

DEPARTMENT OF ENERGY

NATIONAL NUCLEAR SECURITY ADMINISTRATION

Federal Funds

FEDERAL SALARIES AND EXPENSES

For expenses necessary for Federal Salaries and Expenses in the National Nuclear Security Administration, \$418,595,000, to remain available until September 30, 2019, including official reception and representation expenses not to exceed \$12,000.

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.

Program and Financing (in millions of dollars)

Identification code 089–0313–0–1–053	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0010 Federal Salaries and Expenses	383	364	419
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	42	25	25
1021 Recoveries of prior year unpaid obligations	2		
1050 Unobligated balance (total)	44	25	25
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	384	383	419
1131 Unobligated balance of appropriations permanently reduced	–20	–19	
1160 Appropriation, discretionary (total)	364	364	419
1930 Total budgetary resources available	408	389	444
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	25	25	25
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	68	68	39
3010 New obligations, unexpired accounts	383	364	419
3020 Outlays (gross)	–380	–393	–410
3040 Recoveries of prior year unpaid obligations, unexpired	–2		
3041 Recoveries of prior year unpaid obligations, expired	–1		
3050 Unpaid obligations, end of year	68	39	48
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	68	68	39
3200 Obligated balance, end of year	68	39	48
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	364	364	419
Outlays, gross:			
4010 Outlays from new discretionary authority	307	300	346
4011 Outlays from discretionary balances	73	93	64
4020 Outlays, gross (total)	380	393	410
4180 Budget authority, net (total)	364	364	419
4190 Outlays, net (total)	380	393	410

Federal Salaries and Expenses.—This account provides the Federal salaries and other expenses of the National Nuclear Security Administration (NNSA) mission and mission support staff. The Federal Salaries and Expenses appropriation allows for the creation of a well-managed, inclusive, responsive, and accountable organization through the strategic management of human capital and greater integration of budget and performance data. It also includes funding for a standardized corporate project management enterprise. Program direction for Naval Reactors is within that program's account, and program direction for Secure Transportation Asset is within the Weapons Activities account.

Object Classification (in millions of dollars)

Identification code 089–0313–0–1–053	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	201	204	239

11.3	Other than full-time permanent	3	3	3
11.5	Other personnel compensation	5	5	5
11.9	Total personnel compensation	209	212	247
12.1	Civilian personnel benefits	64	53	61
21.0	Travel and transportation of persons	14	12	12
23.3	Communications, utilities, and miscellaneous charges	2	3	3
25.1	Advisory and assistance services	25	28	28
25.2	Other services from non-Federal sources	6	6	6
25.3	Other goods and services from Federal sources	41	31	44
25.4	Operation and maintenance of facilities	19	16	15
25.6	Medical care	1	1	1
26.0	Supplies and materials	2	2	2
99.9	Total new obligations, unexpired accounts	383	364	419

Employment Summary

Identification code 089–0313–0–1–053	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	1,553	1,625	1,715
2001 Reimbursable civilian full-time equivalent employment	20		

NAVAL REACTORS

For Department of Energy expenses necessary for naval reactors activities to carry out the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), including the acquisition (by purchase, condemnation, construction, or otherwise) of real property, plant, and capital equipment, facilities, and facility expansion, \$1,479,751,000, to remain available until expended: Provided, That of such amount, \$48,200,000 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.

Program and Financing (in millions of dollars)

Identification code 089–0314–0–1–053	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0010 Naval reactors development	451	446	473
0020 Program Direction	45	43	48
0030 S8G prototype refueling	133	132	190
0040 Naval reactors operations and infrastructure	445	444	467
0050 Construction	121	121	145
0060 COLUMBIA-class reactor systems development	187	186	157
0900 Total new obligations, unexpired accounts	1,382	1,372	1,480
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	13	6	6
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	1,375	1,372	1,480
1930 Total budgetary resources available	1,388	1,378	1,486
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	6	6	6
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	465	548	500
3010 New obligations, unexpired accounts	1,382	1,372	1,480
3020 Outlays (gross)	–1,299	–1,420	–1,566
3050 Unpaid obligations, end of year	548	500	414
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	465	548	500
3200 Obligated balance, end of year	548	500	414
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	1,375	1,372	1,480
Outlays, gross:			
4010 Outlays from new discretionary authority	877	1,166	1,258
4011 Outlays from discretionary balances	422	254	308
4020 Outlays, gross (total)	1,299	1,420	1,566
4180 Budget authority, net (total)	1,375	1,372	1,480

NAVAL REACTORS—Continued
Program and Financing—Continued

Identification code 089-0314-0-1-053	2016 actual	2017 est.	2018 est.
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4190 Outlays, net (total)	1,299	1,420	1,566
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Naval Reactors.—This account funds all naval nuclear propulsion work. It begins with reactor technology development and design, continues through reactor operation and maintenance, and ends with reactor plant disposal. The program ensures the safe and reliable operation of reactor plants in nuclear-powered submarines and aircraft carriers (constituting over 45 percent of the Navy's combatants), and fulfills the Navy's requirements for new nuclear propulsion plants that meet current and future national defense requirements. Due to the crucial nature of nuclear reactor work, Naval Reactors is a centrally managed organization. Federal employees oversee and set policies/procedures for developing new reactor plants and operating existing nuclear plants and the facilities that support these plants.

Object Classification (in millions of dollars)

Identification code 089-0314-0-1-053	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	29	29	32
11.5 Other personnel compensation	1	1	1
11.9 Total personnel compensation	30	30	33
12.1 Civilian personnel benefits	9	9	10
21.0 Travel and transportation of persons	1	1	1
25.1 Advisory and assistance services	1	1	1
25.2 Other services from non-Federal sources	6	6	7
25.3 Other goods and services from Federal sources	4	4	4
25.4 Operation and maintenance of facilities	1,165	1,156	1,237
31.0 Equipment	22	22	28
32.0 Land and structures	140	139	155
41.0 Grants, subsidies, and contributions	4	4	4
99.9 Total new obligations, unexpired accounts	1,382	1,372	1,480

Employment Summary

Identification code 089-0314-0-1-053	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	230	238	246

WEAPONS ACTIVITIES

For Department of Energy expenses, including the purchase, construction, and acquisition of plant and capital equipment and other incidental expenses necessary for atomic energy defense weapons 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, \$10,239,344,000, to remain available until expended: Provided, That of such amount, \$105,600,000 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.

