annualized CR	FY 2018 Request
Washington Headquarters			
Chief Financial Officer			
Program Direction	46,739	46,935	47,000
Chief Information Officer			
Program Direction	31,988	31,927	36,805
Cybersecurity and Secure Management	26,524	20,966	34,143
Corporate IT Program Support	14,706	20,186	20,495
Total, Chief Information Officer	73,218	73,079	91,443
Congressional, and Intergovernmental Affairs			
Program Direction	6,300	6,288	6,200
Economic Impact & Diversity			
Program Direction	10,000	9,981	10,000
Energy Policy and Systems Analysis			
Energy Policy and Systems Analysis	31,297	31,238	10,432
General Counsel			
Program Direction	33,000	32,937	33,000
International Affairs			
Program Direction	18,000	17,966	18,878
Program Direction			
Program Direction	24,500	24,453	25,500
Office of Indian Energy Policy & Programs			
Office of Indian Energy Policy & Programs	4,142	3,339	3,267
Management			
Program Direction	65,000	64,876	53,758
Departmental Administration			
Program Direction	0	0	15,192
Small and Disadvantaged Business Utilization			
Program Direction	3,000	2,994	3,000
Office of the Secretary			
Program Direction	5,008	4,998	5,300
Public Affairs			
Program Direction	3,431	3,424	6,589
Strategic Partnership Projects			
Strategic Partnership Projects	1,108	1,032	0
Total, Washington Headquarters	324,743	323,540	329,559
Western Area Power Administration			
Office of Indian Energy Policy & Programs			
Office of Indian Energy Policy & Programs	0	285	150
Total, Western Area Power Administration	0	285	150
Total, Departmental Administration	375,778	375,063	384,652

Inspector General

Inspector General

**Office of Inspector General
Proposed Appropriation Language**

For necessary expenses of the Office of Inspector General in carrying out the provisions of the Inspector General Act of 1978, [~~\$46,424,000~~] \$49,000,000 to remain available until *September 30, [2018]2019*.

Explanation of Changes

No change.

Public Law Authorizations

- Public Law 95-452, "Inspector General Act of 1978"
- Public Law 103-356, "Government Management Reform Act (GMRA) of 1994"
- Public Law 106-531, "Reports Consolidation Act of 2000"
- Public Law 107-347, "Federal Information Security Modernization Act (FISMA) of 2014"
- Public Law 111-5, "American Recovery & Reinvestment Act (ARRA) of 2009"
- Public Law 111-204, "Improper Payments Elimination and Recovery Act of 2010"
- Public Law 111-258, "Reducing Over-Classification Act"
- Public Law 112-194, "Government Charge Card Abuse Prevention Act of 2012"
- Public Law 112-199, "Whistleblower Protection Enhancement Act of 2012"
- Public Law 112-239, "National Defense Authorization Act for Fiscal Year 2013"
- Public Law 113-6, "Consolidated and Further Continuing Appropriations Act of 2013/2014 Omnibus Appropriations Act"
- Public Law 113-101, "Digital Accountability and Transparency Act"
- Public Law 114-117, "Grants Oversight and New Efficiency Act"
- Public Law 115-53, "Cybersecurity Act of 2015"

Office of Inspector General

(\$K)		
FY 2016 Enacted	FY 2017 Annualized CR ^a	FY 2018 Request
46,424	46,336	49,000

Overview

The Office of the Inspector General is dedicated to its mission to strengthen the integrity, economy and efficiency of the Department’s programs and operations. The OIG is able to accomplish its mission effectively, in part, because it has the authority to inquire into all Department programs and activities as well as the related activities of persons or parties associated with Department grants, contracts, or other agreements. As a result of its work, the OIG has consistently provided a positive return on its investment. The Office of Inspector General’s (OIG’s) average Return on Investment (ROI) is \$14.35 for every dollar appropriated.

The OIG focuses its efforts to enhance the efficiency and effectiveness of the Department’s programs and operations in the following key areas:

- **NNSA Modernization Efforts.** NNSA is undertaking a massive modernization effort that involves major projects (e.g., weapons complex transformation). Additionally, NNSA is slated to receive a significant increase in funding in FY 2018, which inherently increases operational risks. NNSA will benefit from OIG reviews that proactively seek to identify opportunities to improve the efficiency and effectiveness of their operations.
- **Environmental Management.** The federal government’s environmental liability was added to the Government Accountability Office’s (GAO) High Risk List in 2017. The OIG routinely reviews the efficacy of the Department’s environmental management programs, which annually expend approximately \$6,500,000,000, including the \$690,000,000 Hanford Waste Treatment Plant.
- **Hotline Allegations.** The OIG uses hotline allegations to identify potential areas of fraud, waste, and abuse. Changes in the Department’s operating environment (e.g., program elimination, increased NNSA funding) will likely increase the number of allegations received through the OIG Hotline.
- **Contractor Whistleblower Retaliation.** OIG conducts reviews of alleged contractor whistleblower retaliation that serve to inform health and safety issues throughout the Department.
- **Mission Support Costs.** OIG assists in identifying potential costs savings in areas such as the estimated \$5,900,000,000^b spent each year on National Laboratory support costs.

Loan Programs. The proposed elimination of Title 17 Innovative Technology Loan Guarantee program and the Advanced Technology Vehicle Manufacturing direct loan program may require the OIG to hire experts to assist with reviews to confirm compliance with loan terms and conditions and program termination requirements.

- **Cost Accounting Standards (CAS).** OIG provides reviews of Department contractors’ incurred costs and compliance with Cost Accounting Standards.
- **Contract Review.** OIG assesses the Department’s award and administration of approximately \$27,000,000,000^c in contracts.

Highlights of the FY 2018 Budget Request

The requested level for FY 2018 will ensure that the OIG can continue to operate at current levels and review the Department’s efforts in the following critical areas:

- Nuclear life extension projects;
- Weapons complex modernization efforts;
- Environmental Management;
- Project management;
- Cybersecurity; and
- Agency realignment, reorganization and cost reduction efforts.

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above, below that level, a dash (-) is shown.

^b Source: Department of Energy’s FY 2016 Institutional Cost Report

^c Source: USASpending.gov as referenced in the *Management Challenges at the Department of Energy – Fiscal Year 2017* report.

**Program Direction
Funding (\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR^a	FY 2018 Request	FY 2018 vs FY 2016
Washington Headquarters				
Salaries and Benefits	37,963	-	41,874	+3,911
Travel	1,690	-	1,536	-154
Support Services	765	-	500	-265
Other Related Expenses	6,006	-	5,090	-916
Subtotal, Program Direction	46,424	48,692	49,000	+2,576
Use of Prior Year Balances	0	-2,356	0	0
Total, Program Direction	46,424	46,336	49,000	+2,576
Federal FTEs	279	279	279	0
Support Services				
Management Support				
Federal Information Security Modernization Act (FISMA)	765	-	500	-265
Total, Support Services	765	-	500	-265
Other Related Expenses				
Council of the Inspectors General on Integrity and Efficiency (CIGIE)	125	-	135	+10
Information Technology	1,000	-	600	-400
Training	420	-	420	0
Working Capital Fund	3,172	-	3,166	-6
Other Related Expenses	1,289	-	769	-520
Total, Other Related Expenses	6,006	-	5,090	-916

^a The FY 2017 Annualized CR amounts reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above, below that level, a dash (-) is shown.

Program Direction

Activities and Explanation of Changes

FY 2016 Enacted	FY 2018 Request	Explanation of Changes FY 2018 vs FY 2016
Program Direction \$46,424,000	\$49,000,000	+\$2,576,000
Salaries and Benefits \$37,963,000	\$41,874,000	+\$3,911,000
Funding supports Federal staff with specialized skill sets (e.g., Certified Public Accountants, Technology Crime Investigators, Certified Fraud Examiners) who identify significant Departmental program and operational challenges.	Continue to identify significant Departmental challenges.	The funding increase reflects the OIG goal to increase its FTE usage to authorized levels. OIG will use a risk-based approach to focus resources on areas within DOE that have the greatest impact on the security and prosperity of the country, to include NNSA Modernization efforts and Environmental Management issues.
Travel \$1,690,000	\$1,536,000	-\$154,000
Funding supports travel to provide oversight at DOE's 25 geographically dispersed facilities.	Continue to perform audit, inspections, and investigations across the DOE complex.	The funding decrease reflects a reduction in travel associated with training.
Support Services \$765,000	\$500,000	-\$265,000
Funding supports required FISMA work for DOE and FERC.	Continue performing FISMA work for DOE and FERC.	The funding decrease reflects an OIG decision to perform a portion of the FISMA work using OIG FTEs.
Other Related Expenses \$6,006,000	\$5,090,000	-\$916,000
This funding includes training, which is critical for OIG staff to maintain required levels of proficiency and comply with the Inspector General Act. Funding also supports forensic hardware and software requirements needed to accomplish investigative responsibilities. Funds are included for mandatory support for CIGIE and to fund OIG's share of the DOE Working Capital Fund and Energy IT Services.	Continue to support training, information technology needs, and other requirements in the performance of OIG duties.	The funding decrease reflects a decrease in Energy IT Services costs, FOIA and HR Support, WCF, and Training costs. The OIG expects to have sufficient funds to support the training efforts of 279 FTE.

Department Of Energy
FY 2018 Congressional Budget
Funding By Appropriation By Site
(\$K)

Office of the Inspector General	FY 2016 Enacted	FY 2017 Annualized CR	FY 2018 Request
Washington Headquarters			
Office of the Inspector General			
Office of the Inspector General	46,424	46,336	49,000
Total, Washington Headquarters	46,424	46,336	49,000
Total, Office of the Inspector General	46,424	46,336	49,000

Working Capital Fund

Working Capital Fund

**Working Capital Fund
Program Mission
(\$K)**

FY 2016 Obligations	FY 2017 Estimate	FY 2018 Estimate
298,420	300,882	309,663

The Working Capital Fund (WCF or Fund) is a financial management tool for improving the financing and delivery of a range of common administrative services. Service delivery is assigned to business-line service managers; financial responsibility resides in a Fund Manager and individual Business-line Managers are responsible for billing and funds control. The Fund creates a framework for business-like organization of support functions and market-like incentives for both customers and suppliers. The objectives of the Fund include:

- Improve the efficiency of administrative services by providing managers with the opportunity and responsibility to make choices on the amount, priority, and sources of administrative services used by their programs;
- Ensure that program mission budgets include a fair allocation of the costs of common administrative services; and
- Expand the flexibility of the Department's budget structure to permit service providers to respond to customer needs.

Fund businesses maintain performance-based plans that inform the budget and alert the Fund Manager of the need to change pricing policies. The Fund Manager reviews financial and business performance each quarter. These reviews culminate in an Annual Report that includes analysis of financial measures, including each business line's performance against its standards and its accomplishments.

WCF charges full cost recovery for each business line in its budget and program billings. Full costs in Fund prices improve cost accounting for WCF activities, support improved decision-making for business-line operations and program spending, and allow the Fund Manager to benchmark against other federal agency equivalent costs. Good budgeting practice incorporates full costing, as laid out in OMB Circular A-94, to promote efficient resource allocation through well-informed decision-making that incorporates societal costs and benefits by the Federal Government.

This information will allow the Department to improve the efficiency of WCF service offerings. The Fund Manager has created controls to satisfy oversight requirements, including regular budget reports on spending. This is consistent with other agency WCFs and satisfies the need to recover costs in reimbursable activities.

WCF operations are valued by customers, serve the Department, and remain within the fiscal and policy guidelines established by the Department and by Congressional Committees. The Fund experienced an over-recovery of \$15,100,000 (only \$606,000 after internal adjustments) for its FY 2016 operations. Although net earnings for individual business-lines have fluctuated between positive and negative net position over the years, DOE is achieving its goal of sustained break-even operations.

The Department continues to examine ways to use the Fund to gain greater management efficiencies. The Fund has reported efficiency and effectiveness performance metrics since its inception and documents continuous improvement efforts to provide program customers with the best goods and services possible in accordance with other statutory requirements. Performance baselines include data recorded before the inception of the Fund. In addition to specific goals, the businesses describe strategies to improve resource utilization and accomplish objectives.

Working Capital Fund: Business-line Budgets

Table 1 summarizes projected customer billings by business-line. These billings are the result of established pricing policies, which provide the basis for programs to manage their utilization of the WCF and control their budgets. FY 2018 guidance approved by the WCF Board is that program office customers may utilize Program funding (as available and appropriate) for expenses that support program operations or agency mission/support and are independent of the number of staff: A-123/Internal Controls; Copy Services; Corporate Business Systems (all segments except Flexible Spending Accounts and Subsidy For Energy Employee Transit (SEET)); CyberOne; Financial Statement Audits; Interagency Transfers; Mail &

Transportation; Pension Studies; Printing & Graphics; Project Management Career Development Program (PMCDP); and Procurement Management. WCF expenses that support staff operations or provide staff benefits and fluctuate based on the number of staff, are funded from Program Direction: Building Occupancy; Flexible Spending Accounts and SEET; Corporate Training Services; Health Services; Overseas Presence; Supply and Telecommunications. Changes to WCF business-line amounts compared to the FY 2017 submission total \$8,783K due to: increases in A-123/Internal Controls (+\$916K), Building Occupancy (+\$5,115K), CyberOne (+\$1,850K), Telecommunications (+4,845K); Health Services (+175K) and Mail and Transportation (+26K); offset by decreases in Corporate Business Systems (-\$774K); Interagency Transfers (-\$2,093K); Supply (-\$656K); Corporate Training Services (-\$211K); Pension Studies (-\$178K); Overseas Presence (-\$106K); Procurement Management (-\$49K); Copy Services (-\$40K); Financial Statement Audits (-\$19K); Printing and Graphics (-\$13K); and Project Management Career Development Program (-\$5K).

Table 1
Working Capital Fund Budget Business-lines^a
(\$K)

	FY 2016 Obligations	FY 2017 Estimate	FY 2018 Estimate	FY 2018 vs FY 2016
A-123/Internal Controls	1,732	1,673	2,589	+857
Building Occupancy	133,920	107,116	112,231	-21,689
Copy Services	3,352	4,078	4,038	+686
Corporate Business Systems	43,811	47,933	47,159	+3,348
Corporate Training Services	2,275	3,099	2,888	+613
CyberOne	30,792	32,981	34,831	+4,039
Financial Statement Audits	10,347	12,185	12,166	+1,819
Health Services	1,546	1,700	1,875	+329
Indirect WCF	3,453	0	0	-3,453
Interagency Transfers	7,084	10,900	8,807	+1,723
Mail and Transportation Services	3,813	4,146	4,172	+359
Overseas Presence	13,541	16,388	16,282	+2,741
Pension Studies	217	735	557	+340
Printing and Graphics	4,677	4,528	4,515	-162
Procurement Management	3,327	16,313	16,264	+12,937
Project Management Career Development Program (PMCDP)	1,728	1,632	1,627	-101
Supplies	2,322	3,260	2,604	+282
Telecommunications	30,483	32,214	37,059	+6,576
Total, Working Capital Fund	298,420	300,882	309,663	+11,244

^a Numbers may not add due to rounding.

Table 2 summarizes projected customer billings by business-line and by customer program office. Further descriptions of these changes are included in the individual business-line sections that follow. Billing for customer organizations may change as a result of the final FY 2018 appropriations enacted for each program office.

Table 2
FY 2018 Working Capital Fund Budget Business-lines by Customer Program Office
(\$K)

ORG	A-123/INT CNTRL	BLDG OCCUP	COPY SVCS	CORPORATE BUSINESS SYSTEMS	CORP TRNG SVCS	CYBER-ONE	FIN STMT AUDITS	HEALTH SVCS	INTER-AGENCY TRANS	MAIL & TRANSP	OVERSEAS PRESENCE	PENSION STUDIES	PMCDP	PRINT & GRAPH	PROC MGMT	SUPPLY	TELECOM	TOTAL ALL ACTIVITIES	ORG	
TYPE \$*	P\$	PD\$	P\$	P\$/PD\$ (1)	PD\$	P\$	P\$	PD\$	P\$	P\$	PD\$	P\$	P\$	P\$	P\$	PD\$	PD\$	P\$+PD\$		
AR	\$ 31	\$ 2,139	\$ 10	\$ 647	\$ 8	\$ 420	\$ 147	\$ 16	\$ 76	\$ 55	\$ -	\$ -	\$ -	\$ 30	\$ 32	\$ 0	\$ 502	\$ 4,113	AR	
AU	\$ 16	\$ 7,759	\$ 465	\$ 493	\$ 86	\$ 219	\$ 77	\$ 88	\$ 78	\$ 198	\$ -	\$ -	\$ -	\$ -	\$ 177	\$ 51	\$ 163	\$ 1,544	\$ 11,414	AU
BPA	\$ -	\$ 121	\$ -	\$ 80	\$ 469	\$ -	\$ -	\$ 99	\$ 156	\$ 15	\$ -	\$ -	\$ -	\$ 1	\$ -	\$ 1	\$ 44	\$ 986	BPA	
CF	\$ 4	\$ 4,604	\$ 215	\$ 495	\$ 59	\$ 58	\$ 20	\$ 63	\$ 22	\$ 112	\$ -	\$ -	\$ -	\$ 61	\$ 26	\$ 81	\$ 1,128	\$ 6,948	CF	
CI	\$ 1	\$ 658	\$ 7	\$ 44	\$ 9	\$ 7	\$ 2	\$ 10	\$ 2	\$ 36	\$ -	\$ -	\$ -	\$ 16	\$ -	\$ 14	\$ 174	\$ 979	CI	
EA	\$ 7	\$ 1,894	\$ 60	\$ 162	\$ 32	\$ 88	\$ 31	\$ 24	\$ 25	\$ 80	\$ -	\$ -	\$ -	\$ 29	\$ 7	\$ 66	\$ 421	\$ 2,925	EA	
ED	\$ 1	\$ 735	\$ 67	\$ 70	\$ 10	\$ 12	\$ 4	\$ 8	\$ 3	\$ 39	\$ -	\$ -	\$ -	\$ 56	\$ 16	\$ 20	\$ 192	\$ 1,233	ED	
EE	\$ 201	\$ 11,066	\$ 621	\$ 3,550	\$ 181	\$ 2,699	\$ 945	\$ 138	\$ 498	\$ 244	\$ 651	\$ 13	\$ 24	\$ 1,970	\$ 966	\$ 321	\$ 3,810	\$ 27,899	EE	
EI	\$ 11	\$ 7,466	\$ 118	\$ 841	\$ 105	\$ 145	\$ 51	\$ 119	\$ 39	\$ 157	\$ -	\$ -	\$ -	\$ 116	\$ 58	\$ 74	\$ 750	\$ 10,051	EIA	
EM	\$ 531	\$ 7,058	\$ 344	\$ 8,614	\$ 243	\$ 7,138	\$ 2,500	\$ 137	\$ 1,662	\$ 205	\$ 326	\$ 99	\$ 776	\$ 171	\$ 5,111	\$ 212	\$ 2,398	\$ 37,523	EM	
EPFA	\$ 3	\$ 1,304	\$ 24	\$ 138	\$ 18	\$ 37	\$ 13	\$ 21	\$ 8	\$ 60	\$ -	\$ -	\$ -	\$ 43	\$ -	\$ 38	\$ 461	\$ 2,168	EPFA	
FE	\$ 74	\$ 3,252	\$ 92	\$ 2,521	\$ 158	\$ 996	\$ 349	\$ 68	\$ 245	\$ 119	\$ 326	\$ -	\$ 74	\$ 133	\$ 1,698	\$ 94	\$ 1,458	\$ 11,655	FE	
GC	\$ 3	\$ 4,609	\$ 72	\$ 350	\$ 65	\$ 37	\$ 13	\$ 66	\$ 13	\$ 92	\$ -	\$ -	\$ -	\$ 71	\$ 5	\$ 93	\$ 972	\$ 6,461	GC	
HC	\$ 2	\$ 2,288	\$ 84	\$ 291	\$ 47	\$ 29	\$ 10	\$ 48	\$ 11	\$ 111	\$ -	\$ -	\$ -	\$ 49	\$ 21	\$ 51	\$ 922	\$ 3,965	HC	
HG	\$ 0	\$ 787	\$ 9	\$ 92	\$ 6	\$ 7	\$ 2	\$ 7	\$ 2	\$ 22	\$ -	\$ -	\$ -	\$ 48	\$ -	\$ 4	\$ 88	\$ 1,075	HG	
IA	\$ 1	\$ 1,618	\$ 48	\$ 119	\$ 15	\$ 20	\$ 7	\$ 24	\$ 8	\$ 115	\$ 651	\$ -	\$ -	\$ 45	\$ 21	\$ 25	\$ 817	\$ 3,534	IA	
IE	\$ 2	\$ 100	\$ 8	\$ 23	\$ 1	\$ 22	\$ 8	\$ 2	\$ 4	\$ 6	\$ -	\$ -	\$ -	\$ 16	\$ 2	\$ 8	\$ 38	\$ 239	IE	
IG	\$ 4	\$ 2,029	\$ 24	\$ 341	\$ 62	\$ 52	\$ 18	\$ 38	\$ 20	\$ 58	\$ -	\$ -	\$ -	\$ 36	\$ 6	\$ 33	\$ 445	\$ 3,165	IG	
IM	\$ 7	\$ 5,926	\$ 113	\$ 259	\$ 48	\$ 93	\$ 33	\$ 39	\$ 43	\$ 251	\$ -	\$ -	\$ 2	\$ 92	\$ 37	\$ 158	\$ 3,189	\$ 10,291	IM	
SSA	\$ 20	\$ 4,878	\$ 86	\$ 532	\$ 47	\$ 263	\$ 92	\$ 63	\$ 56	\$ 274	\$ -	\$ -	\$ 2	\$ 69	\$ 2	\$ 140	\$ 827	\$ 7,352	SSA	
LM	\$ 14	\$ 412	\$ 23	\$ 256	\$ 19	\$ 193	\$ 68	\$ 8	\$ 41	\$ 24	\$ -	\$ 20	\$ 24	\$ 25	\$ 16	\$ 15	\$ 602	\$ 1,760	LM	
LP	\$ 2	\$ 3,684	\$ 71	\$ 186	\$ 57	\$ 23	\$ 8	\$ 33	\$ 11	\$ 74	\$ -	\$ -	\$ -	\$ 26	\$ -	\$ 44	\$ 709	\$ 4,929	LP	
MA	\$ 5	\$ 6,129	\$ 336	\$ 630	\$ 87	\$ 73	\$ 26	\$ 85	\$ 43	\$ 408	\$ -	\$ -	\$ -	\$ 267	\$ 221	\$ 145	\$ 2,038	\$ 10,493	MA	
NA	\$ 956	\$ 18,924	\$ 760	\$ 13,571	\$ 429	\$ 12,857	\$ 4,503	\$ 270	\$ 3,676	\$ 672	\$ 11,259	\$ 369	\$ 373	\$ 355	\$ 3,594	\$ 423	\$ 8,879	\$ 81,868	NA	
NE	\$ 82	\$ 2,264	\$ 69	\$ 1,474	\$ 85	\$ 1,103	\$ 386	\$ 66	\$ 327	\$ 112	\$ 2,418	\$ 8	\$ 103	\$ 110	\$ 47	\$ 60	\$ 1,129	\$ 9,844	NE	
NR	\$ 117	\$ -	\$ -	\$ 1,308	\$ 37	\$ 1,580	\$ 554	\$ 40	\$ 272	\$ 5	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5	\$ 12	\$ 3,930	NR	
OE	\$ 18	\$ 1,996	\$ 50	\$ 419	\$ 37	\$ 241	\$ 85	\$ 33	\$ 47	\$ 91	\$ 326	\$ -	\$ -	\$ 71	\$ 21	\$ 52	\$ 665	\$ 4,150	OE	
PA	\$ 0	\$ 365	\$ 39	\$ 55	\$ 5	\$ 4	\$ 1	\$ 8	\$ 2	\$ 18	\$ -	\$ -	\$ -	\$ 15	\$ 2	\$ 20	\$ 188	\$ 722	PA	
S	\$ 0	\$ 1,499	\$ 47	\$ 54	\$ 14	\$ 6	\$ 2	\$ 18	\$ 2	\$ 290	\$ -	\$ -	\$ -	\$ 90	\$ -	\$ 56	\$ 431	\$ 2,510	S	
SB	\$ 0	\$ 266	\$ 9	\$ 12	\$ 2	\$ 3	\$ 1	\$ 3	\$ 1	\$ 36	\$ -	\$ -	\$ -	\$ 12	\$ -	\$ 5	\$ 39	\$ 389	SB	
SC	\$ 469	\$ 6,283	\$ 165	\$ 7,625	\$ 209	\$ 6,309	\$ 2,210	\$ 185	\$ 1,325	\$ 180	\$ 326	\$ 49	\$ 244	\$ 186	\$ 4,262	\$ 181	\$ 1,615	\$ 31,821	SC	
WAPA	\$ 7	\$ 116	\$ 2	\$ 1,907	\$ 239	\$ 97	\$ -	\$ 51	\$ 90	\$ 11	\$ -	\$ -	\$ 4	\$ 128	\$ 43	\$ 2	\$ 573	\$ 3,270	WAPA	
TOTALS	\$ 2,589	\$ 112,231	\$ 4,038	\$ 47,159	\$ 2,888	\$ 34,831	\$ 12,166	\$ 1,875	\$ 8,807	\$ 4,172	\$ 16,282	\$ 557	\$ 1,627	\$ 4,515	\$ 16,264	\$ 2,604	\$ 37,059	\$ 309,663		