Program and Financing (in millions of dollars)

Identification code 089-0240-0-1-053	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0020 Directed stockpile work	3,376	3,314	3,977
0021 Science	424	428	488
0022 Engineering	131	134	193
0023 Inertial confinement fusion ignition and high yield	509	516	533
0024 Advanced simulation and computing	620	648	734
0027 Secure transportation asset	236	256	325
0028 Advanced manufacturing development	132	88	80
0030 Infrastructure and Operations	2,283	2,408	2,803
0091 Defense programs (DP), subtotal	7,711	7,792	9,133

0150 Nuclear counterterrorism incident response	2		
0170 Site stewardship	1		
0179 Information technology and cybersecurity	169	170	187
0180 Defense nuclear security	690	662	687
0183 Legacy contractor pensions	284	248	232
0191 Non-DP activities, subtotal	1,146	1,080	1,106
0300 Subtotal, Weapons Activities	8,857	8,872	10,239
0799 Total direct obligations	8,857	8,872	10,239
0810 Weapons Activities (Reimbursable)	1,649	1,642	1,630
0900 Total new obligations, unexpired accounts	10,506	10,514	11,869

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	213	243	84
1021 Recoveries of prior year unpaid obligations	62		
1033 Recoveries of prior year paid obligations	2		
1050 Unobligated balance (total)	277	243	84
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	8,847	8,830	10,239
Spending authority from offsetting collections, discretionary:			
1700 Collected	1,633	1,525	1,552
1701 Change in uncollected payments, Federal sources	-8		
1750 Spending auth from offsetting collections, disc (total)	1,625	1,525	1,552
1900 Budget authority (total)	10,472	10,355	11,791
1930 Total budgetary resources available	10,749	10,598	11,875
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	243	84	6

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	6,238	6,861	7,158
3010 New obligations, unexpired accounts	10,506	10,514	11,869
3020 Outlays (gross)	-9,821	-10,217	-12,189
3040 Recoveries of prior year unpaid obligations, unexpired	-62		
3050 Unpaid obligations, end of year	6,861	7,158	6,838
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-2,156	-2,148	-2,148
3070 Change in uncollected pymts, Fed sources, unexpired	8		
3090 Uncollected pymts, Fed sources, end of year	-2,148	-2,148	-2,148
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	4,082	4,713	5,010
3200 Obligated balance, end of year	4,713	5,010	4,690

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	10,472	10,355	11,791
Outlays, gross:			
4010 Outlays from new discretionary authority	4,945	6,731	7,664
4011 Outlays from discretionary balances	4,876	3,486	4,525
4020 Outlays, gross (total)	9,821	10,217	12,189
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-1,567	-1,475	-1,502
4033 Non-Federal sources	-68	-50	-50
4040 Offsets against gross budget authority and outlays (total)	-1,635	-1,525	-1,552
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	8		
4053 Recoveries of prior year paid obligations, unexpired accounts	2		
4060 Additional offsets against budget authority only (total)	10		
4070 Budget authority, net (discretionary)	8,847	8,830	10,239
4080 Outlays, net (discretionary)	8,186	8,692	10,637
4180 Budget authority, net (total)	8,847	8,830	10,239
4190 Outlays, net (total)	8,186	8,692	10,637

Programs funded within the Weapons Activities appropriation support the Nation's current and future defense posture and its attendant nationwide infrastructure of science, technology, and engineering capabilities. Weapons Activities provides for the maintenance and refurbishment of nuclear weapons to continue sustained confidence in their safety, reliability, and performance; continued investment in scientific, engineering, and manufacturing capabilities to enable certification of the enduring nuclear weapons stockpile; and manufacture of nuclear weapon components. Weapons Activities also provides for continued maintenance and investment in the

NNSA nuclear complex to be more responsive and cost effective. The major elements of the program include the following:

Directed Stockpile Work.—Encompasses all activities that directly support the nuclear weapons stockpile. These activities include: maintenance and surveillance; planned refurbishment; reliability assessment; weapon dismantlement and disposal; and research, development, and certification technology efforts to meet stockpile requirements. Additionally, Strategic Materials are also included in Directed Stockpile Work to recognize the investment needed in nuclear materials to maintain the viability of the enduring stockpile.

Research, Development, Test and Evaluation.—Focuses on scientific, technical, and engineering efforts to develop and maintain critical capabilities, tools, and processes needed to support science-based stockpile stewardship, weapons refurbishments, and continued certification of the stockpile over the long-term in the absence of underground nuclear testing.

Infrastructure and Operations.—Provides for the base operations funding required to operate NNSA facilities and support underlying infrastructure and capabilities at the level necessary to deliver mission results in a safe and secure manner. Includes resources for cross-cutting programmatic functions such as Long Term Stewardship, Nuclear Safety Research & Development, Nuclear Criticality Safety, and the Packaging program. Modernizes NNSA infrastructure through recapitalization, capability investments, strategic development, and line-item construction projects for the enhancement of capabilities.

Defense Nuclear Security.—Provides protection for NNSA personnel, facilities, and nuclear weapons from a full spectrum of threats, most notably terrorism. Provides for all safeguards and security requirements including protective forces and systems at all NNSA sites.

Secure Transportation Asset.—Provides for the safe, secure movement of nuclear weapons, special nuclear material, and weapon components to meet projected DOE, Department of Defense (DOD), and other customer requirements. The Program Direction in this account provides for the secure transportation workforce, including the Federal agents.

Information Technology and Cybersecurity.—Provides information technology and cyber security solutions such as identity, credential, and access management to help meet energy security, and proliferation resistance.

Object Classification (in millions of dollars)

Identification code 089-0240-0-1-053	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	44	44	45
11.5 Other personnel compensation	11	11	11
11.9 Total personnel compensation	55	55	56
12.1 Civilian personnel benefits	24	24	24
21.0 Travel and transportation of persons	5	5	5
23.1 Rental payments to GSA	64	64	64
23.3 Communications, utilities, and miscellaneous charges	9	9	9
25.1 Advisory and assistance services	170	170	172
25.2 Other services from non-Federal sources	499	499	505
25.3 Other goods and services from Federal sources	32	32	32
25.4 Operation and maintenance of facilities	6,735	6,745	8,071
25.5 Research and development contracts	116	116	116
25.6 Medical care	3	3	3
25.7 Operation and maintenance of equipment	4	4	4
26.0 Supplies and materials	6	6	6
31.0 Equipment	285	288	300
32.0 Land and structures	793	795	815
41.0 Grants, subsidies, and contributions	57	57	57
99.0 Direct obligations	8,857	8,872	10,239
99.0 Reimbursable obligations	1,649	1,642	1,630
99.9 Total new obligations, unexpired accounts	10,506	10,514	11,869

Employment Summary

Identification code 089-0240-0-1-053	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	514	541	554

DEFENSE NUCLEAR NONPROLIFERATION

(INCLUDING CANCELLATION OF FUNDS)

For Department of Energy expenses, including the purchase, construction, and acquisition of plant and capital equipment and other incidental expenses necessary for defense nuclear nonproliferation 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, \$1,842,310,000, to remain available until expended: Provided, That of the unobligated balances from prior year appropriations available under this heading, \$49,000,000 is hereby permanently cancelled: Provided further, That no amounts may be cancelled from amounts that were previously designated by the Congress as an emergency requirement pursuant to a concurrent resolution on the budget or the Balanced Budget and Emergency Deficit Control Act of 1985.

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.

Program and Financing (in millions of dollars)

Identification code 089-0309-0-1-053	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0010 Defense nuclear nonproliferation research and development	423	414	446
0040 International materials protection and cooperation	26	.....	.....
0071 Global material security	426	410	337
0072 Material management and minimization	316	313	332
0073 Nonproliferation and arms control	130	129	130
0074 Nonproliferation construction	340	335	279
0075 Nuclear counterterrorism incident response	234	231	277
0080 Global threat reduction initiative	1	.....	.....
0085 Legacy contractor pensions	95	93	41
0100 Subtotal, obligations by program activity	1,991	1,925	1,842
0799 Total direct obligations	1,991	1,925	1,842
0801 Global material security	5	.....	.....
0899 Total reimbursable obligations	5	.....	.....
0900 Total new obligations, unexpired accounts	1,996	1,925	1,842

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	70	38	49
1021 Recoveries of prior year unpaid obligations	25	.....	.....
1050 Unobligated balance (total)	95	38	49
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	1,940	1,936	1,842
1120 Appropriations transferred to other accts (089-0222)	-8	.....	.....
1131 Unobligated balance of appropriations permanently reduced .....	.....	.....	-49
1160 Appropriation, discretionary (total)	1,932	1,936	1,793
Spending authority from offsetting collections, discretionary:			
1700 Collected	7	.....	.....
1900 Budget authority (total)	1,939	1,936	1,793
1930 Total budgetary resources available	2,034	1,974	1,842
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	38	49	.....

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	1,643	1,571	1,560
3010 New obligations, unexpired accounts	1,996	1,925	1,842
3020 Outlays (gross)	-2,043	-1,936	-1,792
3040 Recoveries of prior year unpaid obligations, unexpired	-25	.....	.....
3050 Unpaid obligations, end of year	1,571	1,560	1,610
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	1,643	1,571	1,560

DEFENSE NUCLEAR NONPROLIFERATION—Continued
Program and Financing—Continued

Identification code 089–0309–0–1–053		2016 actual	2017 est.	2018 est.
3200	Obligated balance, end of year	1,571	1,560	1,610
Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	1,939	1,936	1,793
Outlays, gross:				
4010	Outlays from new discretionary authority	1,005	658	609
4011	Outlays from discretionary balances	1,038	1,278	1,183
4020	Outlays, gross (total)	2,043	1,936	1,792
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4034	Offsetting governmental collections	–7	.....	.....
4180	Budget authority, net (total)	1,932	1,936	1,793
4190	Outlays, net (total)	2,036	1,936	1,792

NNSA plays a central role in reducing global nuclear threats across the entire nuclear threat spectrum by preventing the acquisition of nuclear weapons or weapons-usable materials, countering efforts to acquire such weapons or materials, and responding to nuclear or radiological accidents and incidents domestically and abroad.

This appropriation funds the Defense Nuclear Nonproliferation (DNN) program, which works to prevent the unauthorized or illegal acquisition of nuclear weapons or weapons-usable materials by states or terrorists, as well as the Nuclear Counterterrorism and Incident Response (NCTIR) program, which primarily supports efforts to counter and respond to nuclear threats. These two programs provide policy and technical leadership to prevent or limit the spread of materials, technology, and expertise related to weapons of mass destruction (WMD); develop technologies that detect the proliferation of WMD worldwide; secure or eliminate inventories of nuclear weapons-related materials and infrastructure; ensure a technically trained response to nuclear and radiological incidents worldwide; support the Department's enterprise-wide, all-hazards approach to emergency management; and reduce the danger that hostile nations or terrorist groups may acquire nuclear devices, radiological dispersal devices (RDD) or weapons-usable material, nuclear and dual-use commodities and technology, or nuclear-related expertise that could be used to develop nuclear weapon capabilities.

These activities are carried out within the context of a dynamic global security environment, which is described in NNSA's annual report entitled Prevent, Counter, and Respond—A Strategic Plan to Reduce Global Nuclear Threats. This environment is characterized by the persistent vulnerability of nuclear and radiological materials (particularly in regions of conflict); pressure on arms control and nonproliferation regimes from a continued interest in nuclear weapons capabilities by state and non-state actors; the global expansion of nuclear power and fuel cycle technology; increasing opportunities for illicit nuclear material trafficking and sophisticated procurement networks; and the rapid advance of technology (including cyber-related tools) that may shorten nuclear weapon development timelines and directly affect nuclear safeguards and security missions.

The major elements of the appropriation account include the following:

Material Management and Minimization (M^3).— M^3 addresses the persistent threat posed by vulnerable weapons-usable nuclear materials. The primary objective of the program is to achieve permanent threat reduction by minimizing and, when possible, eliminating weapons-usable nuclear material around the world.

Global Material Security (GMS).—GMS enhances U.S. national security by working with partner countries to increase the security of vulnerable nuclear and radiological materials and facilities and improving partner countries' abilities to deter, detect, and investigate illicit trafficking.

Nonproliferation and Arms Control (NPAC).—NPAC supports activities to prevent the proliferation or use of WMD by state and non-state actors. NPAC develops and implements programs and strategies to: strengthen

international nuclear safeguards; control the spread of nuclear and dual-use material, equipment, technology, and expertise; verify nuclear reductions and compliance with nonproliferation and arms control treaties and agreements; and address enduring and emerging nonproliferation and arms control challenges and opportunities.