* Type \$ -- P\$ = Program funding; PD\$ = Program Direction funding.
 * Maximum amount is reflected for P\$; Program Office customers can still opt to use PD\$ funding at their discretion, within the authorization of their appropriation.
 * A number of DOE Program Offices have no P\$ funding, therefore their WCF share is financed with PD\$.
 1) Corporate Business Systems -- FSA & SEET segments = PD\$; all other segments = P\$.

The following section includes a description of each business-line, along with pricing policy and selected performance measures.

A-123/Internal Controls (formally Financial Reporting Control Assessment)

Description

The OMB Circular A-123, *Management's Responsibility for Internal Control* and Federal Managers' Financial Integrity Act (FMFIA), define management's responsibility for internal control and include guidance for management to assess the effectiveness of internal control.

A-123/Internal Controls will ensure the Department meets the intent of the Congress and the Executive Branch for internal control of financial reporting and has appropriate support for the Secretary's annual assurance statement, included as part of the Agency Financial Report. Because the requirements of OMB Circular A-123 apply to the Agency as a whole, each benefiting program must share the cost. In addition, DOE pricing policy incorporates the full costing requirements laid out in OMB Circular A-94 to promote efficient resource allocation through well-informed decision-making by the Federal Government for evaluating societal costs and benefits.

In order to support these goals, the business-line will develop, provide, and maintain the capabilities needed to implement a comprehensive Department-wide evaluation of internal controls over financial reporting. The technical support resources to maintain and support the evaluation data collection tools are currently not fully available in-house. Furthermore, the Department's internal controls over financial reporting are examined during our yearly external Financial Statement audit, requiring as-needed technical support to document some Financial Statement related internal control processes with DOE-wide impact.

Pricing Policy

The A-123/Internal Controls (formerly Financial Reporting Control Assessment) charges customers a pro rata allocation of costs based on percentage share of three prior fiscal years' combined budget shares, using the Congressional request of the most recent year. FY 2018 estimates reflect the three years (FYs 2015-2017) in the Department's FY 2017 Budget request to Congress. Departmental programs that use proprietary financial systems, for example, Federal Energy Regulatory Commission (FERC) and the Power Marketing Administrations (PMA's) will be excluded from billing for this business.

Budget increase is attributed to modification for existing Financial Management Assurance (FMA) tool (one-time request).

Building Occupancy

Description

The core services in the Building Occupancy Business-line include space management (rent), utilities such as heat and electricity, cleaning services, snow removal, facility operation and preventive and restorative maintenance, pest control, trash removal, and waste recycling. Engineering and facilities services include drafting of construction documents, developing scopes of work, construction management and inspection, value engineering, leasehold administration, lock repair and key management, safety and occupational health, moving and warehousing services, and conference support. This business also provides electronic services, which involve audio/visual meeting and conferencing support, as well as repair and maintenance of Headquarters radio communications and electronic equipment. Approved improvements to the Headquarters complex are also included.

Pricing Policy

Policy is based on direct costs and allocations in the following manner:

- Each year, organizations sign occupancy agreements that define the space to be assigned to them.
- On a building-by-building basis, direct rental value of the space assigned to each organization is calculated, based on rent charged to the Department by the General Services Administration (GSA). Customer rent costs are based on areas assigned to each organization at the start of each fiscal year.
- Common use space costs in each building are divided among the tenants of that building based on their proportional shares of direct rental costs.
- Certain additional costs, such as common area improvements and health and life safety programs, are allocated as a pro rata addition to the building-by-building charges described above.
- Electronic Services charges are allocated according to direct building occupancy costs.
- In addition, tenants may arrange, at their own cost, alterations of office space.
- Charges related to property management are allocated based on program usage during the prior fiscal year.
- FY 2018 estimates reflect historical costs for utilities as well as information provided by GSA as to the anticipated rent for future years, and projections of space usage in future years based on input from customer organizations, historical information, space availability, and Departmental objectives.

Budget increase is attributed to increases in utilities, facilities operations and maintenance support and GSA rent charges.

Copy Services

Description

This business provides the following services:

- Staffed photocopy centers at Forrestal and Germantown capable of reproducing 25,000 impressions per document;
- Centralized (walk-up) photocopy rooms;
- Dedicated (customer-assigned) photocopiers, including needs assessment analysis to determine workload and most appropriate equipment;
- Digital document management, including optical scanning of paper copy documents and storage on electronic files; and
- Digital news clips to programs based on subscriptions. (Note: News clips were previously provided as hard-copy documents prepared in the copy business.)

In FY 1996, before creation of the Fund, DOE Headquarters made over 100 million copies. The number of copies declined rapidly after creation of the Fund and has continued to decline. Currently, DOE Headquarters photocopies at an annual rate of 19 million copies.

Pricing Policy

Each office pays the full cost to maintain and supply its assigned dedicated photocopiers. For walk-up and staffed photocopiers, a cost per photocopy is calculated and programs are charged based on the number of photocopies made by program staff. The digitization pricing policy is to charge on a per-page basis to cover the costs of this business segment. FY 2018 estimates reflect amounts based on usage from the year prior to formulation (FY 2015).

Corporate Business Systems

Description

Corporate Business Systems (CBS) is the Department's solution for managing enterprise-wide systems and data. CBS is consolidating and streamlining Department-wide systems and business processes to integrate financial, budgetary, procurement, personnel, program, and performance information. CBS is supported at the core by a central data warehouse/portal that links common data elements from each of the Department's business systems and supports both external and internal reporting.

Consolidation of Payroll and CHRIS businesses into CBS was approved in 2008. Consolidation provides efficiencies in its administration and result in a single, senior business manager.

Standard Accounting and Reporting System (STARS) Segment provides the Department with a modern, comprehensive, and responsive financial management system that records and processes accounting transactions for general accounting, payments, receivables, purchasing including obligations and reservations, accruals, plant and capital equipment, nuclear materials accounting, and many other functions. STARS is also used for financial reporting including GTAS, Standard Form (SF) 220.9, SF 224, and the Department's financial statements. Costs include all operations and maintenance support, including the Chief Information Officer's Application Hosting and annual Oracle Software licensing.

Strategic Integrated Procurement Enterprise System (STRIPES) Segment replaced and consolidated federal corporate, regional and local procurement-related systems across the Department. STRIPES automates all procurement and contract activities required or directly associated with planning, awarding, and administering various unclassified acquisition and financial assistance instruments; thereby, increasing the internal efficiency of the Department. STRIPES is also fully integrated with STARS, creating efficiency between the two systems and improving the accuracy and timeliness of funding commitments and obligations. Costs include all operations and maintenance support, including the Chief Information Officer's Application Hosting and the annual Compusearch subscription fees.

iBudget Segment is a budget formulation solution that will support the collection and management of budget formulation data for OMB and Congressional budget submissions and provide a capability to automate the budget publication. Costs will include the operations and maintenance support provided by Treasury. Short and long-term enhancements are also being considered for the funds distribution process, currently supported by the Funds Distribution System (FDS) and the field budget systems (BEARS/FCDS).

iPortal/Information Data Warehouse Segment is the CBS face to its customers. It provides the gateway into all CBS applications and services. The Information Data Warehouse (IDW) provides capability to integrate and store data from various corporate and/or program systems for reporting using Business Intelligence reporting tools. The CBS iPortal/IDW provides many services that connect our people, simplify our work, and liberate our data. Costs will include the operations and maintenance of the technical infrastructure, consisting mostly of Application Hosting and annual software licensing fees.

Payment Processing Segment (formerly Oak Ridge Financial Service Center) The Oak Ridge Financial Service Center Processes all of the Department's payments. Completes over 140,000 payments annually. Costs include operations and maintenance of FAST, VIPERS, and DOE PAC systems.

Corporate Human Resource Information System (CHRIS) Segment is a nation-wide operational portfolio of systems within the Department that serves as the official system of record for human resource management information for all employees. CHRIS supports the Administration's strategic human capital management initiative and expands e-government within DOE, combining electronic workflow and other best practices in work processes with a web-based IT architecture and suite of software applications based on off-the-shelf products (PeopleSoft and Monster Government Solutions), and the legacy Employee Self-Service. This budget also funds Jobs One-Portal (J1P), recruitment using social media, and specific recruiting efforts to reach veterans and disabled veterans. In addition, costs for inter-agency contributions for electronic benefits are financed in WCF.

Digital Media Segment rationalizes hundreds of websites and streamline web operations, reducing duplicative spending, and improving overall digital communications. Costs will include the operations and maintenance of the technical infrastructure, consisting mostly of application hosting, iterative development, and platform upgrades to meet ongoing scale and usage demands.

Payroll Services Segment encompasses three areas: Payroll, Flexible Spending Account (FSA) administrative fees, and Transit Subsidy (SEET). Civilian payrolls are prepared based on authenticated documentation. Through the Defense Finance and Accounting Service (DFAS) this segment: computes, deposits, and reports Federal, State, and local income taxes; maintains employee records related to Civil Service and Federal Employees Retirement Systems (CSRS and FERS); reports retirement information to the Office of Personnel Management (OPM); and performs reconciliation of account balances with DFAS, OPM and Treasury. Accounts for and reports employee's health benefit coverage, thrift savings plans, transit subsidies (SEET), and unemployment compensation, among other non-salary employee payments. Processes donated leave into the Defense Civilian Pay System. Maintains and operates the Department's system of allocating payroll costs to the proper appropriation.

Pricing Policy

CBS activities charge programs a pro-rata allocation of costs based on percentage share of three prior fiscal years' combined budget shares, using the Congressional request of the most recent year. FY 2018 estimates reflect the three years (FYs 2015-2017) in the Department's FY 2017 Budget request to Congress. Exceptions to this pricing policy include:

- STRIPES charges based on the number of 1102 series system users recorded during the fiscal year prior to formulation (for FY 2018 this is FY 2015).
- ORFSC charges programs based on a pro-rata share of processed transactions during the fiscal year prior to formulation (for FY 2018 this is FY 2015).
- CHRIS and Payroll charges programs based on an allocation of Federal employment on-board by organization at the beginning of the formulation year (for FY 2018 this is FY 2016).
- SEET and FSA are charged to programs based on actual usage during the fiscal year. Estimates are derived from the twelve month period prior to formulation.

Corporate Training Services

Description

The Corporate Training Services (CTS) business-line combines Training Delivery and Services (TDS), Online Learning Center (OLC), OPM 360 Assessments and National Defense University (NDU) business segments to deliver courses which support the Department's mission at competitive pricing and fee for service pricing.

Energy Online Learning Center (OLC) Segment is a web-based commercial off-the-shelf training system that provides access to online learning and training. The goal of this business segment is to use technology to deliver learning activities to the desktop where such delivery can be demonstrated to improve learning outcomes and reduce costs independently or in combination with other training methods. The overall vision of the OLC program is to provide the capability for all DOE federal employees to have access to web-based training via the desktop. The OLC has been structured to meet DOE needs with a customized access process and DOE-specific information (including DOE-mandated training).

Training Delivery and Services (TDS) Segment includes the design, development, and delivery of competency-based courses to meet critical skills development needs in Project Management, Program Management, and Acquisition and Assistance Management.

A series of Continuing Education courses has been added to present new topics and refresher training. Program offerings include modular course design and customized training for on-site and centralized delivery. The TDS Program has over a 20-year track record of providing professional training and training services throughout the DOE complex. The training management services are offered to customers on a negotiated basis only.

OPM 360 Degree Assessment Program Segment provides services through an agency Agreement with the Office of Personnel Management. DOE's program is part of a larger effort to change the leadership culture throughout the agency. By administering leadership behavior assessments and simple, but targeted, evaluations of leadership training efforts, the Department can track changes in the perception of leadership behaviors over time and assess the effectiveness of leadership training. Participants are rated by people of varying relationships to the participant (e.g., peer, subordinate/direct report, and supervisor). Assessments will focus on leadership competencies most relevant to DOE's current strategic plan, and include items related to personal training experiences and the effectiveness of those experiences.

National Defense University (NDU) Segment provides services through an Interagency Agreement with the National Defense University (NDU/DOD) for DOE participation at the National Defense University (National War College) for Energy Master/Certificate Programs and the Advanced Management Program.

Pricing Policy

Pricing policy for Corporate Training Services business-line is as follows:

- OLC - Participating DOE organizations pay for OLC access through a fixed annual fee per student and allocation of administrative costs, based on number of employees per program.
- TDS - Participating DOE organizations in the TDS pay \$250/day for each employee enrolled in professional skills training course.
- OPM 360 - Participation in the OPM 360 Assessments is financed by the benefitting program; fees per person are based upon specific assessment options.
- NDU - Participation in the NDU is financed by the benefitting program; fees per person are based upon the specific training program.
- Federal staff support consists of program management, developing curriculum, contractor oversight of distance learning, and managing classroom delivery by contractor staff.
- FY 2018 estimates reflect amounts based on usage from the fiscal year prior to formulation (FY 2015), except OLC, which is based on an allocation of the number of employees on-board by organization at the beginning of the formulation year (FY 2016).

CyberOne

Background

The CyberOne Business-line consists of two Enterprise-wide capabilities to include: (1) Identity Credentialing and Access Management, and (2) Incident Response (IR) and Recovery. IR and Recovery consists of multiple Enterprise Cybersecurity Capabilities implemented through the DOE Joint Cybersecurity Coordination Center (JC3).

The CIO via the Office of the Chief Information Security Officer (CISO) manages the CyberOne line of business.

Description

Identity, Credential and Access Management (ICAM) Segment: The DOE ICAM program transforms Identity, Credential, and Access Management (ICAM) from a system or facility effort to an enterprise strategic resource for leveraging the enhancement of cybersecurity and the improvement of efficiency of business processes in each DOE Element. The ICAM program develops a comprehensive, enterprise solution that is in compliance with legislative and regulatory requirements as well as positions the Department to face today's ever increasing and complex security threat environment. The strategic goals for ICAM include:

- Increase security, which correlates directly to increased Personally Identifiable Information (PII) protection and minimize the number and impact of data breaches and trust violations.
- Achieve high degree of interoperability within the Department and with other Federal Agencies, thereby reducing the cost of ownership for application owners and utilizing new Cloud capabilities.
- Establish an enterprise and interoperable access management approach linking DOE Physical Access Control Systems (PACS) and Logical Access Control Systems (LACS) into a federated access management infrastructure.
- Foster an enterprise view of digital identity that facilitates the sharing of digital identity data across DOE Organizations, as well as with external DOE entities.
- Implement identity credentials at National Institute of Standards and Technology Level of Assurance 4.
- Foster a system-of-system approach where the DOE Organizations collaborate and cooperate in implementing ICAM, identifying mission needs and managing associated risks.

The Working Capital Fund (WCF) will support five CyberOne line of business services:

- **PKI-to-cloud** service to establish an enterprise Public Key Infrastructure (PKI) that is on the Federal Bridge and provides PKI certificates for interoperable and secure information exchange internal and external to DOE. Support for removing local certificates to comply with the Federal Bridge.
- **Personal Identity Verification (PIV)** enablement in support of Homeland Security Presidential Directive (HSPD)-12 directive and strong authentication through issuance and use of PIV cards.
- **Identity Management** service assigning DOE unique identifiers (DUID) to all staff and correlating digital identities across the department with federation to DOE entities and authoritative identity sources to include the GSA USAccess service providing identity verification services as part of the PIV card issuance process.
- **Unified Credentialing** service providing strong authentication solutions at Levels of Assurance 4 to supplement PIV where use of the PIV is technically infeasible such as the support to mobile devices.
- **Access Management** service based on a federated authentication architecture at the department level for seamless single sign on access to applications across the enterprise thus continually reducing the number of authentication credentials with an increased emphasis on the enablement of PIV card access to an increasing number of applications.