Defense Nuclear Nonproliferation Research and Development (DNN R&D).—DNN R&D drives the innovation of unilateral and multi-lateral technical capabilities to detect nuclear detonations; foreign nuclear weapons programs' activities; and the presence, movement, or diversion of special nuclear materials. To meet national and Departmental nuclear security requirements, DNN R&D leverages the unique facilities and scientific skills of the Department of Energy, academia, and industry to perform research, including counterterrorism-related R&D, conduct technology demonstrations, develop prototypes, and produce and deliver sensors for integration into operational systems.

Nonproliferation Construction.—Consolidates construction costs for DNN projects. Currently, the MOX Fuel Fabrication Facility (MFFF) is the only project in this program. However, the FY 2018 Budget Request proposes to terminate the MOX project and pursue the dilute and dispose (D&D) option as an alternative.

Nuclear Counterterrorism and Incident Response (NCTIR).—NCTIR applies the unique technical expertise from NNSA's nuclear security enterprise to counter attempts of both proliferant states and non-state actors to steal, acquire, develop, disseminate, transport, or deliver the materials, expertise, or components necessary for a nuclear weapon, improvised nuclear device (IND), or RDD domestically or abroad. NCTIR provides technical advice to the Department of Defense and Federal Bureau of Investigation special mission units, other interagency and international partners, and state and local organizations. NCTIR carries out technical nuclear forensics activities to support identification of the origin of the nuclear material and conducts consequence management actions following an event to protect lives, property, and the environment. Additionally, NCTIR Emergency Operations administers the DOE/NNSA's Comprehensive Emergency Management System through development, coordination, implementation, and support of all-hazards emergency management for all DOE/NNSA offices and sites. Emergency Operations manages the DOE/NNSA Emergency Operations Centers, Emergency Communications Network, Policy Management, Training, Exercises, and Continuity of Operations Plan (COOP) activities.

Object Classification (in millions of dollars)

Identification code 089–0309–0–1–053		2016 actual	2017 est.	2018 est.
Direct obligations:				
25.1	Advisory and assistance services	111	108	103
25.2	Other services from non-Federal sources	163	159	151
25.3	Other goods and services from Federal sources	11	11	10
25.4	Operation and maintenance of facilities	1,305	1,259	1,207
25.5	Research and development contracts	3	3	3
31.0	Equipment	48	46	44
32.0	Land and structures	334	324	309
41.0	Grants, subsidies, and contributions	16	15	15
99.0	Direct obligations	1,991	1,925	1,842
99.0	Reimbursable obligations	5	.....	.....
99.9	Total new obligations, unexpired accounts	1,996	1,925	1,842

URANIUM LEASE AND TAKE-BACK, NATIONAL NUCLEAR SECURITY ADMINISTRATION,
ENERGY

(Legislative proposal, not subject to PAYGO)

Program and Financing (in millions of dollars)

Identification code 089-4403-2-3-271	2016 actual	2017 est.	2018 est.
Budgetary resources:			
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation			1
1900 Budget authority (total)			1
1930 Total budgetary resources available			1
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year			1
Change in obligated balance:			
Unpaid obligations:			
3020 Outlays (gross)			-1
3050 Unpaid obligations, end of year			-1
Memorandum (non-add) entries:			
3200 Obligated balance, end of year			-1
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross			1
Outlays, gross:			
4010 Outlays from new discretionary authority			1
4180 Budget authority, net (total)			1
4190 Outlays, net (total)			1

The Uranium Lease and Take-Back Revolving Fund is necessary to carry out section 3173 of the National Defense Authorization Act for Fiscal Year 2013 and American Medical Isotopes Production Act of 2012.

CERRO GRANDE FIRE ACTIVITIES

Program and Financing (in millions of dollars)

Identification code 089-0312-0-1-053	2016 actual	2017 est.	2018 est.
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	3	3	3
1930 Total budgetary resources available	3	3	3
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	3	3	3
4180 Budget authority, net (total)			
4190 Outlays, net (total)			

Cerro Grande Fire Activities.—Emergency funding was provided in 2000 and 2001 for restoration activities at the Los Alamos National Laboratory in New Mexico after the Cerro Grande Fire in May 2000. It is an inactive account.

ENVIRONMENTAL AND OTHER DEFENSE ACTIVITIES

Federal Funds

DEFENSE ENVIRONMENTAL CLEANUP

For Department of Energy expenses, including the purchase, construction, and acquisition of plant and capital equipment and other expenses necessary for atomic energy defense environmental cleanup 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, \$5,537,186,000, to remain available until expended: Provided, That of such amount, \$300,000,000 shall be available until September 30, 2019, for program direction: Provided further, That of such amount, \$225,000,000 shall be available for the deactivation and decommissioning of high-risk excess facilities that are not in the current project inventory of the Environmental Management program.

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 Continu-

ing Appropriations Act, 2017 (P.L. 114-254). The amounts included for 2017 reflect the annualized level provided by the continuing resolution.

Program and Financing (in millions of dollars)

Identification code 089-0251-0-1-053	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Closure Sites	5	5	5
0002 Hanford Site	921	921	716
0003 River Protection - Tank Farm	724	648	713
0004 River Protection - Waste Treatment Plant	692	689	698
0005 River Protection - LAWPS		75	93
0006 Idaho	396	395	350
0007 NNSA Sites	252	251	256
0008 Oak Ridge	248	239	208
0009 Savannah River	1,217	1,206	1,282
0010 Waste Isolation Pilot Plant	326	299	317
0011 Program Support	16	15	35
0012 Safeguards & Security	238	236	269
0013 Technology Development & Demonstration	19	20	25
0014 Program Direction	283	281	300
0015 Excess Facilities			225
0016 CyberSecurity			43
0020 SPRU	4		2
0900 Total new obligations, unexpired accounts	5,341	5,280	5,537
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	48	18	30
1021 Recoveries of prior year unpaid obligations	22	12	12
1050 Unobligated balance (total)	70	30	42
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	5,290	5,280	5,537
1120 Appropriations transferred to other accts [089-0222]	-1		
1160 Appropriation, discretionary (total)	5,289	5,280	5,537
1930 Total budgetary resources available	5,359	5,310	5,579
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	18	30	42
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	1,984	2,146	2,203
3010 New obligations, unexpired accounts	5,341	5,280	5,537
3020 Outlays (gross)	-5,157	-5,211	-5,737
3040 Recoveries of prior year unpaid obligations, unexpired	-22	-12	-12
3050 Unpaid obligations, end of year	2,146	2,203	1,991
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	1,984	2,146	2,203
3200 Obligated balance, end of year	2,146	2,203	1,991
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	5,289	5,280	5,537
Outlays, gross:			
4010 Outlays from new discretionary authority	3,403	3,696	3,876
4011 Outlays from discretionary balances	1,754	1,515	1,861
4020 Outlays, gross (total)	5,157	5,211	5,737
4180 Budget authority, net (total)	5,289	5,280	5,537
4190 Outlays, net (total)	5,157	5,211	5,737

The Defense Environmental Cleanup program is responsible for protecting human health and the environment by identifying and reducing risks, as well as managing waste and facilities, at sites where the Department carried out defense-related nuclear research and production activities. Those activities resulted in radioactive, hazardous, and mixed -waste contamination requiring remediation, stabilization, decontamination and decommissioning, or some other type of cleanup action. The budget displays the cleanup program by site and activity.

Closure Sites.—Funds post-closure administration costs after the physical completion of cleanup, including costs for contract closeout and litigation support.

Hanford Site.—Funds cleanup and environmental restoration to protect the Columbia River and surrounding communities. The Hanford site cleanup is managed by two Environmental Management (EM) site offices: the Richland Operations Office and the Office of River Protection.

DEFENSE ENVIRONMENTAL CLEANUP—Continued

The Richland Office is responsible for cleanup activities on most of the geographic area making up the Hanford site. The primary cleanup focus is decontamination and decommissioning legacy facilities and characterizing and treating contaminated groundwater.

The Office of River Protection is responsible for the safe storage, retrieval, treatment, immobilization, and disposal of 56 million gallons of radioactive waste stored in 177 underground tanks. It is also responsible for related operation, maintenance, engineering, and construction activities, including those connected to the Waste Treatment and Immobilization Plant being built to solidify the liquid tank waste in a glass form that can be safely stored.

Idaho.—Funds retrieval, treatment, and disposition of nuclear and hazardous wastes and spent nuclear fuel, and legacy site cleanup activities.

NNSA Sites.—Funds the safe and efficient cleanup of the environmental legacy past operations at National Nuclear Security Administration (NNSA) sites including Nevada National Security Site, Sandia National Laboratories, Lawrence Livermore National Laboratory, Los Alamos National Laboratory and the Separations Process Research Unit. The cleanup strategy follows a risk-informed approach that focuses first on those soil and groundwater contaminant plumes and sources that are the greatest contributors to risk. The overall goal is first to ensure that risks to the public and workers are controlled, then to clean up soil and groundwater using a risk-informed methodology. NNSA is responsible for long-term stewardship of its sites after physical cleanup is completed. Los Alamos legacy cleanup is managed by the EM Los Alamos field office.

Oak Ridge.—Funds defense-related cleanup of the three facilities that make up the Oak Ridge Reservation: the East Tennessee Technology Park, the Oak Ridge National Laboratory, and the Y-12 Plant. The overall cleanup strategy is based on surface water considerations, encompassing five distinct watersheds that feed the adjacent Clinch River.

Savannah River Site.—Funds the safe stabilization, treatment, and disposition of legacy nuclear materials, spent nuclear fuel, and waste at the Savannah River site. Key activities include operating the Defense Waste Processing Facility, which is solidifying the high activity liquid waste contained in underground storage tanks, and the construction of the Salt Waste Processing Facility, which will separate various tank waste components and treat and dispose the low activity liquid waste stream.

Waste Isolation Pilot Plant.—Funds the world's first permitted deep geologic repository for the permanent disposal of radioactive waste, and the Nation's only disposal site for defense-generated transuranic waste. The Waste Isolation Pilot Plant, managed by the Carlsbad Field Office, is an operating facility, supporting the disposal of transuranic waste from waste generator and storage sites across the DOE complex. The Waste Isolation Pilot Plant is crucial to the Department of Energy (DOE) completing its cleanup and closure mission.

Program Direction.—Funds the Federal workforce responsible for the overall direction and administrative support of the EM program, including both Headquarters and field personnel.

Program Support.—Funds management and direction for various cross-cutting EM and DOE initiatives, intergovernmental activities, and analyses and integration activities across DOE in a consistent, responsible, and efficient manner.

Safeguards and Security.—Funds activities to protect against unauthorized access, theft, diversion, loss of custody or destruction of DOE assets, and hostile acts that could cause adverse impacts to fundamental national security or the health and safety of DOE and contractor employees, the public or the environment.

Cyber Security.—Funds cyber security services for EM headquarters and field sites.

Innovation and Technology Development (formerly Technology Development and Deployment).—Funds projects managed through Headquarters to address the immediate, near- and long-term technology needs identified by the EM sites, enabling them to accelerate their cleanup schedules, treat

orphaned wastes, improve worker safety, and provide technical foundations for the sites' cleanup decisions. These projects focus on maturing and deploying the technologies necessary to accelerate tank waste processing, treatment, and waste loading.

Excess Facilities.—Funds the deactivation and decommissioning (D&D) of excess facilities to be transferred to the Environmental Management program. This targeted effort supports accelerated D&D activities focused on specific high-risk facilities at the Y-12 National Security Complex and the Lawrence Livermore National Laboratory to achieve substantial risk reduction within four years.

Object Classification (in millions of dollars)

Identification code 089-0251-0-1-053	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	163	166	169
11.3 Other than full-time permanent	3	3	3
11.5 Other personnel compensation	2	2	2
11.9 Total personnel compensation	168	171	174
12.1 Civilian personnel benefits	53	52	55
21.0 Travel and transportation of persons	5	5	5
23.1 Rental payments to GSA	11	11	11
23.2 Rental payments to others	1	1	1
23.3 Communications, utilities, and miscellaneous charges	11	11	12
25.1 Advisory and assistance services	656	648	680
25.2 Other services from non-Federal sources	394	389	409
25.3 Other goods and services from Federal sources	59	58	61
25.4 Operation and maintenance of facilities	2,783	2,751	2,885
25.5 Research and development contracts	5	4	5
25.6 Medical care	17	16	18
26.0 Supplies and materials	1	1	1
31.0 Equipment	48	47	50
32.0 Land and structures	1,067	1,054	1,106
41.0 Grants, subsidies, and contributions	62	61	64
99.9 Total new obligations, unexpired accounts	5,341	5,280	5,537

Employment Summary

Identification code 089-0251-0-1-053	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	1,421	1,460	1,400

OTHER DEFENSE ACTIVITIES

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 of such amount, \$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.