Joint Cybersecurity Coordination Center (JC3) Segment:

The JC3 integrates cybersecurity activities and delivery across the DOE enterprise into one collective program. The JC3 unifies the DOE enterprise, and provides a collaborative, intelligence-driven approach to cyber operations and defends the DOE full attack surface – spanning all labs, plants, PMAs, and offices. Increased communication streamlines and automates cybersecurity reporting and information sharing across DOE to strengthen cyber defense, detection, and response. Jointly,

DOE OCIO, NNSA OCIO, and DOE IN ensures the success of the JC3 through targeted program direction and enterprise governance.

Under Secretaries and line managers remain accountable for the security of the information and information systems under their purview and ensure Federal and contractor network and security operations centers cooperate fully with the JC3 while executing local organization or site cybersecurity activities. The cybersecurity program managers are responsible to their line management for coordinating Enterprise-wide cybersecurity requirements with the OCIO.

The JC3 provides Departmental, enterprise level, situational awareness in a rapidly increasing threat environment. Two of the most significant services in the JC3 portfolio are the Cooperative Protection Program (CPP), which provide cyber situational awareness, and the Cyber Federated Model (CFM), which enables cyber information sharing. The JC3 provides cybersecurity enterprise services and tools to customers Department-wide and facilitates enterprise cybersecurity training for the Department.

The JC3 integrates Departmental Incident Management capabilities and coordinates all enterprise activities including prevention, detection, containment, and recovery for all DOE Elements. This includes activities on both unclassified and classified networks through partnerships with DOE Programs with direct support to classified networks through the National Nuclear Security Administration (NNSA) and the DOE Office of Intelligence and Counterintelligence (IN). The JC3 also coordinates communications on behalf of the DOE for cybersecurity events and cyber emergency response with United States Computer Emergency Response Team (US-CERT) and other agency partners.

The JC3 employs enterprise services as key components on delivery enterprise coordination for the Department's Incident Response and Recovery. The CPP designs, operates, and enhances a system that collects high quality, information rich network data sets, enabling a more robust defense against adversaries targeting DOE assets. CPP maintains a cooperative partnership between DOE Headquarters Elements, the participating sites, and the analysis centers to provide the most effective use of the CPP collected data. Network sensors are capable of monitoring 10 Gigabit network links existing at over 90 DOE government and contractor facilities examining about 36 Terabytes/Day of raw network traffic, and generating over 1.4 Terabytes/Month processed data. This data is used by cybersecurity analysts to gain insights into the motives of our adversaries and enables a rapid response to emerging threats. CPP collaborates with other US Government agencies, commercial companies, and the open source community to continually enhance system sensing capabilities.

CFM is a JC3 service that has driven machine-to-machine sharing of cyber threat intelligence, speeding up proactive defense, and distributed detection for the Department's National Laboratories and site offices. CFM began with a pilot in FY 2004 and entered production status in FY 2009 and has distributed over seven million bad actor addresses to date. In FY 2014, over 1.5 million bad actor addresses were distributed with an average of five thousand per day. In many cyber incidents, timely sharing of information is often a second thought and CFM allows for the cyber systems to share, act and provide a coordinated defense 24x7x365 with minimal human interaction. CFM supports operation at machine speed in responding to cybersecurity threats and incidents. Flexible and customizable, CFM integrates the latest advancements and technologies developed by its project team members and partners. CFM can deliver signatures and indicators of compromise to automatically update cyber defenses, such as intrusion detection systems, intrusion prevention systems, and firewalls.

Pricing Policy

CyberOne charges programs a pro rata allocation of costs based on percentage share of three prior fiscal years' combined budget shares, using the Congressional request of the most recent year. FY 2018 estimates reflect the three years (FYs 2015-2017).

Financial Statement Audits

Description

Support services relating to the audit contract are required to attain contractor expertise, needed primarily for financial statement audits required by the Government Management Reform Act (GMRA) (e.g., actuaries, petroleum engineers, and

information technology support personnel). Oversight of this process and contract activities is provided by the Office of the Inspector General

Pricing Policy

The business-line charges customers a pro-rata allocation of costs based on percentage share of three prior fiscal years' combined budget shares, using the Congressional request of the most recent year. FY 2018 estimates reflect the three years (FYs 2015-2017) in the Department's FY 2017 Budget request to Congress. Departmental programs that use proprietary financial systems (e.g., the FERC and the PMA's) will be excluded from billing for this business.

Health Services

Description

The Health Services business-line provides common administrative services to the DOE Headquarters community. These services include Headquarters health centers, a drug testing program (DOE-wide), an employee assistance program, and disability services. The Department's analysis shows cost reductions will result from consolidating these activities under one enterprise with a focus on program demand for these services.

Health Center Segment consists of two HQ facilities: one at Forrestal and one at the Germantown. Services provided include: emergency response; travel immunizations; fitness-for-duty and pre-employment physical exams; annual influenza vaccinations; and general occupational health concerns. The health center is operated under an Interagency Agreement with the Department of Health & Human Services, Federal Occupational Health (HHS/FOH) to provide packaged services, which reduces costs and DOE resource needs.

Drug Testing Program Segment, a DOE-wide program, provides for collection, testing, and medical review of alcohol and drug testing. This activity supports testing of DOE positions for fitness-for-duty, pre-employment, and random drug testing and positions which require a clearance (e.g., security, technical, and/or executive positions) in line with Federal mandates (Executive Order 12564; Department of Transportation Regulations; and 49 Code of Federal Regulations Part 40). The Department has an existing Interagency Agreement with Department of the Interior to utilize their contracts, which reduces costs and saves DOE resources.

Employee Assistance Program (EAP) at Headquarters finances professional EAP counselors to offer assistance to DOE federal employees for family, work, health, and other concerns (work-life) in line with Federal mandates (Executive Order 12564; Public Law 79-658; Public Law 99-570 (5 U.S.C. §§7361 and 7362); Public Law 98-24 (42 U.S.C. §290dd-1); Public Law 96-24 (42 U.S.C. §290ee-1); Sec. 7361 and Sec. 7362 of Public Law 99-570; and the Public Health Services Act).

Disability Services coordinates contract vendors to provide sign language interpreting services for deaf and hard-of-hearing federal employees at Headquarters in line with Federal mandates (Rehabilitation Act of 1973, as amended).

Pricing Policy

Charges for Health Service segments are based on an allocation of Headquarters Federal employment on-board by organization at the beginning of the formulation year (for FY 2018 this is FY 2016). Charges for the Drug Testing segment are based on an allocation of DOE-wide Federal employment on-board by organization at the beginning of the formulation year (for FY 2018 this is FY 2016).

Interagency Transfers

Description

Interagency transfers are necessary to finance National Archives and Records Administration (NARA) storage and management of critical DOE records and the Integrated Acquisition Environment. Other activities include E-Government initiatives, which consist of consolidation studies of lines of businesses, agency assessments and other intergovernmental procurement systems.

The DOE Records Management Program ensures compliance with the Federal Records Act of 1950, as amended, by promoting the management of records throughout their life cycle in an economical, efficient, and effective manner. DOE maintains an annual agreement with NARA on records storage costs and appropriate records management and disposition, consistent with approved records schedules.

Integrated Acquisition Environment (IAE) provides a secure business environment that facilitates and supports cost effective acquisition of goods and services in support of mission performance. To accomplish this mission, IAE focuses on the following goals:

- Create a simpler, common integrated business process for buyers and sellers that promotes competition, transparency and integrity. Increase data sharing to enable better business decisions in procurement, logistics, payment, and performance assessment.
- Take a unified approach to obtaining modern tools to leverage investment costs for business-related processes.

IAE is operated under an Interagency Agreement with General Services Administration (GSA) to provide packaged services, reduce costs, and save DOE resources by leveraging economy of services. GSA is charged with the fiduciary responsibility to work across government to provide acquisition services to support agency missions by delivering timely acquisition tools and services, including but not limited to, the Central Contractor Registration, excluded parties list, electronic subcontracting reporting, federal business opportunities, federal procurement data, wage determinations, and others, as business requirements are identified by the acquisition community.

Per the Office of Personnel Management (OPM), agencies will need to contribute funding to cover credit monitoring and related services/benefits for the OPM cybersecurity incidents affecting Federal and contract employees. Coverage will include a suite of services (e.g., credit monitoring, call center/support services, and identity theft protection).

Pricing Policy

E-Gov and NARA - these activities will be charged to programs on a pro rata allocation of costs based on percentage share of three prior fiscal years' combined budget shares, using the Congressional request of the most recent year. FY 2018 estimates reflect the three years (FYs 2015-2017) in the Department's FY 2017 Budget request to Congress.

OPM Credit Monitoring - Program office cost shares are based on an allocation of HQ and Field credential numbers by organization from the formulation year (for FY 2018 this is FY 2015).

Mail and Transportation Services

Description

The Mail Center provides a variety of mail services for all official and other authorized mail for DOE and its employees. Services include the processing of all incoming postal mail, outgoing official mail, internal mail processing, accountable mail processing, pouch mail, a variety of overnight express mail services, messenger services, directory services, and pick-up and delivery services. In response to the risk of terrorism, the business-line has implemented various processes for sanitizing and testing mail against bio-terrorist attacks.

The Transportation Service includes shuttle bus operations, Headquarters executive transportation, motor vehicle fleet administration, and courier service. The shuttle bus operates between DOE Headquarter facilities; utilizing two bio-diesel buses. Executive transportation is provided to Headquarters executive staff for official business required to further the mission of the Department of Energy. Motor vehicle fleet administration includes fleet maintenance, monitoring and tracking fleet activity, conducting fleet management activities, and the vehicle maintenance program. Courier service is for the delivery and pick-up of sensitive and non-sensitive material within the Washington Metropolitan area.

Pricing Policy

Mail and transportation pricing has multiple components:

- Offices pay the actual dollar cost for outgoing United States Postal Service (USPS) mail and for Federal Express or other special mail services. Offices pay for internal mail distribution based on the number of mail stops.
- Offices pay for Mail Security based on their percentage of incoming USPS mail over the preceding six-month

period.

- Offices pay for Express Mail labor based on their percentage of the total volume of incoming and outgoing special mail during the preceding six-month period.
- Offices pay for USPS Outgoing labor based on their percentage of actual outgoing mail for the preceding six months.
- Offices pay for specified special services on a negotiated basis.
- Programs pay for shuttle bus services based on their prior year usage.
- Programs pay for courier and messenger services based on their prior year usage.
- Programs pay for Headquarters executive transportation services based on their prior year usage.
- FY 2018 estimates reflect amounts based on usage from the fiscal year prior to formulation (FY 2015)

Overseas Presence

Description

The Department has a long standing presence in several foreign capitals; this enables the Department to promote American trade and support critical treaties with our allies.

DOE funds 22 federal positions and 27 locally employed staff in ten countries that support the Secretary and, by extension, the entire Department. The business-line provides administrative and operational support service to Departmental personnel traveling overseas for mission programs.

The budget finances federal salaries, overseas operating costs, and International Cooperative Administrative Support Services (ICASS) and Capital Security Cost Sharing (CSCS) programs. The Department utilizes State Department resources as shared services to ensure that costs are minimized.

Pricing Policy

Charges for Overseas Presence are based on actual usage of these services by program offices. The annual bill for these charges will cover the fixed cost of the program and be allocated to programs based on the previous year's actual usage. FY 2018 estimates reflect allocations determined by the Overseas Presence Advisory Board based on negotiations with related programs.

Pension Studies

Description

Pension Studies provide program offices with an independent measure of contractor benefits and compare each contractor to both an internal and external benchmark. Program offices use the results of these studies in discussions with contractors regarding the need for reducing costs associated with contractor employee benefits. Results can be measured by the changes made to contractor employee benefit plans.

Pension Studies require access to actuarial expertise that is essential to understanding the implications on federal budgets of potential pension liabilities. Factors that impact pensions are dynamic and include: volatility of contributions, inflation, provisions in benefit plans, workforce restructuring, and pension legislation. These studies support the Department's budget projections, financial statements analysis, Office of General Counsel, and pension management plan.

Under the terms of the contracts that the Department has with each of its management and operations (M&O) contracts, the Department reimburses the contractors for reasonable costs associated with fulfilling their duties under the terms of the contract. These reasonable costs include costs associated with providing benefits to the contractors' employees. Beginning in 2009, the Department increased its oversight of these benefits and began annual reporting on the expected reimbursements for pension plans. DOE also reports on expected reimbursements for other postretirement benefits (primarily medical).

A key goal of this oversight is to improve transparency among the contractors with respect to the benefits being provided to the contractors' employees, as well as the associated annual cost per employee. The collection and analysis of this data requires a great deal of personnel, including the use of external actuarial services. However, publicizing the results of the survey has exerted pressure on the contractors to address the costs associated with their benefit plans. In addition, the Department has relied on external actuarial services to assist in the analysis of the information provided during the annual pension management review process, as well as in analyzing the impact of various proposals for cost reduction in the benefits provided by the different contractors. Given that there are approximately 50 pension plans and a similar number of postretirement benefit plans, analysis across the entire complex requires a significant amount of resources.

Pricing Policy

Programs will be charged based on each program's sites' ratio of the total pension and post-retirement reimbursements reported in the April Report to Congress for the prior fiscal year. FY 2018 estimates reflect allocations included in the 2016 Report to Congress.

Printing and Graphics

Description

The Printing and Graphics Business-line provides procurement and liaison services with commercial printers through the Government Printing Office. It also provides design and development of pre-press graphics, electronic forms and exhibits, and court reporting services. Contractor staff distributes materials produced in-house as well as materials produced by other government agencies. This business-line also provides professional photography, lab technicians, portrait studio operations, graphics, visual aids, and presentation materials. Centralized visual archives are provided through a repository of general interest photos.

Pricing Policy

Organizations pay direct costs for printing, printed products, Federal Register publications, and some graphics services. Additionally, programs pay maintenance costs on graphics equipment and graphics supplies as a percentage allocation of costs incurred in the previous fiscal year. FY 2018 estimates reflect amounts based on usage from the fiscal year prior to formulation (FY 2015).

Procurement Management

Description

Audit Services, Contract Closeout, and Purchase Card Surveillance business segments work together to help validate compliance with procedures and improve the internal controls of the Department. These segments also respond to specific issues raised by the Inspector General. Ultimately, savings to programs are realized by preventing fraud, waste, and abuse.

Audit Services Segment of the business actually represents funding to various federal audit agencies; however, the majority of the funding is provided to the Defense Contract Audit Agency (DCAA). DCAA and the Department of Health and Human Services (HHS) provide audit services to the Department's program offices and contracting officers in support of their acquisition activities. These services benefit the contracting officers in supporting their determination for reasonableness and realism of the contractor's proposed rates.

Contract Closeout Segment of the business is the final stage in contract administration support for DOE Headquarters elements. Services include ensuring that all contracted products and services have been delivered, final releases are obtained, final invoices and vouchers are processed for payment, and any remaining unexpended funds under the contract are released. Since FY 1996, the universe of contract instruments ready for closeout has been reduced from 3,000 to approximately 1,900 instruments. Over \$164 million has been de-obligated from expired contracts in the 19 years this activity has been operating as a Fund business. During FY 2016 the return on investment calculation shows that for every one dollar invested in the contract closeout activity, \$23 of uncosted funding was de-obligated from expired instruments.

As a result of the American Recovery and Reinvestment Act of 2009, it is anticipated that there will be a substantial increase in the number of financial assistance awards that will require closeout.

Purchase Card Data Mining segment monitors purchase card usage within the Department. DOE purchase cards are issued under a task order through the SmartPay2 program administered by GSA. Funding for this effort is derived from rebates DOE elements receive, based upon the dollar volume of purchases. The vendor provides a version of the data mining system, entitled to DOE at no cost for the basic version. This business unit will detect patterns, trends, and/or anomalies for use in risk management, spend patterns, and other areas of analysis.

Pricing Policy

Procurement Management pricing has multiple components:

- Closeout - each Headquarters element pays the actual contract closeout cost, determined by the unit price of each contract type and negotiated level of service.
- Purchase Card Data Mining costs are allocated based on the distribution of refunds resulting from the DOE purchase card program.
- DCAA audits are charged to programs based on actual usage from the previous fiscal year.
- FY 2018 estimates reflect amounts based on usage from the fiscal year prior to formulation (FY 2015).

Project Management Career Development Program

Description

The Project Management Career Development Program (PMCDP) provides a wide range of developmental, mentoring, training, and rotational activities which lead to project management certification. Project management certification under the program is based upon the requirements for training, developmental activities, and experience outlined in the certification standard contained in DOE Order 361.1B, Chapter IV, and meets the certification requirements of the Federal Acquisition Certification for Program and Project Managers defined in OMB OFPP Policy Memo dated December 16 2013. PMCDP defines necessary DOE project management knowledge, skills and abilities, as well as DOE training course requirements. Components of PMCDP also include a DOE career development tracking system and a DOE project management certification program.

Pricing Policy

In FY 2018, the business-line will continue to assess programs based on the number of projects, the amount of projects in the portfolio, and the number of incumbent project directors or potential project directors identified by the programs. Fixed costs related to the PMCDP will be charged to programs based on their pro-rata share of the number of projects and the value of those projects in the Project Assessment and Reporting System (PARS II). The variable costs of delivering courses will be charged to programs based on their pro-rata share of targeted participants. FY 2018 estimates reflect amounts based on programmatic statistics reported in PARS II and PMCDP Program participant profile data at the time of formulation (FY 2016). This data includes estimates of present and forecasted needs that include number of projects, portfolio value of projects, and the number of incumbent and candidate project directors.

In addition, we expect some programs outside of the assessment pool to desire participation in the training offered. In those cases, the business will allocate a certain number of slots, on a space-available basis, at the rate of \$200 per day. These charges will offset other development costs and future charges to the programs.

Supplies

Description

This business-line operates two self-service stores, which carry a wide variety of consumable office products. At customers' request, it acquires specialty items, not stocked in the stores. Products carried are based on review of equipment in the agency inventory and customer input and suggestions. This business operates the supply stores as a commercial operation,

which is paid only for the supplies purchased by DOE employees. In support of federal green purchasing Executive Orders and statutory mandates, the Headquarters supply stores (located in Forrestal and Germantown) offer a wide range of environmentally-friendly supplies that are energy efficient or contain post-consumer waste (recycled) materials, bio-based materials (biological, agricultural or forestry-based), and biodegradable materials (decompose easily).

Pricing Policy

Each organization pays for supplies purchased by its employees. FY 2018 estimates reflect amounts based on usage from the 12-month period prior to formulation (FY 2015-16); extraordinary or unusual changes in usage patterns are not anticipated in the Fund's estimates.

Telecommunications

Description

The Telecommunications Business-line consists of three comprehensive enterprise activities: Voice Services, Wireless Services and Network Services.

Voice Services Segment: Comprises an infrastructure connecting two main Headquarters buildings and satellite buildings for internal dialing and basic line service. The infrastructure includes communication networks, installed telephone processing switching equipment, and trained technical personnel. Telephone service includes local, long distance, and international dialing; specialized services such as operator-assisted conference calls, voice mail, call forwarding, automatic ring-back, and custom calling cards; and trained technical personnel to install, repair and operate the system. There are 11,839 telephone connections at DOE Headquarters. This segment also includes wireless communications and there are 8,352 wireless devices supported by the business line. The wireless device costs are monitored regularly and carrier plans are centrally adjusted to attain maximum savings.

Pricing Policy

Telephone system costs are allocated to Headquarters offices based upon four categories:

- Headquarters telephone system infrastructure costs, which are composed of: (a) the cost of the leased telecommunications circuits connecting the Headquarters buildings to the internal telephone system; (b) the cost of leased telecommunications circuits that support local, long distance and international calling; and (c) the cost of the technical staff who operate the Headquarters telephone switches, and install and repair the telephone wiring plant. Since the Fund's inception, program customers have been validating and reducing the number of active phone lines.
- The costs of dedicated communication circuits are allocated to organizations requesting installation of such lines.
- All long distance, local, and international calls at Headquarters are allocated to the originating telephones and thus to programs based on the actual billing information.
- All recurring wireless communication devices (smart phones, pagers, tablets, etc.) service contract costs and equipment purchases are charged to programs based on actual usage.

FY 2018 estimates reflect amounts based on usage from the 12-month period prior to formulation (FY 2015-16); extraordinary or unusual changes in usage patterns as well as purchases of new equipment, outside of the approved and budgeted refresh program, are not anticipated in the Fund's estimates.

Network Services Segment: Provides connectivity for DOE Headquarters and Field operations through Local and Wide Area Networks. This connectivity provides interoperability for 86 organizational Local Area Network (LAN) segments in two main Headquarters and associated satellite buildings; and connectivity to the Headquarters application host systems. There are 14,738 DOE Headquarters and Field LAN connections. LAN connections provide access to and cybersecurity for the internet, electronic mail, and other applications for information processing and sharing through infrastructure. It also provides connectivity to the entire national complex through DOEnet, which is a centrally managed DOE-wide area network designed to support DOE corporate systems and carry business sensitive data to users at 42 DOE sites.

Pricing Policy

Networking charges represent infrastructure costs which are composed of: (1) the cost of leased telecommunications circuits; (2) the cost of maintaining common network infrastructure components (routers, switches, etc.) and upgrades where needed; and (3) the cost of providing technical staff to install and repair network connections and monitor/operate the various common network components. These charges will be allocated among program organizations based on the number of active LAN connections, as a monthly charge. Since the Fund's inception, program customers have been validating the number of these connections. DOEnet costs are allocated to participating sites based on the costs associated with providing the service – circuit costs, hardware and maintenance costs, and the cost of providing technical staff. FY 2018 estimates reflect amounts based on usage from the 12-month period prior to formulation (FY 2015-16); extraordinary or unusual changes in usage patterns as well as purchases of new equipment, outside of the approved and budgeted refresh program, are not anticipated in the Fund's estimates.

Crosscutting Activities

Crosscutting Activities

Exascale Computing Initiative (ECI)
((\$K)

	FY 2016 Enacted	FY 2017 Annualized CR ¹	FY 2018 Request
DOE Office of Science	\$157,894	\$164,000	\$346,580
National Nuclear Security Administration	\$64,000	\$95,000	\$161,000
Total, Exascale Computing Initiative	\$221,894	\$259,000	\$507,580

Overview

The United States must retain its primacy in high-performance computing (HPC) to ensure its national security, economic prosperity, technological strength, and scientific and energy research leadership. Failure to address our national security, science, and increasing big data needs will open the door to other nations with demonstrated commitment to HPC investment to take the lead not only in high-end computing but also eventually in science, national defense, and energy innovation, as well as in the commercial computing market. If the U.S. defers the lead in HPC technology to other nations, the risks could include being subject to potential export controls exerted by these nations, as well as cybersecurity and computer supply chain risks. To achieve the exascale goal, the U.S. government must actively engage industry in HPC technology development. Past partnerships between the U.S. government and industry have led to the development of highly innovative technologies that met both federal government and private sector objectives.

In 2015, an interagency initiative was established to maximize the benefits of HPC for U.S. economic competitiveness, scientific discovery, and national security. Within that initiative DOE, represented by a partnership between the Office of Science (SC) and the National Nuclear Security Administration (NNSA), has the responsibility for executing a joint program focused on advanced simulation through an exascale-capable computing program, which will emphasize sustained performance and analytic computing to advance DOE missions. The objectives and the associated scientific challenges define a mission need for a computing capability of 2 – 10 exaflops (2 – 10 E¹⁸ floating-point operations per second) in the early to mid-2020s.

The FY 2016 DOE Stockpile Stewardship and Management Plan states that “joint investments by DOE’s Office of Science and NNSA in achieving exascale computing will directly support modeling and experiments as part of NNSA’s Stockpile Stewardship Program, while helping to ensure continued U.S. leadership of this critical capability.” As such, SC and NNSA are collaborating on the Exascale Computing Initiative (ECI), involving close coordination of future and relevant existing programs. Through a coordinated pursuit by government, industry, and academia, the key exascale challenges are: parallelism, system reliability, energy efficiency, and memory and storage. The ECI goal is to significantly accelerate the development and deployment of exascale-capable computing systems, applications and software infrastructure to meet national security needs and to provide next-generation tools for scientific discovery. The planned systems would provide a fifty-fold increase in sustained performance over today’s computing capabilities and enabling applications to address next-generation science, engineering, and data problems in support of DOE missions.

Future-generation systems will require significant changes in how high performance computers are designed and developed. The new designs proposed by industry to address the growing need for energy efficiency will result in massive parallelism, down to the processor level, which the HPC user community has never experienced before. We have reached a point where the continued improvement in processing performance requires breakthroughs to resolve the Von Neumann memory bottleneck, reducing power consumption, and solving unique problems of computing at unprecedented scales. As a consequence, DOE’s approach to overcoming HPC technology challenges is aimed not simply at realizing a single, albeit exceptional, computing performance objective, but rather at setting the U.S. on a new design trajectory to support a broad spectrum of capabilities over the succeeding years.

¹ FY 2017 amounts shown reflect the P.L. 114-254 continuing resolution level annualized to a full year. These amounts are shown only at the congressional control level and above, below that level, a dash (-) is shown.

Concurrent research and development (R&D) in applications that will optimally exploit emerging new exascale computing architectures is a critical component of a federally funded effort in exascale computing. These “extreme-scale” applications, i.e., applications enabled by exascale computing, must address the full spectrum of computing, including terascale and petascale as well as the targeted exascale applications. They should include those that support nuclear weapons stockpile stewardship, scientific discovery, energy technology innovation, electrical generation and distribution, nuclear reactor design and longevity, and data assimilation and analysis. SC and NNSA have already initiated R&D efforts in extreme-scale application development. Starting in FY 2017, these two offices began to provide leadership and assist with the enabling of the next generation of important applications to solve applied energy and national security problems.

In FY 2017, the SC R&D portion of the ECI was segregated into the Office of Science Exascale Computing Project (SC-ECP) as a new Exascale Computing subprogram in SC’s Advanced Scientific Computing Research (ASCR) program. ECP provides the R&D necessary to design an exascale-capable system. As a result, in the FY 2018 President’s Budget Request, exascale R&D funding is consolidated in the SC-ECP project, and ECI non-R&D funding, including non-recurring engineering investments, is consolidated in Leadership Computing Facilities (LCF). The LCF at Argonne (ALCF) and Oak ridge (OLCF) will support preparations for an exascale-capable system intended to be delivered in 2021. In addition, ECI also includes the portion of the FY 2018 Budget for Basic Energy Sciences (BES) investments that include computational materials applications related to exascale computing.

In FY 2018, the NNSA portion of the ECI is categorized as the Office of Advanced Simulation and Computing (ASC)’s Advanced Technology Development and Mitigation (ATDM) subprogram and the Lawrence Livermore National Laboratory Infrastructure modernization projects. The Los Alamos National Laboratory Infrastructure project is included as an accompanying FY ECI investment.

The DOE ECP was initially organized around three technical focus areas: 1) Application Development, which will target specific R&D activities and outcomes that address critical DOE missions applications; 2) Software Technology, with efforts that span low-level operational software to high-level applications software development environments, including the software infrastructure to support large data management and workflows; and 3) Hardware Technology, which supports vendor-based R&D efforts.

Highlights and Major Changes in the FY 2018 Budget Request

In FY 2018, DOE proposes to continue its efforts in three ECP technical focus areas. SC and NNSA will fund the relevant applications in their areas, equitably fund software technology projects to support each program’s application requirements, and jointly invest in vendors’ hardware technologies.

ECP Focus Area 1: Application Development

- Exascale Co-Design Centers, research to co-design, with industry, hardware and software architectures for a set of DOE mission-relevant applications;
- Readiness to Use Exascale-capable Systems, continuing the development of a suite of exascale applications software packages to ensure maximal scientific and engineering impact of the exascale systems.

ECP Focus Area 2: Software Technology

- Software Technology Research and Development, developing the many necessary, complex exascale software technologies, including programming environments, scientific data management, software productivity and resilience, libraries and frameworks.

ECP Focus Area 3: Hardware Technology

- Hardware Research and Development, to be conducted by computer vendors, aimed at developing exascale node and system architectures.

**Exascale Computing
Funding by Appropriation and Program
(\$K)**

	FY 2016 Enacted	FY 2017 Annualized CR	FY 2018 Request	FY 2018 vs FY 2016
Science				
Advanced Scientific Computing Research (ASCR)				
SC-ECP (17-SC-20)	\$0	\$0	\$196,580	+\$196,580
<i>ECP Focus Area 1: Applications</i>			\$110,580	
<i>ECP Focus Area 2: Software</i>			\$47,000	
<i>ECP Focus Area 3: Hardware</i>			\$39,000	
Argonne Leadership Computing Facility (ALCF)			\$100,000	+\$100,000
Oak Ridge Leadership Computing Facility (OLCF)			\$50,000	+\$50,000
Total, SC Exascale	\$157,894	\$164,000	\$346,580	+\$188,686
NNSA				
Advanced Simulation and Computing (ASC)				
Advanced Technology Development & Mitigation (ATDM)	\$64,000	\$95,000	\$158,000	+\$94,000
<i>ECP Focus Area 1: Applications</i>			\$46,000	
<i>ECP Focus Area 2: Software</i>			\$50,000	
<i>ECP Focus Area 3: Hardware</i>			\$40,000	
<i>Advanced Architecture System</i>			\$22,000	
Exascale Computing Facility Modernization (18-D-680)			\$3,000	+\$3,000
Total, NNSA Exascale ²	\$64,000	\$95,000	\$161,000	+\$97,000
Total, ECI	\$221,894	\$259,000	\$507,580	+\$285,686

¹ In FY 2016, exascale was funded in multiple ASCR activities; for FY 2017, the annualized CR amount based on the FY16 Request is shown; it is also the FY 2017 Request amount for the SC-ECP.

² In addition to funding requested to build exascale capability, NNSA is requesting \$22m to construct cooling equipment to support deployment of supercomputing.

Departmental Collaboration

ECP is being executed within a tailored project framework that follows DOE Order 413.3B, which defines critical decision points, overall project management, and requirements for control of a baselined schedule and cost. A single federal official from the Oak Ridge Site Office has overall responsibility for execution of the project, in partnership with a deputy federal project director from the Lawrence Livermore Field Office and they report to the cognizant SC and NNSA Headquarters program offices and are accountable to an Acquisition Executive, as defined in 413.3B. Project execution is governed by a baselined schedule and cost envelope, using Office of Science processes, and will follow defined processes for change control and management of contingency once the performance baseline for ECP is established.

Because of the breadth and complexity of the research and development of the applications, software environment and hardware technologies, along with the deployment of usable exascale computers for DOE, an Integrated Project Team (IPT) has been established through an IPT charter with defined roles and responsibilities. The IPT supports the federal official, who leads the IPT through the lifetime of the project.

ECP Focus Area 1: Application Development (\$156.6M)

SC: ASCR (\$110.6M)

As part of the SC-ECP project, ASCR will support the project to develop applications in this focus area. SC-ECP will build on ASCR's ongoing programs in applied mathematics and computer science, expertise in algorithms and methods, and scientific software tools and libraries to advance scientific discovery through modeling and simulation. In addition this activity supports the development and preparation of exascale applications critical to the scientific and energy missions of the Department and other Federal agencies and co-design between the ECP focus areas.

NNSA: ASC (\$46M)

NNSA will be responsible for determining the scope and management of the stockpile simulation application development that is included in this focus area. Confidence in the safety and reliability of the nuclear weapons stockpile relies on high-fidelity simulations of all of the physical processes occurring within a nuclear weapon and the processes that support the design, production, maintenance, and evaluation of the nuclear arsenal, including life extension programs and weapons dismantlement. The ASC integrated design codes (IDCs) model various aspects of nuclear weapons and each have several million lines of code to accurately reflect the multi-scale, multi-physics phenomena occurring in a nuclear weapon. The accuracy of these IDCs underpins confidence in the U.S. nuclear deterrent and must be improved to ensure continued future confidence in the nation's stockpile. Exploiting the multi-level parallelism demanded by emerging architectures leading to exascale requires significant investment for new stockpile simulation code development over the next 7-10 years. This funding will fund the development of new hostile environment simulation capabilities. It will also extend the development of next-generation integrated weapons design codes and the full basis set of codes to include needs for specific materials, high explosives, and for inertial-confinement-fusion and equations-of-state data. These activities will require support for additional co-design teams, as well as increased support for the existing teams that currently conduct annual assessment activities for the suite of nuclear weapons missions. Funding also supports projects at the NNSA Labs that will seek to increase the capacity and capability of an enduring national HPC ecosystem via inter-agency collaborations with other U.S. Federal agencies.

ECP Focus Area 2: Software Technology (\$97M)

SC: ASCR (\$47M)

As part of the SC-ECP project, ASCR's investments in the Software Technology focus area will provide the required software that effectively bridges between the other focus areas of the ECP. In FY 2018 the SC-ECP the software technology effort will continue to identify and support the research and development needed to either extend current technologies or conceive new approaches necessary to allow application developers to develop next-generation highly parallel applications that can fully utilize exascale architectures and that are resilient to hardware faults.

NNSA: ASC (\$50M)

Since the late 1990s, NNSA has a track record of successfully executing large, technically complex computational projects to support its mission. Where appropriate, ASC will make strategic investments in ECP ST to directly support its stockpile stewardship code development requirements. Funding will support further development of compilers and math libraries for the NNSA suite of integrated design codes that are aligned with the algorithms and approaches used in those codes. This focused research is needed to optimize the performance of the algorithms within the overall simulations that are the most time demanding or require highest control of precision in numerical approximations. Also, investments will be made in various performance analysis tools and visualization techniques to aid code developers and users to navigate on the new advanced architecture systems.

ECP Focus Area 3: Hardware Technology (\$79M)

SC: ASCR (\$39M)

In partnership with NNSA, ASCR investments will support the Hardware Technology focus area, providing funds to support research and development to deliver critical exascale hardware technologies through the PathForward program. PathForward will invest in multiple vendors' critical technologies research and development, in partnership with the vendors, to reduce technical risks by ensuring architectural diversity and that DOE application requirements are factored into the design of the future exascale systems.

NNSA: ASC (\$40M)

SC and NNSA will jointly fund and manage the vendor R&D PathForward projects that were selected under this focus area in FY2017. Where appropriate, ASC will make strategic investments to directly support its stockpile stewardship code development requirements, such as scalable and high-performance interconnect technologies, multi-level memory and burst buffers.

Other Non-Focus Area ECI Investments (\$175M)

SC LCF Investments (\$150M)

ASCR will provide the ECP teams with access to current testbeds and upgraded systems in the ALCF and OLCF as well as systems at the National Energy Research Scientific Computing Center (NERSC). ASCR will also invest in Non-recurring engineering activities at the LCFs, as necessary, with the intention to deliver at least one exascale system in 2021.

NNSA Advanced Architecture System (\$22M)

NNSA will procure a multi-PetaFLOPS advanced architecture system for the initial testing and iteration of its next-generation integrated design codes. Funding will also be for preparations at the NNSA HPC centers to host the incoming advanced hardwares.

NNSA Infrastructure Modernization ASC (\$3M)

NNSA will upgrade the structural, mechanical, and electrical capacities at Lawrence Livermore National Laboratory to prepare for the hosting of ASC's 2020 pre-exascale system. Funding for the \$3M Lawrence Livermore project (Exascale Computing Facility Modernization or ECFM) will be sourced from ASC FOUS subprogram.

Key Accomplishments and Objectives

FY 2015 Key Accomplishments

- Released the document, "Preliminary Conceptual Design for an Exascale Computing Initiative."
- Initiated the DesignForward2 program. The goal of this program is to fund computer vendors to develop conceptual designs for an exascale computer, including modeling of important system characteristics.
- Initiated a program to perform research on Resilience for Extreme-Scale Supercomputing Systems.
- Completed the ECI performance baseline.
- Announced the Argonne National Laboratory system under the CORAL procurement.
- Developed and initiated a plan to gather detailed hardware and software requirements for SC program offices for future computing resources.
- Continued application portability activities to prepare for FY 2016-FY 2017 planned upgrades to SC facilities.

2016 Key Accomplishments

- Formally started the DOE Exascale Computing Initiative.
- Initiated the ECP and established Project Office at Oak Ridge National Laboratory.
- Initiated the first set of ECP projects in the areas of Application Development, Co-Design and Software Technologies. Initiated greater engagement with the applied energy offices.

- Initiated interaction with other U.S. agencies to establish co-design centers for their application areas of interest.
- Completed exascale requirements gathering activities with SC program offices.
- Deployed Cray/Intel upgrade at the Lawrence Berkeley National Laboratory and at Argonne National Laboratory.
- Achieved approval of Mission Need statement at Critical Decision-0 (CD-0) for ECP in July 28, 2016.

FY 2017 Planned Activities

- Achieve approval of the ECP Alternatives Selection (CD-1) and of Long Lead Procurement (CD-3A) to invest in hardware technology research and testbeds after the appropriate independent project reviews.
- Initiate the additional ECP projects in the areas of software technologies and co-design centers.
- Initiate the additional ECP application development projects.
- Finalize site preparations activities for CORAL upgrades at the OLCF and LLNL.
- Begin deployment of Summit, the CORAL system at the OLCF.
- Renegotiate the CORAL ALCF contract with Intel/Cray to include non-recurring engineering investments for the intended delivery of an exascale capable system in 2021.
- Develop and approve CORAL II Mission Need Statement to begin planning for an exascale capable system at the OLCF in 2021-2022 and at LLNL in 2022-2023.
- Establish six ECP Hardware Technology Path Forward contracts.
- Held the first annual meeting of the ECP project teams with over 400 participants.

FY 2018 Key Objectives

- Accelerate development of NNSA's next-generation integrated design code and develop new hostile environment simulation capabilities.
- Improve NNSA proxy applications to enhance co-design interactions with computer vendors.
- Deploy advanced hardware test beds to assist in the performance analysis of NNSA's next-generation weapons codes.
- Complete Analysis of Alternatives, CD-1, CD-2/3, and final construction design for the Lawrence Livermore ECFM Project.
- Complete deployment of Summit and begin operations at the OLCF.
- Approve the Alternatives Analysis and Procurement of Long Lead Time items (CD1/CD3A) for the CORAL II system at the OLCF.
- Convene the second annual meeting of the ECP project teams to review progress.

**Cybersecurity
(\$K)**

FY 2016 Enacted	FY 2018 Request
328,238	371,690

Overview

The Department of Energy (DOE) is engaged in cyber-related activities to protect the DOE enterprise and mitigate risk, including government-owned, contractor-operated sites, from a range of cyber threats that can adversely impact mission capabilities; and activities to improve cybersecurity in the electric power subsector and the oil and natural gas subsector. The Cybersecurity Crosscut highlights the Department’s efforts to protect the DOE enterprise and improve energy sector cybersecurity. This request bolsters DOE cybersecurity functional capabilities to identify, protect, detect, respond, and recover from the increasing incidence of cyber-attacks. The cybersecurity crosscut supports central coordination of the strategic and operational aspects of cybersecurity and facilitates cooperative efforts such as the Joint Cybersecurity Coordination Center (JC3) for incident response and the implementation of Department-wide strong authentication (Identity, Credential, and Access Management (ICAM)).

As highlighted in *America First, A Budget Blueprint to Make America Great Again*, the Cybersecurity Crosscut supports the Office of Electricity Delivery and Energy Reliability’s capacity to carry out cybersecurity and grid resiliency activities that would help harden and evolve critical grid infrastructure. DOE is the Homeland Security Sector-Specific Agency for the energy sector and has a number of responsibilities, including: 1) collaborating with infrastructure owners and operators to strengthen the security and resilience of critical infrastructure; 2) serving as the day-to-day Federal interface for the prioritization and coordination of sector-specific activities; 3) carrying out incident management responsibilities consistent with statutory authority and other appropriate policies; and 4) providing technical assistance to the energy sector to identify vulnerabilities and help mitigate incidents, as appropriate. The Department of Homeland Security considers the Energy Sector uniquely critical because it provides an enabling function across all critical infrastructure sectors.

The FY 2018 DOE cybersecurity goals are to:

- Protect the DOE Enterprise including Government-owned Government Operated, and Government-owned Contractor-operated sites, from a wide range of cybersecurity threats that can adversely impact the DOE mission, and implement an effective risk management framework; and to,
- Improve cybersecurity in the electric power sub-sector and the oil and natural gas sub-sector.

Highlights and Major Changes in the FY 2018 Budget Request

Funding for **Protecting the DOE Enterprise** reflects increases in both Headquarters Cybersecurity of \$12 million and Field Cybersecurity of \$51.4 million to protect DOE networks against cyber threats.