Program and Financing (in millions of dollars)

Identification code 089-0243-0-1-999	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0008 Environment, Health, Safety, and Security Mission Support	182	210	199
0009 Independent Enterprise Assessments	72	76	75
0015 Specialized security activities	233	238	238
0020 Legacy management	167	154	155
0030 Defense related administrative support	117	120	143
0060 Hearings and Appeals	6	6	6
0100 Subtotal, Direct program activities	777	804	816
0799 Total direct obligations	777	804	816
0810 Other Defense Activities (Reimbursable)	1,453	1,440	1,440
0819 Reimbursable program activities, subtotal	1,453	1,440	1,440

0900	Total new obligations, unexpired accounts	2,230	2,244	2,256
Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	25	29	.....
1021	Recoveries of prior year unpaid obligations	21	.....	.....
1050	Unobligated balance (total)	46	29	.....
Budget authority:				
Appropriations, discretionary:				
1100	Appropriation	776	775	816
Spending authority from offsetting collections, discretionary:				
1700	Collected	1,351	1,440	1,440
1701	Change in uncollected payments, Federal sources	86	.....	.....
1750	Spending auth from offsetting collections, disc (total)	1,437	1,440	1,440
1900	Budget authority (total)	2,213	2,215	2,256
1930	Total budgetary resources available	2,259	2,244	2,256
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	29	.....	.....
Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	1,311	1,371	1,370
3010	New obligations, unexpired accounts	2,230	2,244	2,256
3020	Outlays (gross)	-2,148	-2,245	-2,554
3040	Recoveries of prior year unpaid obligations, unexpired	-21	.....	.....
3041	Recoveries of prior year unpaid obligations, expired	-1	.....	.....
3050	Unpaid obligations, end of year	1,371	1,370	1,072
Uncollected payments:				
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-1,029	-1,115	-1,115
3070	Change in uncollected pymts, Fed sources, unexpired	-86	.....	.....
3090	Uncollected pymts, Fed sources, end of year	-1,115	-1,115	-1,115
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	282	256	255
3200	Obligated balance, end of year	256	255	-43
Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	2,213	2,215	2,256
Outlays, gross:				
4010	Outlays from new discretionary authority	1,042	1,445	1,476
4011	Outlays from discretionary balances	1,106	800	1,078
4020	Outlays, gross (total)	2,148	2,245	2,554
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources	-1,294	-1,383	-1,383
4033	Non-Federal sources	-57	-57	-57
4040	Offsets against gross budget authority and outlays (total)	-1,351	-1,440	-1,440
Additional offsets against gross budget authority only:				
4050	Change in uncollected pymts, Fed sources, unexpired	-86	.....	.....
4070	Budget authority, net (discretionary)	776	775	816
4080	Outlays, net (discretionary)	797	805	1,114
4180	Budget authority, net (total)	776	775	816
4190	Outlays, net (total)	797	805	1,114

Environment, Health, Safety and Security Mission Support.—The program supports the Department's health, safety, environment, and security programs to enhance productivity while maintaining the highest standards of safe operation, protection of national assets, and environmental sustainability. As the Department's "environment, health, safety and security advocate," the program works closely with DOE line managers who are ultimately responsible for ensuring that the Department's work is managed and performed in a manner that protects workers and the public as well as the Department's material and information assets. The program functions include: policy and guidance development and technical assistance; analysis of health, safety, environment, and security performance; nuclear safety; domestic and international health studies; medical screening programs for former workers; Energy Employee Occupational Illness Compensation Program Act support; quality assurance programs; interface with the Defense Nuclear Facilities Safety Board; national security information programs; and security for the Department's facilities and personnel in the National Capital Area.

Enterprise Assessments.—The program supports the Department's independent assessments of security, cyber security, emergency management, and environment, safety and health performance; enforcement of worker

safety and health, nuclear safety; and classified information security regulations; and implementation of security and safety professional development and training programs.

Specialized Security Activities.—The program supports national security related analyses requiring highly specialized skills and capabilities.

Legacy Management.—The program supports long-term stewardship activities (e.g., groundwater monitoring, disposal cell maintenance, records management, and management of natural resources) at sites where active remediation has been completed. In addition, Legacy Management funds the pensions and/or post-retirement benefits for former contractor employees.

Hearings and Appeals.—The Office of Hearings and Appeals adjudicates personnel security cases, as well as whistleblower reprisal complaints filed by DOE contractor employees. The office is the appeal authority in various other areas, including Freedom of Information Act and Privacy Act appeals. In addition, the office decides requests for exception from DOE orders, rules, regulations, and is responsible for the DOE's alternative dispute resolution function.

All Other.—Obligations are included for defense-related administrative support.

Object Classification (in millions of dollars)

Identification code 089-0243-0-1-999	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	101	101	101
11.3 Other than full-time permanent	3	3	3
11.5 Other personnel compensation	3	3	3
11.9 Total personnel compensation	107	107	107
12.1 Civilian personnel benefits	33	33	33
21.0 Travel and transportation of persons	5	5	5
23.1 Rental payments to GSA	2	2	2
23.2 Rental payments to others	2	2	2
23.3 Communications, utilities, and miscellaneous charges	8	8	8
25.1 Advisory and assistance services	236	236	237
25.2 Other services from non-Federal sources	93	93	93
25.3 Other goods and services from Federal sources	39	39	39
25.4 Operation and maintenance of facilities	184	211	222
26.0 Supplies and materials	1	1	1
31.0 Equipment	26	26	26
41.0 Grants, subsidies, and contributions	41	41	41
99.0 Direct obligations	777	804	816
99.0 Reimbursable obligations	1,453	1,440	1,440
99.9 Total new obligations, unexpired accounts	2,230	2,244	2,256

Employment Summary

Identification code 089-0243-0-1-999	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	809	809	809

DEFENSE NUCLEAR WASTE DISPOSAL

For nuclear waste disposal activities to carry out the purposes of Public Law 97-425, as amended, including the acquisition of real property or facility construction or expansion, and interim storage activities, \$30,000,000, to remain available until expended.