- The Working Capital Fund – CyberOne increase of \$1.9 million includes initiatives in the enterprise Identity Credential and Access Management (ICAM). ICAM provides strong authentication services for access management to networks, applications, and facilities.
- The Office of the Chief Information Officer’s cybersecurity funding increases by \$7.6 million to modernize DOE’s Network Security through the implementation of a secure, robust, and capable network, built on interoperable standards and architectural principles. The initiative includes: establishing a secure connectivity to cloud service provider networks; optimizing the WAN circuit; updating the Fiber Cable Plant and the network to improve resiliency; integration of the unclassified Security Operations Center (SOC) and Incident Response capabilities to improve DOE’s response to a cybersecurity event; securing mobile devices; and migrating to a commercially-managed Trusted Internet Connection (TIC) Service to reduce and consolidate external access points and increase secure monitoring.

- In FY 2018, the Office of the Chief Financial Officer is added to the Crosscut with a \$963,000 request to support safeguarding DOE corporate business systems, including financial management, budget, human resources, payroll, procurement, and travel systems.
- Defense Environmental Cleanup restructured its budget to consolidate cybersecurity funding. The increase supports efforts to implement the Department's High Value Asset and Continuous Diagnostics and Mitigation programs. EM's cybersecurity activities will also strengthen capabilities at Field Sites and at Headquarters to better support EM's Industrial Control Systems and modernize legacy information technology assets.
- NNSA's Weapons Activities funding increases by \$17.6 million and supports baseline cybersecurity operations and activities at NNSA M&O and Federal sites. It also enables the mission support contractor to provide Multi-Factor Authentication related policy and governance oversight support and includes the necessary funding to support the implementation of Continuous Diagnostics and Mitigation and provide enhanced telecommunication services for the nuclear security enterprise and infrastructure. The increase also continues the modernization of the ESN by enhancing the core services, collaborative capabilities, and cyber security; consolidating disparate networks; deploying and operating the PKI capabilities for authentication to secret networks and applications, and fully utilizing the Energy Sciences Network (ESNet) to provide a high performance networking environment.
- Nuclear Energy's funding increase of \$2.3 million supports the addition of essential cybersecurity specialists, lifecycle hardware/software upgrades for classified and unclassified systems, including maintaining Industrial Control Systems, and network forensics capabilities for increased intrusion detection and response.

Funding for **Energy Sector Cybersecurity** is provided within the Office of Electricity Delivery and Energy Reliability's Cybersecurity for Energy Delivery Systems (CEDS) program. OE's CEDS program supports game-changing early stage R&D at national laboratories to develop the next generation of control systems, components, devices and systems with engineered-in cybersecurity features, and a continuous monitoring capability that will significantly increase our awareness into cyberattacks across the nation's power grid. The decrease of \$20 million includes a \$10.0 million reduction for the completion of the Virtual Energy Sector Advanced Digital Forensics Analysis Platform and its transition to the private sector in FY 2017; and \$10 million is the result of Congressionally Directed efforts in FY 2016 not funded in FY 2018. The remainder of the CEDS budget includes an increase to establish an Energy Delivery System (EDS) cybersecurity testing and analysis laboratory with a focus on supply chain vulnerabilities and risks, offset by a reduction due to completion of Cybersecurity Capability Maturity Model (C2M2) toolkit development.

(\$s in thousands)

	FY 2016 Enacted	FY 2018 Request	FY 2018 vs. FY 2016
Protecting the DOE Enterprise			
<u>Headquarters Cybersecurity</u>			
Chief Financial Officer	--	963	+963
Chief Information Officer	26,524	34,143	+7,619
Working Capital Fund - CyberOne	32,980	34,831	+1,851
Energy Information Administration	851	885	+34
Enterprise Assessments	4,039	5,619	+1,580
Environment, Health, Safety and Security	5,409	5,409	-
<i>Subtotal, Headquarters Cybersecurity</i>	<i>69,803</i>	<i>81,850</i>	<i>+12,047</i>
<u>Field Cybersecurity</u>			
Defense Environmental Cleanup*	16,332	43,342	+27,010
Energy Efficiency and Renewable Energy	2,190	3,680	+1,490
Fossil Energy Research & Development	1,750	3,183	+1,433
Legacy Management	922	1,130	+208
Nuclear Energy	14,466	16,856	+2,390
Science	26,888	27,310	+422
Strategic Petroleum Reserve	1,299	2,111	+812
Weapons Activities	132,588	150,228	+17,640
<i>Subtotal, Field Cybersecurity</i>	<i>196,435</i>	<i>247,840</i>	<i>+51,405</i>
Subtotal, Protecting the DOE Enterprise	266,238	329,690	+63,452
Energy Sector Cybersecurity**			
Electricity Delivery & Energy Reliability	62,000	42,000	(20,000)
Total, Cybersecurity	328,238	371,690	+43,452

* Defense Environmental Cleanup was restructured to consolidate cybersecurity funding. The increase reflects programmatic initiatives, as well as moving all cybersecurity, including cybersecurity at field sites to direct funding.

**This table does not include distributed funding within FE and NE for Nuclear Energy and Fossil Energy power generation systems.

Research and Development Crosscut

The Budget for the Department of Energy (DOE) demonstrates the Administration's commitment to increasing reliance on the private sector to fund later stage research, development and commercialization of energy technologies and focuses resources toward early-stage research and development (R&D)

The DOE supports R&D activities and facilities to ensure that the U.S. remains at the leading edge of discovery and to provide the science and technology to fuel innovation and long-term economic growth. The vast scope of the R&D activities encompasses high priority areas such as advanced manufacturing, clean energy, and climate research; and the operation of a large suite of scientific user facilities in support of the R&D activities.

The Department's R&D reporting includes administrative activities necessary to the success of the R&D programs. These activities include program direction, safeguards and security, and infrastructure funding that support the R&D programs. The table below is consistent with government-wide and international R&D reporting practices. This funding was not included in the R&D reporting in the FY 2016 and prior year budget justifications.

The Department's budget in FY 2018 emphasizes energy technologies best positioned to enable American energy independence and domestic job-growth in the near to mid-term. Highlights of the R&D budget are as follows:

- The Office of Science refocuses resources on its core mission to facilitate cutting edge, early-stage research. The Budget Request provides robust funding for the national laboratories, ensures operation of Office of Science user facilities, and accelerates the Nation's path to exascale computing.
- Energy Efficiency and Renewable Energy will focus resources on early stage R&D across a variety of technologies that support American energy independence and domestic job-growth.
- Electricity Delivery and Energy Reliability funds are focused on early stage R&D on technologies to improve grid reliability, efficiency, flexibility, functionality and security. The proposal also supports grid analytics, technical assistance, permitting, and R&D on next-generation, early stage grid cybersecurity solutions.
- Nuclear Energy funds focus on early stage R&D, and funds promising emerging technologies with the highest potential pay-off for accident tolerant fuels and advanced reactor technologies, with additional support for Nuclear Energy Enabling Technologies cooperative research with universities and industry. The request invests in crosscutting technology development for next generation reactor technologies, including early-stage research on advanced small modular reactors.
- Fossil Energy Research and Development funds focus on cutting edge, early stage R&D that will develop innovative new technologies for adoption, demonstration and deployment by the private sector. This will bolster energy security and domestic energy production, while advancing clean coal technologies.
- In line with Administration priorities, the Budget Request terminates the Advanced Research Projects Agency—Energy, while funding federal staff to oversee existing awards to completion.

Within the Nuclear Security dimension the Budget Request makes key R&D investments in science and technology innovation to support the stewardship of the nuclear weapons stockpile and modernization of the nuclear security enterprise; protecting America from nuclear threats around the world; and propelling the nuclear Navy.

The following table details funding of R&D in the budget by categories; basic, applied, development, equipment, and related construction; and program office.

Research and Development (\$K)¹

	FY 2016 Enacted²	FY 2018 Request	FY 2018 vs FY 2016
Basic Research			
Bonneville Power Administration Fund	4,868	4,400	-468
Science	4,452,419	3,829,898	-622,521
Electricity Delivery and Energy Reliability	5,844	8,290	+2,446
Fossil Energy R&D	6,087	15,279	+9,192
Nuclear Energy	32,430	9,940	-22,490
Defense Nuclear Nonproliferation	60,230	113,204	+52,974
Weapons Activities	0	0	0
Total, Basic Research	4,561,878	3,981,011	-580,867
Applied Research			
Bonneville Power Administration Fund	2,522	2,550	+28
Science	0	0	0
Electricity Delivery and Energy Reliability	78,424	59,516	-18,908
Energy Efficiency and Renewable Energy	640,428	534,132	-106,296
Fossil Energy R&D ³	225,223	290,299	+65,076
Nuclear Energy	734,146	592,188	-141,958
Advanced Research Project Agency - Energy ⁴	145,500	0	-145,500
Environmental Management	5,712	9,240	+3,528
Defense Nuclear Nonproliferation	162,913	169,500	+6,587
Weapons Activities	3,338,779	5,197,897	+1,859,118
Total, Applied Research	5,333,647	6,855,322	+1,531,675
Development			
Bonneville Power Administration Fund	8,822	7,635	-1,187
Electricity Delivery and Energy Reliability	55,244	17,355	-37,889
Energy Efficiency and Renewable Energy	765,705	89,508	-676,197
Fossil Energy R&D ³	377,400	0	-377,400
Nuclear Energy	121,639	98,111	-23,528
Advanced Research Project Agency – Energy ⁴	145,500	0	-145,500
Naval Reactors	1,207,606	1,296,973	+89,367
Environmental Management	11,598	18,760	+7,162
Defense Nuclear Nonproliferation	53,020	63,450	+10,430
Weapons Activities	586,547	84,160	-502,387
Total, Development	3,333,081	1,675,952	-1,657,129

¹ Totals may vary slightly from President's Budget Appendix to reflect the most current estimates available.

² The FY 2016 Enacted level includes SBIR and STTR transfers through the end of the fiscal year.

³ FER&D FY 2018 R&D funding differs from the R&D totals in the Budget Appendix. Totals in the Budget Appendix are based on \$280 million in new Budget Authority. The FY 2018 estimates shown here include \$55.178 million in use of prior year balances, for a total program level of \$335.178 million. Fossil Energy is focusing on early-stage research and development which is reflected in the zero funding amount for Development R&D.

⁴ In FY 2018, ARPA-E is not requesting any Project funding and as such will not conduct any new R&D using FY 2018 budget authority.

	FY 2016 Enacted	FY 2018 Request	FY 2018 vs FY 2016
Subtotal, R&D			
Bonneville Power Administration Fund	16,212	14,585	-1,627
Science	4,452,419	3,829,898	-622,521
Electricity Delivery and Energy Reliability	139,512	85,161	-54,351
Energy Efficiency and Renewable Energy	1,406,133	623,640	-782,493
Fossil Energy R&D ³	608,710	305,578	-303,132
Nuclear Energy	888,215	700,239	-187,976
Advanced Research Project Agency – Energy ⁴	291,000	0	-291,000
Naval Reactors	1,207,606	1,296,973	+89,367
Environmental Management	17,310	28,000	+10,690
Defense Nuclear Nonproliferation	276,163	346,154	+69,991
Weapons Activities	3,925,326	5,282,057	+1,356,731
Subtotal, R&D	13,228,606	12,512,285	-716,321
R&D Related Equipment			
Science	222,135	96,804	-125,331
Energy Efficiency and Renewable Energy	3,600	3,600	0
Fossil Energy R&D ³	15,782	19,300	+3,518
Naval Reactors	22,490	17,990	-4,500
Weapons Activities	125,808	122,909	-2,899
Total, Equipment	389,815	260,603	-129,212
R&D Related Construction			
Science	630,842	506,010	-124,832
Naval Reactors	145,400	164,788	+19,388
Weapons Activities	0	44,100	+44,100
Total, Construction	776,242	714,898	-61,344
Total Department of Energy R&D and R&D Facilities			
Bonneville Power Administration Fund	16,212	14,585	-1,627
Science	5,305,396	4,432,712	-872,684
Electricity Delivery and Energy Reliability	139,512	85,161	-54,351
Energy Efficiency and Renewable Energy	1,409,733	627,240	-782,493
Fossil Energy R&D³	624,492	324,878	-299,614
Nuclear Energy	888,215	700,239	-187,976
Advanced Research Project Agency – Energy⁴	291,000	0	-291,000
Naval Reactors	1,375,496	1,479,751	+104,255
Environmental Management	17,310	28,000	+10,690
Defense Nuclear Nonproliferation	276,163	346,154	+69,991
Weapons Activities	4,051,134	5,449,066	+1,397,932
Total, R&D and R&D Facilities	14,394,663	13,487,786	-906,877

Small Business Innovation Research and Small Business Technology Transfer

The Department of Energy manages two separate Small Business Innovation Research (SBIR) & Small Business Technology Transfer (STTR) programs, one administered by the Office of Science and the other by the Advanced Research Projects Agency – Energy (ARPA-E). The Office of Science has managed the DOE SBIR and STTR programs for the Department since the SBIR program was created in 1982 and the STTR program was created in 1992. The ARPA-E SBIR/STTR programs were created in FY 2012 to manage ARPA-E’s SBIR & STTR allocations independently. ARPA-E is proposed for elimination in the FY 2018 Budget, therefore its SBIR/STTR program will end when the Program shuts down.

The SBIR/STTR Reauthorization Act of 2011 reauthorized the SBIR and STTR programs and provided for annual increases phased in over six years. The Act directs DOE to expend not less than the percentages of nonexempt extramural R&D as tabulated below. By statute, “amounts obligated for atomic energy defense programs solely for weapons activities or for naval reactor programs” are exempt [15 USC 638(e) (1)].

	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018
SBIR	2.5%	2.6%	2.7%	2.8%	2.9%	3.0%	3.2%	3.2%
STTR	0.30%	0.35%	0.35%	0.40%	0.40%	0.45%	0.45%	0.45%
Combined	2.80%	2.95%	3.05%	3.20%	3.30%	3.45%	3.65%	3.65%

DOE SBIR/STTR Programs Office

The SBIR/STTR Programs Office works collaboratively with twelve participating offices to administer the programs: six R&D program offices within the Office of Science; the Offices of Electricity Delivery and Energy Reliability, Energy Efficiency and Renewable Energy, Fossil Energy, Nuclear Energy and Environmental Management; and the Office of Defense Nuclear Nonproliferation within the National Nuclear Security Administration. Each office makes awards commensurate with its allocation, and collaborates with other offices as necessary.

The participating programs are responsible for topic selection, reviewer assignment, award selection, and project oversight. Each program office considers its high priority research needs and program mission, as well as the Department’s goals for the program in developing research topics. The specific research topics selected for the SBIR and STTR programs are developed by the Department’s technical program managers.

The SBIR/STTR Programs Office is responsible for issuing topics and solicitations, managing the peer review and award selection process, working with the Science Office of Acquisition and Assistance to award SBIR/STTR Phase I and Phase II grants, issuing annual reports to the U. S. Small Business Administration, performing outreach, and setting overall policy for the Department regarding the two programs.

ARPA-E SBIR & STTR Programs

In FY 2012 ARPA-E established an SBIR/STTR program separate from the DOE-wide SBIR/STTR program. In FY 2018, ARPA-E is not requesting any Project funding and as such will not make additional Small Business Innovation Research / Small Business Technology Transfer (SBIR/STTR) program investments using FY 2018 budget authority.

Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) (\$K)

	FY 2016 Transferred	FY 2018 Request	FY 2018 vs FY 2016
Advanced Research Projects Agency - Energy			
SBIR	11,380	----	-11,380
STTR	890	----	-890
Electricity Delivery and Energy Reliability			
SBIR	3,885	2,112	-1,773
STTR	583	298	-285
Energy Efficiency and Renewable Energy			
SBIR	26,240	13,794	-12,446
STTR	3,936	1,941	-1,995
Environmental Management			
SBIR	684	896	+212
STTR	103	149	+46
Fossil Energy			
SBIR	12,268	3,912	-8,356
STTR	1,840	550	-1,290
Nonproliferation R&D			
SBIR	6,784	8,440	+1,656
STTR	1,017	1,187	+170
Nuclear Energy			
SBIR	13,129	9,084	-4,045
STTR	1,969	474	-1,495
Science			
SBIR	125,554	113,525	-12,029
STTR	18,833	15,965	-2,868
Total, SBIR	199,924	151,763	-48,161
Total, STTR	29,171	20,564	-8,607

Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) (\$K)

	FY 2016 Transferred	FY 2018 Request	FY 2018 vs FY 2016
Advanced Research Projects Agency - Energy			
SBIR	11,380	----	-11,380
STTR	890	----	-890
Electricity Delivery and Energy Reliability			
SBIR	3,885	2,112	-1,773
STTR	583	298	-285

Energy Efficiency and Renewable Energy ¹			
SBIR	26,240	13,794	-12,446
STTR	3,936	1,941	-1,995
Environmental Management			
SBIR	684	896	+212
STTR	103	149	+46
Fossil Energy ²			
SBIR	12,269	3,912	-8,357
STTR	1,839	550	-1,289
Nonproliferation R&D			
SBIR	6,784	8,440	+1,656
STTR	1,017	1,187	+170
Nuclear Energy			
SBIR	13,129	9,084	-4,045
STTR	1,969	474	-1,495
Science			
SBIR	125,554	113,525	-12,029
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Advanced Research Projects Agency - Energy			
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SBIR	26,240	13,794	-12,446
STTR	3,936	1,941	-1,995
Environmental Management			
SBIR	684	896	+212
STTR	103	149	+46
Fossil Energy			
SBIR	12,268	3,912	-8,356

¹ Initial EERE assessment for FY 2018 is planned against the programmatic funding level of \$695M, rather than the request for new BA of \$636M, which will result in an assessment above the statutory minimum.

² FE R&D SBIR/STTR funding level calculations include the use of balances.

STTR	1,840	550	-1,290
Nonproliferation R&D			
SBIR	6,784	8,440	+1,656
STTR	1,017	1,187	+170
Nuclear Energy			
SBIR	13,129	9,084	-4,045
STTR	1,969	474	-1,495
Science			
SBIR	125,554	113,525	-12,029
STTR	18,833	15,965	-2,868
Total, SBIR	199,924	151,763	-48,161
Total, STTR	29,171	20,564	-8,607

Safeguards and Security

Crosscut

Program Mission

The Safeguards and Security (S&S) program at headquarters and each DOE field site protects against theft, diversion, sabotage, espionage, unauthorized access, compromise, and other hostile acts which may cause damage to national security, program continuity, the health and safety of employees, the public or the environment. The 'crosscut' summarizes the S&S programs that are distributed through the budget volumes. Each program's S&S components are described in the budget justifications for:

- Science
- Weapons Activities
- Defense Environmental Cleanup
- Nuclear Energy
- Energy Efficiency and Renewable Energy
- Fossil Energy R&D
- Strategic Petroleum Reserve
- Legacy Management
- Enterprise Assessments
- Environment, Health, Safety and Security
- Chief Financial Officer
- Chief Information Officer
- Specialized Security Activities

Program Overview

The budget for the direct funded S&S programs is organized to ensure consistency in program and budget execution and ensure management, direction, tracking and monitoring of security costs throughout the Department. Each program budget provides visibility for S&S issues in order to help management ensure effective and efficient S&S program implementation. Figure 1 shows comparable overall funding for S&S in the FY 2016 Enacted, and the FY 2018 Request. It does not include funding for Energy Sector cybersecurity. The S&S crosscut budget is comprised of the functional components shown in the following table.