Program and Financing (in millions of dollars)

Identification code 089-0244-0-1-053	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Defense Nuclear Waste Disposal (Direct) .....	.....	6	30
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	6	6	.....
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....	.....	.....	30
1930 Total budgetary resources available	6	6	30

DEFENSE NUCLEAR WASTE DISPOSAL—Continued
Program and Financing—Continued

Identification code 089–0244–0–1–053	2016 actual	2017 est.	2018 est.
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	6		
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	11	9	6
3010 New obligations, unexpired accounts		6	30
3020 Outlays (gross)	–2	–9	–12
3050 Unpaid obligations, end of year	9	6	24
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	11	9	6
3200 Obligated balance, end of year	9	6	24
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross			30
Outlays, gross:			
4010 Outlays from new discretionary authority			12
4011 Outlays from discretionary balances	2	9	
4020 Outlays, gross (total)	2	9	12
4180 Budget authority, net (total)			30
4190 Outlays, net (total)	2	9	12

The Defense Nuclear Waste Disposal appropriation was established by the Congress as part of the 1993 Energy and Water Development Appropriation (P.L. 102–377), in lieu of payment from the Department of Energy (DOE) into the Nuclear Waste Fund for activities related to the disposal of defense high-level waste from DOE's atomic energy defense activities.

Object Classification (in millions of dollars)

Identification code 089–0244–0–1–053	2016 actual	2017 est.	2018 est.
Direct obligations:			
25.1 Advisory and assistance services		6	2
25.2 Other services from non-Federal sources			1
25.4 Operation and maintenance of facilities			27
99.9 Total new obligations, unexpired accounts		6	30

ENERGY PROGRAMS

Federal Funds

SCIENCE

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for science 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 facility or for plant or facility acquisition, construction, or expansion, and purchase of not more than 16 passenger motor vehicles for replacement only, including one ambulance and one bus, \$4,472,516,000, to remain available until expended: Provided, That of such amount, \$168,516,000 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.

Program and Financing (in millions of dollars)

Identification code 089–0222–0–1–251	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Basic Energy Sciences	1,798	1,845	1,555
0002 Advanced Scientific Computing Research	602	620	722
0003 Biological and Environmental Research	593	608	349
0004 High Energy Physics	777	793	673
0005 Nuclear Physics	602	616	503
0006 Fusion Energy Sciences	428	437	310
0007 Science Laboratories Infrastructure	140	113	76
0008 Science Program Direction	191	185	168

0009 Workforce Development for Teachers and Scientists	34	19	14
0010 Safeguards and Security	103	103	103
0011 Small Business Innovation Research	190		
0012 Small Business Technology Transfer	28		
0799 Total direct obligations	5,486	5,339	4,473
0801 Science (Reimbursable)	554	520	520
0900 Total new obligations, unexpired accounts	6,040	5,859	4,993

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	41	10	8
1021 Recoveries of prior year unpaid obligations	71		
1050 Unobligated balance (total)	112	10	8
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	5,350	5,340	4,473
1121 Appropriations transferred from other acct [089–0213]	14		
1121 Appropriations transferred from other acct [089–0321]	30		
1121 Appropriations transferred from other acct [089–0309]	8		
1121 Appropriations transferred from other acct [089–0318]	4		
1121 Appropriations transferred from other acct [089–0319]	15		
1121 Appropriations transferred from other acct [089–0251]	1		
1131 Unobligated balance of appropriations permanently reduced	–3	–3	
1160 Appropriation, discretionary (total)	5,419	5,337	4,473
Spending authority from offsetting collections, discretionary:			
1700 Collected	525	520	520
1701 Change in uncollected payments, Federal sources	–6		
1750 Spending auth from offsetting collections, disc (total)	519	520	520
1900 Budget authority (total)	5,938	5,857	4,993
1930 Total budgetary resources available	6,050	5,867	5,001
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	10	8	8

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	4,386	4,731	4,496
3010 New obligations, unexpired accounts	6,040	5,859	4,993
3020 Outlays (gross)	–5,624	–6,094	–5,479
3040 Recoveries of prior year unpaid obligations, unexpired	–71		
3050 Unpaid obligations, end of year	4,731	4,496	4,010
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	–411	–405	–405
3070 Change in uncollected pymts, Fed sources, unexpired	6		
3090 Uncollected pymts, Fed sources, end of year	–405	–405	–405
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	3,975	4,326	4,091
3200 Obligated balance, end of year	4,326	4,091	3,605

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	5,938	5,857	4,993
Outlays, gross:			
4010 Outlays from new discretionary authority	2,059	2,922	2,533
4011 Outlays from discretionary balances	3,565	3,172	2,946
4020 Outlays, gross (total)	5,624	6,094	5,479
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	–348	–250	–250
4033 Non-Federal sources	–177	–270	–270
4040 Offsets against gross budget authority and outlays (total)	–525	–520	–520
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	6		
4070 Budget authority, net (discretionary)	5,419	5,337	4,473
4080 Outlays, net (discretionary)	5,099	5,574	4,959
4180 Budget authority, net (total)	5,419	5,337	4,473
4190 Outlays, net (total)	5,099	5,574	4,959

Advanced Scientific Computing Research.—The Advanced Scientific Computing Research (ASCR) program supports research in applied mathematics and computer science; delivers the most advanced computational scientific applications in partnership with disciplinary science; advances computing and networking capabilities; and develops future generations of computing hardware and tools for science, in partnership with the research community and U.S. industry. The strategy to accomplish this has two thrusts: developing and maintaining world-class computing and network

facilities for science; and advancing research in applied mathematics, computer science and advanced networking. The program supports the development, maintenance, and operation of large high performance computing and network facilities, including the Leadership Computing Facilities at Oak Ridge and Argonne National Laboratories, the National Energy Research Scientific Computing Facility at Lawrence Berkeley National Laboratory, and the Energy Sciences Network.

Maximizing the benefits of U.S. leadership computing in the coming decades will require an effective national response to increasing demands for computing capabilities and performance, emerging technological challenges and opportunities, and competition with other nations. The DOE will sustain and enhance its support for high performance computing (HPC) research, development, and deployment as part of the federal strategy in partnership with the Department of Defense (DOD) and the National Science Foundation (NSF).

Within the context of this coordinated federal strategy, the DOE Office of Science (SC) and the DOE National Nuclear Security Administration (NNSA) are overseeing the Department's Exascale Computing Initiative (ECI), which began in 2016. The ECI focuses on delivering advanced simulation through an exascale-capable computing program, with an emphasis on sustained performance on science, national security mission applications, and increased convergence between exascale and large-data analytic computing. To meet ECI goals, research and development (R&D) will be accelerated to overcome key exascale challenges in parallelism, energy efficiency, and reliability, leading to deployment of exascale systems in the 2021 timeframe. Acceleration or advancement is defined as a fifty-fold increase in sustained performance over today's computing capabilities, enabling applications to address next-generation science, engineering, and data problems.

Basic Energy Sciences.—The Basic Energy Sciences (BES) program supports fundamental research to understand, predict, and ultimately control matter and energy at the electronic, atomic, and molecular levels in order to provide the foundations for new energy technologies and to support DOE missions in energy, environment, and national security. Key to exploiting such discoveries is the ability to create new materials using sophisticated synthesis and processing techniques, precisely define the atomic arrangements in matter, and control physical and chemical transformations. The energy systems of the future will revolve around materials and chemical changes that convert energy from one form to another.

The research disciplines that BES supports—condensed matter and materials physics, chemistry, geosciences, and aspects of physical biosciences—are those that discover new materials and design new chemical processes that touch virtually every important aspect of energy resources, production, conversion, transmission, storage, efficiency, and waste mitigation. BES research provides a knowledge base to help understand, predict, and ultimately control the natural world and helps build the foundation for achieving a secure and sustainable energy future. BES also supports world-class, open-access scientific user facilities consisting of a complementary set of intense x-ray sources, neutron sources, and research centers for nanoscale science. BES facilities probe materials with ultrahigh spatial, temporal, and energy resolutions to investigate the critical functions of matter—transport, reactivity, fields, excitations, and motion—and answer some of the most challenging grand science questions. BES-supported activities are entering a new era in which materials can be built with atom-by-atom precision and computational models can predict the behavior of materials before they exist.

Biological and Environmental Research.—The Biological and Environmental Research (BER) program supports fundamental research and provides scientific user facilities to achieve a predictive understanding of complex biological, earth, and environmental systems for energy and infrastructure resilience and sustainability.

The program seeks to understand the biological, biogeochemical, and physical principles needed to predict a continuum of processes from the molecular and genomics-controlled smallest scales to environmental and

ecological processes. Starting with the genetic potential encoded by organisms' genomes, BER Biological System Science research seeks to define the principles that guide the translation of the genetic code into functional proteins and the metabolic and regulatory networks underlying the systems biology of plants and microbes as they respond to and modify their environments. This predictive understanding can enable more confident redesign of microbes and plants for sustainable biofuels production, improved carbon storage, and controlled biological transformation of materials such as nutrients and metals in the environment. BER Earth and Environmental Systems Sciences research advances the fundamental understanding of dynamic, physical, and biogeochemical systems processes required to systematically develop Earth system models for predictive tools and approaches that may inform policies and plans for future energy and resource needs.

Fusion Energy Sciences.—The Fusion Energy Sciences (FES) program mission is to expand the fundamental understanding of matter at very high temperatures and densities and to build the scientific foundation needed to develop a fusion energy source. This is accomplished through the study of plasma, the fourth state of matter, and how it interacts with its surroundings.

The next frontier for the major international fusion programs is the study of the burning plasma state, in which the fusion process itself provides the dominant heat source for sustaining the plasma temperature. Production of strongly self-heated fusion plasma will allow the discovery and study of a number of new scientific phenomena relevant to fusion energy. These include the effects of highly energetic fusion-produced alpha particles on plasma stability and confinement; the strongly non-linear coupling that will occur among fusion alpha particles, pressure-driven self-generated current, turbulent transport, and boundary-plasma behavior; the properties of materials in the presence of high heat and particle fluxes and neutron irradiation; and the self-organized nature of plasma profiles over long time scales. To support the program mission and its major focus, the U.S. fusion program has four elements: Burning Plasma Science: Foundations; Long Pulse; High Power; and Discovery Plasma Science. To achieve these research goals, FES invests in experimental facilities of various scales, international partnerships leveraging U.S. expertise, large-scale numerical simulations based on experimentally validated theoretical models, development of advanced fusion-relevant materials, and invention of new measurement techniques.

High Energy Physics.—The High Energy Physics (HEP) program mission is to understand how the universe works at its most fundamental level by discovering the elementary constituents of matter and energy, probing the interactions among them, and exploring the basic nature of space and time. The HEP Program offers research opportunities for individual investigators and small-scale collaborations, as well as very large international collaborations. A world-wide program of particle physics research is underway to discover what lies beyond the Standard Model. Five intertwined science drivers of particle physics provide compelling lines of inquiry that show great promise for discovery: use the Higgs boson as a new tool for discovery; pursue the physics associated with neutrino mass; identify the new physics of dark matter; understand cosmic acceleration, dark energy, and inflation; and explore new particles, interactions and physical principles. The program enables scientific discovery through a strategy organized along three frontiers of particle physics: 1) The Energy Frontier, where researchers accelerate particles to the highest energies ever made by humans and collide them to produce and study the fundamental constituents of matter. This requires some of the largest machines ever built; 2) The Intensity Frontier, where researchers use a combination of intense particle beams and highly sensitive detectors to make extremely precise measurements of particle properties, study some of the rarest particle interactions predicted by the Standard Model of particle physics, and search for new physics; and 3) The Cosmic Frontier, where researchers seek to reveal the nature of dark matter and dark energy by using naturally occurring particles to explore new phenomena. The highest-energy particles ever observed have come from cosmic sources, and the ancient light from distant galaxies allows the distribution of dark matter to be mapped and perhaps the nature of dark

SCIENCE—Continued

energy to be unraveled. Investments in Theoretical and Computational Physics, which provides the framework to explain experimental observations and gain a deeper understanding of nature, and Advanced Technology R&D, which fosters fundamental research into particle acceleration and detection techniques and instrumentation, support these three frontiers. Many of the advanced technologies and research tools originally developed for high energy physics have also proven applicable to other sciences, as well as industry, medicine, and national security.

Nuclear Physics.—The Nuclear Physics (NP) program mission is to discover, explore, and understand all forms of nuclear matter. Although the fundamental particles that compose nuclear matter—quarks and gluons—are themselves relatively well understood, exactly how they interact and combine to form the different types of matter observed in