Figure 1: Overall DOE S&S Funding FY 2016 – FY 2018 (dollars in millions)

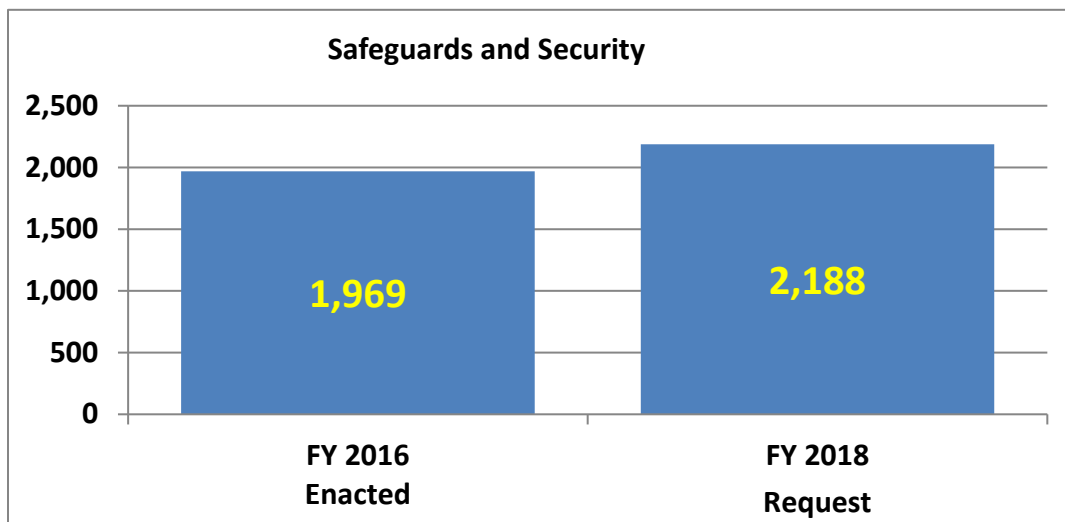


Table 1: Functional Components of S&S

Protective Forces	Provides for the protection of special nuclear materials, information, employees, and government property from theft, diversion, sabotage, and malicious destruction.
Physical Security Systems	Addresses access control and interior/exterior intrusion detection systems.
Information Security	Ensures that individuals protect classified matter and sensitive unclassified matter, and establishes protection systems that require degrees of protection for each classification level.
Cybersecurity	Assures protection of computer resources and networks.
Personnel Security	Supports activities associated with the access authorization program.
Material Control and Accountability	Provides assurance that the nuclear materials used and/or stored at DOE facilities are properly controlled and accounted for at all times.
Program Management	Assures a framework for efficient and effective security operations.
Security Investigations	Provides for background investigations for access authorizations.
Transportation Security	Provides secure transportation of nuclear materials.
Security Infrastructure/Construction	Provides for update and repair of security related infrastructure and construction for that purpose.
Specialized Security Activities	Provides highly specialized analyses in support of national security objectives.

Table 2 shows S&S funding by program cost elements; and Table 3 by functional cost elements. Subsequent sections break out each functional element of field security by program.

Table 2: S&S Funding by Program (dollars in thousands)

	FY 2016 Enacted	FY 2018 Request	\$ Change FY18 vs. FY16	% Change FY18 vs. FY16
Safeguards and Security (S&S) by Program				
Field Security				
Science	96,914	96,691	-223	-0.2%
Weapons Activities	1,099,197	1,207,269	108,072	9.8%
Defense Environmental Cleanup	236,633	312,502	75,869	32.1%
Nuclear Energy	126,161	133,000	6,839	5.4%
Energy Efficiency and Renewable Energy	9,200	8,450	-750	-8.2%
Fossil Energy R&D	6,800	7,409	609	9.0%
Strategic Petroleum Reserve	24,777	23,245	-1,532	-6.2%
Legacy Management	1,972	2,184	212	10.8%
Subtotal, Field S&S	1,601,654	1,790,750	189,096	11.8%
Headquarters Safeguards and Security				
Enterprise Assessments	19,039	20,619	1,580	8.3%
Environment, Health, Safety and Security	58,213	69,104	10,891	18.7%
Specialized Security Activities	230,377	237,912	7,535	3.3%
Chief Financial Officer		963	963	N/A
Chief Information Officer	26,524	34,143	7,619	28.7%
Working Capital Fund	32,980	34,831	1,851	5.6%
Subtotal, Headquarters S&S	367,133	397,572	30,439	8.3%
Total, Safeguards and Security	1,968,787	2,188,322	219,535	11.2%

Table 3: S&S Funding by Functional Cost Element (dollars in thousands)

	FY 2016 Enacted	FY 2018 Request	\$ Change FY18 vs. FY16	% Change FY18 vs. FY16
S&S by Functional Cost Element				
Field Security				
Protective Forces	675,835	729,158	53,323	7.9%
Physical Security Systems	135,567	159,396	23,829	17.6%
Information Security	46,772	48,291	1,519	3.2%
Cybersecurity	196,435	247,840	51,405	26.2%
Personnel Security	54,640	58,752	4,112	7.5%
Material Control and Accountability	36,767	40,730	3,963	10.8%
Program Management	114,119	127,950	13,831	12.1%
Security Investigations	48,068	46,340	-1,728	-3.6%
Transportation Security	237,394	325,454	88,060	37.1%
Security Infrastructure/Construction	56,057	6,839	-49,218	N/A
Subtotal, Field S&S	1,601,654	1,790,750	189,096	11.8%
Headquarters Safeguards and Security				
Enterprise Assessments	19,039	20,619	1,580	8.3%
Environment, Health, Safety and Security	58,213	69,104	10,891	18.7%
Specialized Security Activities	230,377	237,912	7,535	3.3%
Chief Financial Officer		963	963	N/A
Chief Information Officer	26,524	34,143	7,619	28.7%
Working Capital Fund	32,980	34,831	1,851	5.6%
Subtotal, Headquarters	367,133	397,572	30,439	8.3%
Total Safeguards and Security	1,968,787	2,188,322	219,535	11.2%

Protective Forces

Funding Schedule (\$K)

	FY 2016 Enacted	FY 2018 Request	\$ Change FY18 vs. FY16	% Change FY18 vs. FY16
Protective Forces				
Science	37,899	40,545	2,646	7.0%
Weapons Activities	390,592	407,042	16,450	4.2%
Defense Environmental Cleanup	153,459	183,564	30,105	19.6%
Nuclear Energy	65,611	73,881	8,270	12.6%
Energy Efficiency and Renewable Energy	5,200	3,100	-2,100	-40.4%
Fossil Energy R&D	3,666	2,723	-943	-25.7%
Strategic Petroleum Reserve	18,859	17,755	-1,104	-5.9%
Legacy Management	549	548	-1	-0.2%
Total, Protective Forces	675,835	729,158	53,323	7.9%

Mission

The Protective Forces element of field S&S provides funding to protect the Department’s critical assets, which include nuclear weapons in DOE custody, nuclear weapons components, special nuclear materials, classified information and DOE facilities against a spectrum of threats, including terrorist activity, sabotage, espionage, theft, diversion, loss or unauthorized use.

Protective Force programs throughout the complex provide for personnel salaries, wages and benefits for personnel; management and supervision; and well-maintained and logically deployed equipment and facilities to ensure effective performance of assigned functions and tasks under normal and emergency conditions.

Protective Forces programs include the conduct of access control and security response operations; the physical protection of special nuclear material, classified matter and information, and government property; emergency response forces and tactical assistance during events as well as an on-scene security commander; random patrols; coordination with local law enforcement and protective force elements aimed at providing effective response to emergency situations; random prohibited article inspections; security alarm monitoring and dispatch services; the collection and destruction of classified matter; and constant testing of the protective force to respond to various event scenarios.

Protective Forces programs maintain a Special Response Team capability to provide resolution of incidents that require effective and timely response with force options that exceed the capability of front line protective force personnel. This includes recapture and recovery operations involving the use of special weapons, systems and tactics to effect recovery of special nuclear material under authorized control.

Physical Security Systems

Funding Schedule (\$K)

	FY 2016 Enacted	FY 2018 Request	\$ Change FY18 vs. FY16	% Change FY18 vs. FY16
Physical Security Systems				
Science	10,097	10,097	0	0.0%
Weapons Activities	85,805	99,032	13,227	15.4%
Defense Environmental Cleanup	26,680	38,660	11,980	44.9%
Nuclear Energy	11,632	10,075	-1,557	-13.4%
Fossil Energy R&D	257	325	68	26.5%
Strategic Petroleum Reserve	957	1,070	113	11.8%
Legacy Management	139	137	-2	-1.4%
Total, Physical Security Systems	135,567	159,396	23,829	17.6%

Mission

The Physical Security Systems element of field S&S provides for the physical protection of special nuclear material and equipment, sensitive information, Departmental property and unclassified facilities. Included are buildings, fences, barriers, lighting, sensors, surveillance devices, entry control devices, access control systems, explosive detection systems, power systems and other real property and hardware designed for, or affecting security. This hardware and equipment are operated and used to support the protection of DOE property and other interests of national security.

Security Systems programs support DOE-wide efforts required to conduct performance assurance testing. These programs also ensure that security alarm systems are operational and functioning in accordance with applicable DOE requirements. Physical Security System programs are also responsible for two subprograms: (1) a barriers, secure storage, and lock program to restrict, limit, delay or deny entry into a designated area; and (2) an entry control and access program that provides positive identification of personnel requiring access to facilities and initial access to facilities in general, ensuring that persons entering or leaving facilities are authorized, and do not introduce prohibited articles into or remove Government property from Departmental facilities.

The budget estimates include all access control administrative activity involving production, accountability and destruction of access authorization badges and firearms credentials. They also include systems components and tamper-safe oversight by monitoring and responding to alarms, determining access and securing all alarmed structures on site. In addition, this element provides for handling all radio communications for the protection of the facilities.

Information Security

Funding Schedule (\$K)

	FY 2016 Enacted	FY 2018 Request	\$ Change FY18 vs. FY16	% Change FY18 vs. FY16
Information Security				
Science	7,647	4,356	-3,291	-43.0%
Weapons Activities	29,779	32,929	3,150	10.6%
Defense Environmental Cleanup	5,160	5,536	376	7.3%
Nuclear Energy	3,721	4,674	953	25.6%
Energy Efficiency and Renewable Energy	200	500	300	150.0%
Fossil Energy R&D	54	56	2	3.7%
Strategic Petroleum Reserve	205	234	29	14.1%
Legacy Management	6	6	0	0.0%
Total, Information Security	46,772	48,291	1,519	3.2%

Mission

The Information Security element of field S&S ensures that material and documents that may contain sensitive and classified information are accurately and consistently identified, properly reviewed for content, appropriately marked and protected from unauthorized disclosure, and ultimately destroyed in an approved manner.

Information Security programs provides for plans, policies, procedures and training to ensure that all employees are aware of the requirements for the identification, review, classification, declassification, marking, protection and proper disposal of sensitive information and classified material. In addition, operational security considerations are used to preclude inadvertent compromise of classified material.

Cybersecurity

Funding Schedule (\$K)

	FY 2016 Enacted	FY 2018 Request	\$ Change FY18 vs. FY16	% Change FY18 vs. FY16
Cybersecurity				
Science	26,888	27,310	422	1.6%
Weapons Activities	132,588	150,228	17,640	13.3%
Defense Environmental Cleanup	16,332	43,342	27,010	165.4%
Nuclear Energy	14,466	16,856	2,390	16.5%
Energy Efficiency and Renewable Energy	2,190	3,680	1,490	68.0%
Fossil Energy R&D	1,750	3,183	1,433	81.9%
Strategic Petroleum Reserve	1,299	2,111	812	62.5%
Legacy Management	922	1,130	208	22.6%
Total, Cybersecurity	196,435	247,840	51,405	26.2%

Note: Science entry shown net of Working Capital fund contribution.

Mission

The Cybersecurity element of field S&S ensures that sensitive and classified information that is electronically processed, transmitted, or stored, is properly identified and protected. Cybersecurity programs also ensure that electronic systems are appropriately marked and protected. The programs plan, document, and test classified automated information systems (AIS), communications security (COMSEC), investigations and studies of compromising emanations (TEMPEST); and maintain an appropriate level of infrastructure reliability and integrity, as well as an unclassified AIS program. Included are appropriate plans, policies and procedures, assessments, tests, monitoring and self-assessments, certifications, and user and administrator training and awareness.

The amounts given here are program funds and do not include amounts in Program Direction accounts for Federal staff assigned to Cybersecurity work within the program offices. Nor do they include security elements that are within software applications developed for the Department's programmatic or administrative purposes; whether directly or indirectly funded.

Headquarters Cybersecurity: The Office of the Chief Information Officer also funds headquarters cybersecurity and program offices fund cybersecurity through the mechanism of the Working Capital Fund for the enterprise-wide CyberOne effort managed within the OCIO. In FY 2018 up to an additional \$35 million will be funded through the WCF and managed by the OCIO. The table below includes cybersecurity efforts in EA and EHSS that pertain to cybersecurity testing, oversight, and insider threat activities. The Energy Information Administration EIA provides cybersecurity mechanisms for the National Energy Information System.

	FY 2016 Enacted	FY 2018 Request	\$ Change FY18 vs. FY16	% Change FY18 vs. FY16
Cybersecurity (Including OCIO and CyberOne)*				
Field Cybersecurity	196,435	247,840	51,405	26.2%
Energy Information Administration	851	885	34	4.0%
Environment, Health, Safety and Security	5,409	5,409	0	0.0%
Enterprise Assessments	4,039	5,619	1,580	39.1%
WCF Funding for Cybersecurity	32,980	34,831	1,851	5.6%
Chief Financial Officer	0	963	963	N/A
Chief Information Officer	26,524	34,143	7,619	28.7%
Total, Cybersecurity	266,238	329,690	63,452	23.8%

* CyberOne funding is included only on the WCF line. Highly distributed EITS funding of about \$11 million is not included.

Personnel Security

Funding Schedule (\$K)

	FY 2016 Enacted	FY 2018 Request	\$ Change FY18 vs. FY16	% Change FY18 vs. FY16
Personnel Security				
Science	5,334	5,334	0	0.0%
Weapons Activities	33,587	34,219	632	1.9%
Defense Environmental Cleanup	7,457	10,511	3,054	41.0%
Nuclear Energy	6,749	7,624	875	13.0%
Energy Efficiency and Renewable Energy	720	200	-520	-72.2%
Fossil Energy R&D	173	168	-5	-2.9%
Strategic Petroleum Reserve	587	662	75	12.8%
Legacy Management	33	34	1	3.0%
Total, Personnel Security	54,640	58,752	4,112	7.5%

Mission

The Personnel Security element of field S&S supports the access authorization program, and ensure security sensitivity through security briefings such as the initial refresher and termination briefings, re-orientations, computer based training, special workshops and classes, publications, closed circuit television programs, signs, posters and special event days. Support for the access authorization program includes: (1) personnel security assurance program, adjudications, screening and analysis of personnel security cases for determining eligibility for access authorizations, administrative reviews, and handling of Freedom of Information and Privacy Act requests related to security access authorizations; (2) security awareness and education; and (3) activities associated with classified and unclassified visits and assignments by foreign nationals.

Material Control and Accountability

Funding Schedule (\$K)

	FY 2016 Enacted	FY 2018 Request	\$ Change FY18 vs. FY16	% Change FY18 vs. FY16
Material Control and Accountability				
Science	2,431	2,431	0	0.0%
Weapons Activities	24,839	27,532	2,693	10.8%
Defense Environmental Cleanup	4,361	5,170	809	18.6%
Nuclear Energy	4,456	4,876	420	9.4%
Fossil Energy R&D	680	721	41	6.0%
Total, Material Control and Accountability	36,767	40,730	3,963	10.8%

Mission

The Material Control and Accountability (MC&A) element of field S&S provides assurance that nuclear materials are properly controlled and accounted for at all times. MC&A provides evidence that all nuclear materials are accounted for appropriately and that theft, diversion, or operational loss has not occurred. MC&A also supports weapons production, nuclear nonproliferation, nuclear materials operations, facility closure, and nuclear critical safety by determining and documenting the amounts of nuclear materials in weapons and packaged items. MC&A administration includes the following: (1) assessing the levels of protection, control and accounting required for the types and quantities of materials at each facility; (2) documenting facility plans for nuclear materials control and accounting; (3) assigning authorities and responsibilities for MC&A functions; (4) ensuring that facility MC&A personnel are trained and qualified to perform their responsibilities; (5) establishing programs to report occurrences such as nuclear material theft, the loss of control or inability to account for nuclear materials, or evidence of malevolent acts; (6) conducting performance testing of required program elements; and (7) establishing facility programs to conduct and document internal assessments of their operations and MC&A programs.

Program Management

Funding Schedule (\$K)

	FY 2016 Enacted	FY 2018 Request	\$ Change FY18 vs. FY16	% Change FY18 vs. FY16
Program Management				
Science	6,618	6,618	0	0.0%
Weapons Activities	75,289	86,223	10,934	14.5%
Defense Environmental Cleanup	21,840	24,159	2,319	10.6%
Nuclear Energy	7,845	8,175	330	4.2%
Energy Efficiency and Renewable Energy	490	800	310	63.3%
Fossil Energy R&D	220	233	13	5.9%
Strategic Petroleum Reserve	1,494	1,413	-81	-5.4%
Legacy Management	323	329	6	1.9%
Total, Program Management	114,119	127,950	13,831	12.1%

Mission

The Program Management element of field S&S develops the framework for efficient and effective security operations. This includes the development and updating of S&S plans, conducting vulnerability assessments to determine if assets are at risk, modeling to ensure the plans and operations meet mission objectives, identifying assets that need protection, developing local threat assessments and participating in the S&S quality panel process and security education. In addition, these programs ensure that plans are developed and revised in accordance with DOE requirements, professional and technical training is administered, and Departmental S&S goals and objectives are implemented complex wide.

The programs develop S&S plans or other applicable security plans and implement S&S requirements, conduct surveys to determine whether S&S requirements have been implemented, respond to national and local threats and perform a vulnerability analysis that measures the risk of S&S assets. Program Management includes participation in the quality panel process, which raises issues from the field to the headquarters managers and ensures that the staff is properly educated in security matters.

Security Investigations

Funding Schedule (\$K)

	FY 2016 Enacted	FY 2018 Request	\$ Change FY18 vs. FY16	% Change FY18 vs. FY16
Security Investigations				
Weapons Activities	46,600	45,000	-1,600	-3.4%
Defense Environmental Cleanup	1,068	1,170	102	9.6%
Energy Efficiency and Renewable Energy	400	170	-230	-57.5%
Total, Security Investigations	48,068	46,340	-1,728	-3.6%

* NE and SC Security Investigations costs for Federal Employees are subsumed within Personnel Security.

Mission

The Security Investigations element of field S&S funds background investigations associated with providing access authorizations (security clearances) to DOE Federal and contract personnel who, in the performance of their official duties, require access to classified information or certain quantities of special nuclear material. Background investigations are required by Section 145 of the Atomic Energy Act of 1954, as amended, and Executive Order 12968, Access to Classified Information. The investigations are performed and access authorizations granted based on 10 C.F.R. 710, Criteria and Procedures for Determining Eligibility for Access to Classified Matter or Special Nuclear Material.

The Federal Bureau of Investigation conducts background investigations for DOE Federal personnel for positions of a high degree of importance or sensitivity as required by DOE Order 470.4, Safeguards and Security Program. Funding provides for initial background investigations, periodic reinvestigations, and reimbursement for fingerprint and name checks. The Office of Personnel Management conducts the majority of background investigations for DOE Federal personnel and contractors. Funding provides for initial single scope background investigations, periodic reinvestigations, and initial and reinvestigation national agency checks.

Transportation Security

Funding Schedule (\$K)

	FY 2016 Enacted	FY 2018 Request	\$ Change FY18 vs. FY16	% Change FY18 vs. FY16
Transportation Security				
Weapons Activities	237,118	325,064	87,946	37.1%
Defense Environmental Cleanup	276	390	114	41.3%
Total, Transportation Security	237,394	325,454	88,060	37.1%

Mission

Transportation security provides for the secure transport of weapons, weapons components, and nuclear materials to support Directed Stockpile Work and consolidation and disposition of nuclear material within the complex; to meet DOE, DOD, and other customer requirements. This functional component of S&S is funded primarily within NNSA's Secure Transportation Asset (STA) Program.

STA provides safe and secure shipments for Weapons Activities, Naval Reactors, Defense Nuclear Nonproliferation and Nuclear Counterterrorism Incident Response and other Department elements requiring this capability. The STA program supports Departmental initiatives to convert weapons-grade material to commercial reactor fuel. STA supports other DOE programs including Nuclear Energy and Environmental Management; and others, including the National Aeronautics and Space Administration, and international shipments in cooperation with Canada, The United Kingdom, and France.

Security Infrastructure/Construction

Funding Schedule (\$K)

	FY 2016 Enacted	FY 2018 Request	\$ Change FY18 vs. FY16	% Change FY18 vs. FY16
Security Infrastructure/Construction				
Weapons Activities	43,000	0	-43,000	-100.0%
Defense Environmental Cleanup	0	0	0	N/A
Nuclear Energy	11,681	6,839	-4,842	-41.5%
Strategic Petroleum Reserve	1,376	0	-1,376	N/A
Total, Construction	56,057	6,839	-49,218	-87.8%

* Weapons Activities includes Security Improvement Program addition in FY 2016.

Mission

Security Infrastructure provides critical security infrastructure investments and protection enhancements necessary to ensure adequate protection of DOE sites and personnel.

At the Nevada National Security Site (NNSS), NNSA funds the replacement of the obsolete PECOS alarm management system at the NNSS DAF with Argus, the current enterprise standard for Category I Special Nuclear Material protection; as a line item construction project which will reach completion in FY 2019. The Weapons Activities Security Improvements Program (SIP) was created with \$30,000,000 in one-time FY 2016 funds to begin to address the backlog of security infrastructure upgrades needed to replace, maintain, and improve the reliability of aging systems, the preponderance of which are well beyond the manufacturer's lifecycle. In FY 2018 no further funds are requested for SIP, but NNSA will provide further details in a project by project funding plan. The FY 2018 request includes planning and conceptual design funds for a series of future projects to sustain and recapitalize the Perimeter Intrusion Detection and Assessment Systems (PIDAS) at the Pantex Plant and Y-12 National Security Complex. The full scope of the PIDAS projects is still under review, but preliminary estimates are included within the recently completed 10-year Refresh Plan, and future budget requests will reflect the detailed funding requirements.

Defense Environmental Cleanup funds infrastructure upgrades and maintains the security posture at Savannah River Site and various other sites.

At Idaho National Laboratory (INL), activities include upgrading the perimeter intrusion detection and assessment systems (PIDAS) and the central alarm system (CAS) at the Materials and Fuels Complex (MFC). At INL funding will be provided to refurbish the Live-Fire Shoot House training facility to improve safety and perform designs, related analyses, and modifications to support a multi-year effort to enhance physical security infrastructure.

Pensions

Pensions

Contractor Pensions and Other Postretirement Benefits

This section of the budget provides projected contractor defined-benefit (DB) pension plan contributions and other postretirement benefit reimbursement costs. The DB pension plan contributions are provided for FY 2016 through FY 2018 by plan and by the following Department of Energy (DOE) Departmental Elements:¹

- National Nuclear Security Administration (NNSA)
- Office of Environmental Management (EM)
- Office of Science (SC)
- Office of Energy Efficiency and Renewable Energy (EERE)
- Office of Nuclear Energy (NE)
- Office of Electricity Delivery and Energy Reliability (OE)
- Office of Fossil Energy (FE)
- Office of Legacy Management (LM)

Information regarding projected reimbursements for other postretirement benefits (primarily medical) can be found in Section II below.

Contractors that manage and operate DOE's laboratories, weapons plants, and execute environmental cleanup projects at various government-owned sites and facilities are required by DOE to assume sponsorship of the existing contractor DB pension plans and other postretirement benefit plans for incumbent employees who work at, and retire from, those sites and facilities. A portion of the DOE's funding is used to reimburse the costs of the DOE contractors' contributions to DB pension plans and the reimbursements for benefits paid from the other postretirement benefit plans, either as part of the indirect costs or as direct obligations for legacy plans.

Section I - Contractor DB Pension Plan Contributions²

DOE reimburses contractors for pension contributions at levels that are at least equal to the minimum required by the Employee Retirement Income Security Act (ERISA). The minimum required contribution (MRC) is determined on a plan year basis. Only two of the contractor plans have a plan year that coincides with the fiscal year and, therefore, the majority of fiscal year pension allocations are spread across 2 plan years. At a minimum, plan sponsors of single or multiple employer plans³ in which the plan assets were less than liabilities in the prior year must make quarterly contributions during the plan year with the first one due 3½ months after the beginning of the plan year and any outstanding amount due 8½ months after the plan year ends.

DOE's reimbursement of contractor costs in excess of the minimum contribution will require approval by the Contracting Officer, as well as approval by the parties designated by NNSA and the Program Offices, and coordination with the Chief Financial Officer, the General Counsel, and other affected Headquarters Offices. Table 1 provides the information related to plans where funding in excess of the MRC was requested during FY 2016, and includes the MRC (assuming the legally required payments were made at the specified dates), the contribution approved, and the actual amount contributed during FY 2016. In March 2016, NNSA, SC and NE granted requests by contractors for reimbursement of contributions in excess of the minimum for 17 plans primarily to minimize fluctuations in indirect rates and to mitigate increases in future contribution requirements, including the anticipated FY 2023 increase resulting from expiration of the 2015 Bipartisan Budget Act (BBA) extension of the Highway and Transportation Funding Act (HATFA) funding relief.⁴ Based on the

¹ Tables include projected contributions from Reimbursable Work (previously referred to as "non-DOE Work") and "Other" entities (e.g., DOE departmental administration, classified programs, etc.).

² DOE has reimbursed contributions for 34 funded defined benefit (DB) pension plans and 13 non-qualified DB pension plans in FY 2016. Non-qualified plans have no assets and are funded on a pay-as-you-go basis.

³ A single employer plan is a plan sponsored by only one employer; a multiple employer plan is a plan sponsored by 2 or more unrelated employers and not established by a collective bargaining agreement; a multi-employer plan is a plan established and maintained pursuant to a collective bargaining agreement between a labor union and a group of employers in a particular trade or industry.

⁴ The Highway and Transportation Funding Act required the extended use of higher (non-market based) interest rates to discount future plan liabilities. Using a higher interest rate to discount plans' future liabilities reduces the liability and thus results in lower minimum required contributions.

contractors' assumptions in January 2016 and 2017, minimum required contributions were expected to increase in FY 2023 and later years after expiration of HAFTA's funding relief.

Table 1 - FY 2016 Contributions in Excess of the MRC (\$K)

Plan	FY 2016 Budget - President's Budget	FY 2016 Minimum Required Contribution	Additional Amount Requested	FY 2016 Total Amount Approved	FY 2016 Final Contributions
Pension Plan for Eligible Bettis Employees and Retirees	70,200	-	70,200	70,200	70,200
Pension Plan of the Pacific Northwest Laboratories, Battelle Memorial Institute	30,000	-	45,000	45,000	35,210
Retirement Program for Employees of Consolidated Nuclear Security, LLC at the U. S. Department of Energy Facilities at Oak Ridge, Tennessee	65,000	19,700	52,300	72,000	72,000
Idaho National Laboratory Employee Retirement Plan	49,600	9,800	40,200	50,000	59,260
Salaried Employee Pension Plan for KAPL Employees and Retirees	67,800	-	67,800	67,800	67,800
Pension Plan for KAPL Employees in Participating Bargaining Units	8,300	-	8,300	8,300	8,300
Kansas City Division Hourly Employees' Pension Plan	7,000	-	7,000	7,000	7,000
Honeywell Retirement Earnings Plan for Aerospace Employees at the Kansas City Division	20,000	-	20,000	20,000	20,000
LANS Defined Benefit Pension Plan	134,000	-	134,000	134,000	134,000
LLNS Defined Benefit Pension Plan	23,000	-	23,000	23,000	23,000
National Renewable Energy Laboratory Retirement Plan	15,400	16,907	93	17,000	20,922
National Security Technologies, LLC (NSTec) Employee Retirement Plan	17,615	-	18,200	18,200	18,200
Consolidated Nuclear Security Retirement Plan for Non-Bargaining Pantex Location Employees	24,210	6,100	17,900	24,000	24,000
Sandia Corporation Retirement Income Plan	150,000	-	150,000	150,000	150,000
Pension Plan for Employees at ORNL	46,000	-	46,000	46,000	56,000
Centerra-Nevada Retirement Plan	885	366	838	1,204	1,190
Centerra-Nevada/IGAN Retirement Plan	343	-	520	520	524
TOTAL	729,353	52,873	701,351	754,224	767,606

Battelle Memorial Institute received permission to contribute up to \$45 million to the Pension Plan of the Pacific Northwest Laboratories, but actually contributed \$35.2 million; separately, UT Battelle received provisional approval in April 2016 to contribute up to an additional \$10 million to the Pension Plan for Employees at ORNL pension plan in the event UT Battelle was able to manage its operations at ORNL such that the contribution was feasible. Battelle Energy Alliance received approval in September 2016 to contribute an additional \$9.3 million to Idaho's pension plan after determining that it also had managed its operations such that the contribution was feasible. Alliance for Sustainable Energy Inc. received approval to contribute an additional \$3.9 million to the National Renewable Energy Laboratory Retirement Plan after determining that an additional contribution was feasible.

The contractors are making concerted efforts to reduce the costs and volatility associated with these plans as the costs have steadily increased. During 2016, contractors have made changes to their DB pension plans, in an effort to reduce the costs associated with them.

- Two plans are currently in the termination process: Mound Employees Retirement Plan and the Lockheed Martin Specialty Components, Inc. Pension Plan at Pinellas. Settlement of obligations for these plans is expected to be completed from mid FY 2017 to early FY 2018.
- One contractor closed its plan to new entrants.
- One contractor amended its plan to freeze the final average earnings calculation as of December 31, 2015; future service will continue to be credited.

In addition, one contractor amended its plan to reflect plan changes as a result of collective bargaining which included enhancing benefits slightly for certain tiers of wage earners as well as increasing the minimum pension benefit.

Due to the timing of the required annual valuation for these contractor DB pension plans, the actual amount of the contractors' annual contributions to these DB pension plans that DOE will reimburse each fiscal year will not generally be known until after budget development. The majority of contractor contributions are included in indirect costs.⁵ Thus, budgetary line items that include DOE reimbursement of contractor contributions to DB pension plans assume an indirect rate anticipated to be sufficient to meet reimbursement requirements. In the case of plans covering employees working for various programs, the allocation of contributions among NNSA, the program offices and work for others is done based on each site's best estimate of the allocation of work based on current and anticipated work for the various parties that the site serves.⁶

Projections of future DB pension plan contributions are highly sensitive to underlying data, methods, and especially assumptions. Changes in the population data that are different from the data expected impact the future costs of these plans; participants retiring earlier and/or living longer than expected may increase the costs, while compensation increases less than expected may decrease the costs. The most significant assumptions affecting the contribution amounts are those assumptions with respect to future market conditions. In particular, the assumption of the expected return on investments earned by the plans each future year, as well as what the corporate bond yields will be in the future (because they drive the discount rate used to determine the liabilities), have the largest impact on the ultimate contributions that will be reimbursed by the DOE. For example, the actual contributions for fiscal year 2018 will not be known until January 2018 at the earliest because these contributions will be determined based on the asset value as of December 31, 2017, and the discount rate in effect at that time.

Therefore, it is important to emphasize that the actual amounts reimbursed for the applicable fiscal years shown will almost certainly be different from the projections provided in this section. The information provided for the funded plans (excluding the non-qualified plans) is based on plan contributions projected by the DOE's contractors in January and April 2017. The non-qualified plan amounts equal the expected benefit payments which were provided by the contractors for the prior year financial statements. The information has been reviewed by NNSA and relevant DOE program offices and by the Office of the Chief Financial Officer.

- Table 2 provides aggregate FY 2016 actual and FY 2017 and FY 2018 estimated pension plan contributions eligible for reimbursement for all plans.

⁵ Legacy Management Plans, the NNSA legacy University of California (UC) plans and the East Tennessee Technology Park Pension Plan for Grandfathered Employees rely on direct costs.

⁶ These allocations were provided by the contractors to the DOE in January 2017 and April 2017. The allocation percentages for FY 2017 are based on work performed for the first three months of the fiscal year and the final allocations may be different. The allocation percentages for FY 2018 represents contractors' expectation of work for FY 2018 as of April 2017.

- Table 3 provides plan-by-plan FY 2016 actual contributions and FY 2017 and FY 2018 estimated pension contributions eligible for reimbursement by NNSA and the DOE.

Table 2: NNSA and DOE Program Office Actual Contributions for FY 2016 and Projected Contributions for FY 2017 and FY 2018 (\$K)

Based on January and April 2017⁷ data and pro-rated by Program Office

Program Office	FY 2016	FY 2017	FY 2018	FY 2016-FY 2018 Total Projected Contributions
NNSA	833,733	626,686	598,961	2,059,380
EM	192,694	243,157	249,193	685,044
SC	77,919	65,580	63,766	207,265
EERE	33,848	32,343	32,066	98,257
NE	16,928	14,097	14,033	45,059
OE	1,976	2,807	2,365	7,148
FE	1,819	1,434	1,450	4,703
LM	732	0	0	732
Reimbursable Work	181,348	109,473	116,840	407,661
Other	16,697	15,400	15,548	47,646
Total	1,357,695	1,110,978	1,094,222	3,562,894

There may be small variance in totals due to rounding

Table 3 provides the following information for each plan:

Plan name and Plan type: Single employer, multi-employer, multiple employer, state or non-qualified.

Status: *Open* means that the plans are open to new employees who earn benefits under a traditional defined benefit formula. *Closed* means that the plans are closed to new employees, but active employees who were employed prior to the plan being closed continue to earn benefits; this includes plans where new entrants only or new entrants and legacy employees receive benefits under reduced hybrid formulas which are much less volatile (indicated by the word hybrid after closed). For non-qualified plans, “closed” means that the universe of possible participants is limited to individuals who are currently accruing benefits in the closed qualified plan at the respective site and who may at some point qualify for the non-qualified plan under the terms of the non-qualified plan.) *Partially Closed* means that the plan is closed to some subset of the employee population, but that other employees (*e.g.*, represented employees covered by collective bargaining agreements) are still becoming members of the plan at the time of hire. *Frozen* means that plan liabilities are frozen, *i.e.*, that there are no longer any employees accruing credit for current service under the plan.

Reimbursements & Allocations: Expected contributions are allocated by program office for fiscal year 2016-2018 with 2016 representing actual contributions and contributions for later years based on submissions as outlined in footnote 6. *There may be small variances in totals due to rounding.*

⁷Final information for FY 2016 contributions reported in October 2016 while projected contributions for FY 2017 and FY 2018 reported in January and April 2017 for all departmental elements.

Plan Name	Plan status	Fiscal Year	Total	NNSA	EM	SC	EERE	NE	OE	FE	Reimbursable		
											Work	LM	Other
East Tennessee Technology Park Pension Plan for Grandfathered Employees		2016	14,444	-	14,444	-	-	-	-	-	-	-	-
	Partially Closed	2017	13,518	-	13,518	-	-	-	-	-	-	-	-
	Multiemployer	2018	11,117	-	11,117	-	-	-	-	-	-	-	-
University of California Retirement Plan - Lawrence Berkeley National Laboratory		2016	34,070	385	126	22,377	3,628	147	198	249	6,575	10	375
	Open	2017	33,066	407	218	21,251	3,647	86	291	549	6,183	-	433
	State	2018	33,766	415	223	21,701	3,724	88	297	561	6,314	-	442
Pension Plan for Eligible Bettis Employees and Retirees		2016	70,200	38,610	-	-	-	-	-	-	31,590	-	-
	Closed	2017	23,700	13,035	-	-	-	-	-	-	10,665	-	-
	Single	2018	39,500	21,725	-	-	-	-	-	-	17,775	-	-
Pension Plan of the Pacific Northwest Laboratories, Battelle Memorial Institute		2016	35,210	8,098	-	7,042	3,873	352	704	352	10,211	-	4,577
	Open	2017	35,000	7,700	350	6,300	3,850	350	1,050	350	10,850	-	4,200
	Single	2018	20,000	4,600	200	3,600	2,000	200	600	200	6,200	-	2,400
Retirement Program for Employees of Consolidated Nuclear Security, LLC at the U. S. Department of Energy Facilities at Oak Ridge, Tennessee		2016	72,000	69,840	-	-	-	-	-	-	720	-	1,440
	Closed	2017	46,000	44,160	-	-	-	-	-	-	920	-	920
	Single	2018	47,000	45,120	-	-	-	-	-	-	940	-	940
HPM Occupational Health Services Retirement Plan		2016	-	-	-	-	-	-	-	-	-	-	-
	Closed	2017	240	-	240	-	-	-	-	-	-	-	-
	Single	2018	346	-	346	-	-	-	-	-	-	-	-
Hanford Multi-Employer Pension Plan		2016	82,129	-	80,487	1,643	-	-	-	-	-	-	-
	Partially Closed	2017	93,064	-	93,064	-	-	-	-	-	-	-	-
	Multiemployer	2018	98,988	-	98,988	-	-	-	-	-	-	-	-
Idaho National Laboratory Employee Retirement Plan		2016	59,260	6,886	31,408	124	996	11,911	71	18	7,265	-	581
	Closed	2017	50,000	4,445	26,500	100	845	10,400	445	5	6,670	-	590
	Multiple	2018	50,000	4,445	26,500	100	845	10,400	445	5	6,670	-	590
		2016	67,800	37,290	-	-	-	-	-	-	30,510	-	-

Plan Name	Plan status	Fiscal Year	Total	NNSA	EM	SC	EERE	NE	OE	FE	Reimbursable		
											Work	LM	Other
Salaried Employee Pension Plan for KAPL Employees and Retirees	Closed	2017	19,500	10,725	-	-	-	-	-	-	8,775	-	-
	Single	2018	23,600	12,980	-	-	-	-	-	-	10,620	-	-
Pension Plan for KAPL Employees in Participating Bargaining Units		2016	8,300	4,565	-	-	-	-	-	-	3,735	-	-
	Closed	2017	2,600	1,430	-	-	-	-	-	-	1,170	-	-
	Single	2018	3,400	1,870	-	-	-	-	-	-	1,530	-	-
		2016	7,000	6,580	-	-	-	-	-	-	420	-	-
Kansas City Division Hourly Employees' Pension Plan		2017	-	-	-	-	-	-	-	-	-	-	-
	Closed - Hybrid for New Entrants	2017	-	-	-	-	-	-	-	-	-	-	-
	Single	2018	-	-	-	-	-	-	-	-	-	-	-
Honeywell Retirement Earnings Plan for Aerospace Employees at the Kansas City Division		2016	20,000	18,360	-	-	-	-	-	-	1,640	-	-
	Closed	2017	-	-	-	-	-	-	-	-	-	-	-
	Single	2018	-	-	-	-	-	-	-	-	-	-	-
LANS Defined Benefit Pension Plan		2016	134,000	99,160	9,380	6,700	670	1,340	-	670	14,740	-	1,340
	Closed	2017	101,200	76,912	7,084	4,048	911	506	-	202	10,525	-	1,012
	Single	2018	100,200	80,661	1,002	4,509	1,002	601	-	200	11,022	-	1,202
University of California Retirement Plan - Lawrence Livermore National Laboratory Retained Segment		2016	237,076	237,076	-	-	-	-	-	-	-	-	-
	Frozen	2017	181,968	181,968	-	-	-	-	-	-	-	-	-
	State	2018	145,049	145,049	-	-	-	-	-	-	-	-	-
LLNS Defined Benefit Pension Plan		2016	23,000	17,020	-	1,610	230	-	-	-	3,450	-	690
	Closed	2017	-	-	-	-	-	-	-	-	-	-	-
	Single	2018	23,000	17,710	-	690	230	-	-	-	3,220	-	1,150
Lockheed Martin Specialty Components, Inc. Pension Plan		2016	-	-	-	-	-	-	-	-	-	-	-
	Terminated	2017	-	-	-	-	-	-	-	-	-	-	-
	Single	2018	-	-	-	-	-	-	-	-	-	-	-
University of California Retirement Plan - Los Alamos National Laboratory Retained Segment		2016	141,428	141,428	-	-	-	-	-	-	-	-	-
	Frozen	2017	149,743	149,743	-	-	-	-	-	-	-	-	-
	State	2018	128,042	128,042	-	-	-	-	-	-	-	-	-

Plan Name	Plan status	Fiscal Year	Total	NNSA	EM	SC	EERE	NE	OE	FE	Reimbursable		
											Work	LM	Other
National Renewable Energy Laboratory Retirement Plan		2016	20,922	-	-	1,046	16,738	-	209	-	2,511	-	418
	Closed - Hybrid for all	2017	21,000	-	-	840	16,170	-	210	-	3,360	-	420
	Single	2018	22,000	-	-	880	17,380	-	220	-	3,080	-	440
National Strategic Protective Services Pension Plan		2016	1,849	-	518	1,332	-	-	-	-	-	-	-
	Closed	2017	1,980	-	554	1,426	-	-	-	-	-	-	-
	Single	2018	1,860	-	1,116	744	-	-	-	-	-	-	-
National Security Technologies, LLC (NSTec) Employee Retirement Plan		2016	18,200	13,268	1,511	-	-	-	-	-	3,112	-	309
	Closed - Hybrid for all	2017	16,700	12,609	1,553	-	-	-	-	-	2,188	-	351
	Single	2018	16,457	12,425	1,530	-	-	-	-	-	2,156	-	346
Consolidated Nuclear Security, LLC Retirement Plan for Bargaining Unit Members of the Pantex Guards Union		2016	-	-	-	-	-	-	-	-	-	-	-
	Closed	2017	5,000	5,000	-	-	-	-	-	-	-	-	-
	Single	2018	6,000	6,000	-	-	-	-	-	-	-	-	-
Retirement Plan for Bargaining Unit Employees of the Metal Trades Council of Consolidated Nuclear Security, LLC		2016	-	-	-	-	-	-	-	-	-	-	-
	Closed	2017	19,000	18,810	-	-	-	-	-	-	190	-	-
	Single	2018	16,000	16,000	-	-	-	-	-	-	-	-	-
Consolidated Nuclear Security Retirement Plan for Non-Bargaining Pantex Location Employees		2016	24,000	23,520	-	-	-	-	-	-	480	-	-
	Closed	2017	-	-	-	-	-	-	-	-	-	-	-
	Single	2018	-	-	-	-	-	-	-	-	-	-	-
Rocky Flats Retirement Plan for Hourly Protection Employees		2016	-	-	-	-	-	-	-	-	-	-	-
	Frozen	2017	-	-	-	-	-	-	-	-	-	-	-
	Single	2018	-	-	-	-	-	-	-	-	-	-	-
Rocky Flats Retirement Plan		2016	-	-	-	-	-	-	-	-	-	-	-
	Frozen	2017	-	-	-	-	-	-	-	-	-	-	-
	Single	2018	-	-	-	-	-	-	-	-	-	-	-
Sandia Corporation Retirement Income Plan		2016	150,000	87,600	1,050	3,000	3,000	750	450	300	52,800	-	1,050
	Closed	2017	109,000	64,746	654	2,180	2,071	654	436	218	37,278	-	763

Plan Name	Plan status	Fiscal Year	Total	NNSA	EM	SC	EERE	NE	OE	FE	Reimbursable		
											Work	LM	Other
	Single	2018	107,000	63,344	642	2,140	2,033	642	428	321	36,808	-	642
Savannah River Nuclear Solutions LLC Multiple Employer Pension Plan		2016	68,302	15,027	48,495	-	-	-	-	-	-	-	4,781
	Closed	2017	112,210	24,686	81,913	-	-	-	-	-	-	-	5,611
	Multiple	2018	124,710	27,436	91,038	-	-	-	-	-	-	-	6,236
B&W Conversion Services Pension Plan for Grandfathered Employees		2016	1,805	-	1,805	-	-	-	-	-	-	-	-
	Closed	2017	1,111	-	1,111	-	-	-	-	-	-	-	-
	Single	2018	1,275	-	1,275	-	-	-	-	-	-	-	-
Pension Plan for Employees at ORNL		2016	56,000	4,312	280	32,872	4,648	2,408	336	224	9,856	-	1,064
	Open	2017	52,000	5,148	208	29,276	4,784	2,080	364	104	8,996	-	1,040
	Single	2018	52,000	5,356	208	29,224	4,784	2,080	364	156	8,736	-	1,092
Waste Isolation Pilot Plant Pension Plan		2016	423	-	423	-	-	-	-	-	-	-	-
	Open	2017	12,116	-	12,116	-	-	-	-	-	-	-	-
	Single	2018	10,278	-	10,278	-	-	-	-	-	-	-	-
West Valley Pension Plan		2016	2,133	-	2,133	-	-	-	-	-	-	-	-
	Closed	2017	3,431	-	3,431	-	-	-	-	-	-	-	-
	Single	2018	4,162	-	4,162	-	-	-	-	-	-	-	-
Mound Employees Pension Plan		2016	-	-	-	-	-	-	-	-	-	-	-
	Terminated	2017	-	-	-	-	-	-	-	-	-	-	-
	Single	2018	-	-	-	-	-	-	-	-	-	-	-
Centerra-Nevada Retirement Plan		2016	1,190	1,190	-	-	-	-	-	-	-	-	-
	Closed	2017	1,375	1,375	-	-	-	-	-	-	-	-	-
	Single	2018	1,392	1,392	-	-	-	-	-	-	-	-	-
Centerra-Nevada/IGAN Retirement Plan		2016	524	524	-	-	-	-	-	-	-	-	-
	Closed	2017	750	750	-	-	-	-	-	-	-	-	-
	Single	2018	1,270	1,270	-	-	-	-	-	-	-	-	-
Battelle Memorial Institute Excess Benefit and		2016	11	2	-	2	1	0	0	0	3	-	1
	Closed	2017	11	2	0	2	1	0	0	0	3	-	1

Plan Name	Plan status	Fiscal Year	Total	NNSA	EM	SC	EERE	NE	OE	FE	Reimbursable		
											Work	LM	Other
Supplemental Executive Pension Plans	Non-Qualified	2018	10	2	0	2	1	0	0	0	3	-	1
Executive and Supplemental Pension Plans for Designated Bettis Employees		2016	1,569	863	-	-	-	-	-	-	706	-	-
	Closed	2017	1,569	863	-	-	-	-	-	-	706	-	-
	Non-Qualified	2018	1,648	907	-	-	-	-	-	-	742	-	-
Excess and Supplemental Pension Plan for Designated KAPL Employees		2016	241	133	-	-	-	-	-	-	109	-	-
	Closed	2017	241	133	-	-	-	-	-	-	109	-	-
	Non-Qualified	2018	320	176	-	-	-	-	-	-	144	-	-
LANS 401(a)(17) Restoration Plan		2016	140	103	10	7	1	1	-	1	15	-	1
	Closed	2017	140	106	10	6	1	1	-	0	15	-	1
	Non-Qualified	2018	84	68	1	4	1	1	-	0	9	-	1
LANS Restoration Plan		2016	11	8	1	1	0	0	-	0	1	-	0
	Closed	2017	11	9	1	0	0	0	-	0	1	-	0
	Non-Qualified	2018	32	26	0	1	0	0	-	0	4	-	0
LLNS 401(a)(17) Restoration Plan		2016	135	100	-	9	1	-	-	-	20	-	4
	Closed	2017	135	107	-	5	1	-	-	-	18	-	4
	Non-Qualified	2018	317	244	-	10	3	-	-	-	44	-	16
LLNS Restoration Plan		2016	155	115	-	11	2	-	-	-	23	-	5
	Closed	2017	155	122	-	6	2	-	-	-	20	-	5
	Non-Qualified	2018	146	112	-	4	1	-	-	-	20	-	7
Sandia Nonqualified Pension Plan		2016	2,339	1,366	16	47	47	12	7	5	823	-	16
	Closed	2017	2,339	1,389	14	47	44	14	9	5	800	-	16
	Non-Qualified	2018	2,225	1,317	13	44	42	13	9	7	765	-	13
The Savannah River Nuclear Solutions, LLC Nonqualified Pension Plan		2016	527	116	374	-	-	-	-	-	-	-	37
	Frozen	2017	527	116	384	-	-	-	-	-	-	-	26
	Non-Qualified	2018	435	96	317	-	-	-	-	-	-	-	22
		2016	49	-	49	-	-	-	-	-	-	-	-

Plan Name	Plan status	Fiscal Year	Total	NNSA	EM	SC	EERE	NE	OE	FE	Reimbursable		
											Work	LM	Other
Washington Government Services Executive Pension Plan (TRU Solutions Participants Only)	Frozen	2017	49	-	49	-	-	-	-	-	-	-	-
	Non-Qualified	2018	56	-	56	-	-	-	-	-	-	-	-
Washington Government Services Executive Pension Plan (West Valley Participants Only)		2016	184	-	184	-	-	-	-	-	-	-	-
	Frozen	2017	184	-	184	-	-	-	-	-	-	-	-
	Non-Qualified	2018	178	-	178	-	-	-	-	-	-	-	-
Consolidated Nuclear Security, LLC Equalization Retirement Income Plan and Supplemental Retirement Income Plan		2016	180	175	-	-	-	-	-	-	2	-	4
	Closed	2017	180	173	-	-	-	-	-	-	4	-	4
	Non-Qualified	2018	159	153	-	-	-	-	-	-	3	-	3
UT-Battelle Equalization Retirement Income Plan and Supplemental Retirement Income Plan		2016	165	13	1	97	14	7	1	1	29	-	3
	Open	2017	165	16	1	93	15	7	1	0	29	-	3
	Non-Qualified	2018	198	20	1	112	18	8	1	0	34	-	4
Yucca Mountain Salaried Pension Plan		2016	722	-	-	-	-	-	-	-	-	722	-
	Terminated	2017											
	Single	2018											
Total		2016	1,357,695	833,733	192,694	77,919	33,848	16,928	1,976	1,819	181,348	732	16,697
		2017	1,110,978	626,686	243,157	65,580	32,343	14,097	2,807	1,434	109,473	-	15,400
		2018	1,094,222	598,961	249,193	63,766	32,066	14,033	2,365	1,450	116,840	-	15,548

Section II - Other Postretirement Benefit Plans

For the most part, contractors do not fund other postretirement benefit plans in advance, but instead pay the claims incurred by the retired members or the premiums required to cover the plan benefits. The other postretirement benefits covered by the contractors are primarily medical including prescription drug but may also include dental, vision and life insurance benefits that are provided upon retirement from the contractor. The costs associated with these plans are expected to grow as the retired population grows and as healthcare cost trends continue to increase.

Due to the fact that the claims are not paid until incurred and processed, the actual amounts of contractors' payment of claims that DOE will reimburse for FY 2017 and FY 2018 will not be known until after budget development. The contractor costs are included in indirect costs. The budget assumes an indirect rate sufficient to meet reimbursement requirements.⁸ As mentioned in the pension section, the allocation of contributions among NNSA, the non-NNSA program offices, and work for others, is done based on each site's best estimate of the allocation of work based on current and anticipated work for the various parties that the site serves.

The contractors are making concerted efforts to reduce the costs associated with these plans as the costs have steadily increased. In recent years, contractors have made changes to their other postretirement benefit plans in an effort to reduce the costs associated with them as well as to simplify administration. These changes include:

- One contractor discontinued wellness benefits and incentives.
- Four contractors changed vendors and revised medical plans offered to retirees.
- Two contractors changed out-of-pocket maximums and/or increased co-payments.
- Three contractors replaced its existing medical plan for Medicare eligible retirees with an employer funded Health Reimbursement Arrangement (HRA) that will provide funding for retirees and covered family members to purchase individual coverage on a private health insurance exchange.
- One contractor eliminated postretirement medical benefits for Medicare eligible retirees who were provided access to a private health insurance exchange without any employer subsidy.

Projections of future postretirement benefits to be paid are highly sensitive to underlying data, methods, and assumptions, particularly assumptions related to future increases in the expected claims paid each year as well as the underlying assumptions regarding usage and coverage. Thus, the actual amounts reimbursed in a future fiscal year may be different. All of the information provided is based on expected reimbursements as reported by the DOE's respective contractors in July 2015; it has been reviewed by the appropriate NNSA and DOE program office and the Office of the Chief Financial Officer. Table 1 provides aggregate FY 2016-2018 projected other postretirement benefit reimbursements.

⁸ The LM plans rely on direct costs.

Table 1: FY 2016-2018 NNSA and DOE Program Office Projected Other Postretirement Benefits Payments (\$K)
 Based on January 2017 data and pro-rated by Program Office

FY 2018 Postretirement Benefit Costs (\$K)				
Program Office	FY 2016	FY 2017	FY 2018	Total Contributions FY 2016- FY 2018
NNSA	146,109	161,420	172,320	479,850
EM	76,742	83,285	84,057	244,084
SC	52,957	53,480	55,813	162,250
EERE	5,535	6,289	6,657	18,481
NE	7,417	7,967	8,580	23,964
OE	454	881	931	2,267
FE	851	797	848	2,496
Reimbursable Work	45,778	47,899	51,395	145,072
LM	59,508	72,956	54,080	186,543
Other	7,999	7,647	8,920	24,565
Total	403,351	442,620	443,602	1,289,573

There may be small variances in totals due to rounding.

GENERAL PROVISIONS – DEPARTMENT OF ENERGY
(INCLUDING TRANSFER OF FUNDS)

SEC. 301. (a) No appropriation, funds, or authority made available by this title for the Department of Energy shall be used to initiate or resume any program, project, or activity or to prepare or initiate Requests For Proposals or similar arrangements (including Requests for Quotations, Requests for Information, and Funding Opportunity Announcements) for a program, project, or activity if the program, project, or activity has not been funded by Congress.

- (b) (1) Unless the Secretary of Energy notifies the Committees on Appropriations of both Houses of Congress at least 3 full business days in advance, none of the funds made available in this title may be used to—
- (A) make a grant allocation or discretionary grant award totaling \$1,000,000 or more;
 - (B) make a discretionary contract award or Other Transaction Agreement totaling \$1,000,000 or more, including a contract covered by the Federal Acquisition Regulation;
 - (C) issue a letter of intent to make an allocation, award, or Agreement in excess of the limits in subparagraph (A) or (B); or
 - (D) announce publicly the intention to make an allocation, award, or Agreement in excess of the limits in subparagraph (A) or (B).
- (2) The Secretary of Energy shall submit to the Committees on Appropriations of both Houses of Congress within 15 days of the conclusion of each quarter a report detailing each grant allocation or discretionary grant award totaling less than \$1,000,000 provided during the previous quarter.
- (3) The notification required by paragraph (1) and the report required by paragraph (2) shall include the recipient of the award, the amount of the award, the fiscal year for which the funds for the award were appropriated, the account and program, project, or activity from which the funds are being drawn, the title of the award, and a brief description of the activity for which the award is made.
- (c) The Department of Energy may not, with respect to any program, project, or activity that uses budget authority made available in this title under the heading "Department of Energy—Energy Programs", enter into a multiyear contract, award a multiyear grant, or enter into a multiyear cooperative agreement unless—
- (1) the contract, grant, or cooperative agreement is funded for the full period of performance as anticipated at the time of award; or
 - (2) the contract, grant, or cooperative agreement includes a clause conditioning the Federal Government's obligation on the availability of future year budget authority and the Secretary notifies the Committees on Appropriations of both Houses of Congress at least 3 days in advance.
- (d) Except as provided in subsections (e), (f), and (g), the amounts made available by this title shall be expended as authorized by law for the programs, projects, and activities specified in the "Final Bill" column in the "Department of Energy" table included under the heading "Title III—Department of Energy" in the explanatory statement accompanying this Act.
- (e) The amounts made available by this title may be reprogrammed for any program, project, or activity, and the Department shall notify the Committees on Appropriations of both Houses of Congress at least 30 days prior to the use of any proposed reprogramming that would cause any program, project, or activity funding level to increase or decrease by more than \$5,000,000 or 10 percent, whichever is less, during the time period covered by this Act.
- (f) None of the funds provided in this title shall be available for obligation or expenditure through a reprogramming of funds that—
- (1) creates, initiates, or eliminates a program, project, or activity;
 - (2) increases funds or personnel for any program, project, or activity for which funds are denied or restricted by this Act; or
 - (3) reduces funds that are directed to be used for a specific program, project, or activity by this Act.
- (g) (1) The Secretary of Energy may waive any requirement or restriction in this section that applies to the use of funds made available for the Department of Energy if compliance with such requirement or restriction would pose a substantial risk to human health, the environment, welfare, or national security.
- (2) The Secretary of Energy shall notify the Committees on Appropriations of both Houses of Congress of any waiver under paragraph (1) as soon as practicable, but not later than 3 days after the date of the activity to which a requirement or restriction would otherwise have applied. Such notice shall include an explanation of the substantial risk under paragraph (1) that permitted such waiver.

SEC. 302. The unexpended balances of prior appropriations provided for activities in this Act may be available to the same appropriation accounts for such activities established pursuant to this title. Available balances may be merged with funds in the applicable established accounts and thereafter may be accounted for as one fund for the same time period as originally enacted.

SEC. 303. Funds appropriated by this or any other Act, or made available by the transfer of funds in this Act, for intelligence activities are deemed to be specifically authorized by the Congress for purposes of section 504 of the National Security Act of 1947 (50 U.S.C. 3094) during fiscal year 2018 until the enactment of the Intelligence Authorization Act for fiscal year 2018.

SEC. 304. None of the funds made available in this title shall be used for the construction of facilities classified as high-hazard nuclear facilities under 10 CFR Part 830 unless independent oversight is conducted by the Office of Enterprise Assessments to ensure the project is in compliance with nuclear safety requirements.

SEC. 305. None of the funds made available in this title may be used to approve critical decision–2 or critical decision–3 under Department of Energy Order 413.3B, or any successive departmental guidance, for construction projects where the total project cost exceeds \$100,000,000, until a separate independent cost estimate has been developed for the project for that critical decision.

SEC. 306. Notwithstanding section 301(c) of this Act, none of the funds made available under the heading "Department of Energy—Energy Programs—Science" in this or any subsequent Energy and Water Development and Related Agencies appropriations Act for any fiscal year may be used for a multiyear contract, grant, cooperative agreement, or Other Transaction Agreement of \$1,000,000 or less unless the contract, grant, cooperative agreement, or Other Transaction Agreement is funded for the full period of performance as anticipated at the time of award.

SEC. 307. (a) NEW REGIONAL RESERVES.—The Secretary of Energy may not establish any new regional petroleum product reserve unless funding for the proposed regional petroleum product reserve is explicitly requested in advance in an annual budget submission and approved by the Congress in an appropriations Act.

(b) The budget request or notification shall include—

- (1) the justification for the new reserve;
- (2) a cost estimate for the establishment, operation, and maintenance of the reserve, including funding sources;
- (3) a detailed plan for operation of the reserve, including the conditions upon which the products may be released;
- (4) the location of the reserve; and
- (5) the estimate of the total inventory of the reserve.

SEC. 308. Uranium Lease and Take-Back Revolving Fund.—There is hereby established in the Treasury of the United States a fund to be known as the "Uranium Lease and Take-Back Revolving Fund" (the Fund), which shall be available without fiscal year limitation, for Department of Energy expenses, including the purchase, construction, and acquisition of plant and capital equipment and other expenses necessary in carrying out section 3173 of the National Defense Authorization Act for Fiscal Year 2013. For initial capitalization, there is appropriated \$1,000,000 to the Fund. Notwithstanding 31 U.S.C. 3302, revenues received under section 3173 of such Act in this and subsequent fiscal years shall be credited to the Fund to be available for carrying out the purposes of the Fund without further appropriation. Funds collected in fiscal year 2018 shall be credited as offsetting collections to the Fund, so as to result in a final fiscal year 2018 appropriation from the general fund estimated at not more than \$0.

SEC. 309. Treatment of Lobbying and Political Activity Costs as Allowable Costs under Department of Energy Contracts.

(a) Allowable Costs.—

(1) Section 4801(b) of the Atomic Energy Defense Act (50 U.S.C. 2781(b)) is amended—

- (A) by striking "(1)" and all that follows through "the Secretary" and inserting "The Secretary"; and
- (B) by striking paragraph (2).

(2) Section 305 of the Energy and Water Development Appropriation Act, 1988, as contained in section 101(d) of Public Law 100–202 (101 Stat. 1329–125), is repealed.

(b) Regulations Revised.—The Secretary of Energy shall revise existing regulations consistent with the repeal of 50 U.S.C. 2781(b)(2) and section 305 of Public Law 100–202 and shall issue regulations to implement 50 U.S.C. 2781(b), as

amended by subsection (a), no later than 150 days after the date of the enactment of this Act. Such regulations shall be consistent with the Federal Acquisition Regulation 48 C.F.R. 31.205–22.

SEC. 310. Not to exceed 5 percent of any appropriation made available for Department of Energy activities funded in this Act may be transferred between such appropriations, but no such appropriation, except as otherwise provided, shall be increased or decreased by more than 5 percent by any such transfers, and notification of any such transfers shall be submitted promptly to the Committees on Appropriations of the House of Representatives and the Senate.

SEC. 311. Notwithstanding section 161 of the Energy Policy and Conservation Act (42 U.S.C. 6241), the Secretary of Energy shall draw down and sell one million barrels of refined petroleum product from the Strategic Petroleum Reserve during fiscal year 2018. Proceeds from sales under this section shall be deposited into the general fund of the Treasury during fiscal year 2018.

Title V – General Provisions

SEC. 501. None of the funds appropriated by this Act may be used in any way, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913.

SEC. 502. None of the funds made available by this Act may be used in contravention of Executive Order No. 12898 of February 11, 1994 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations).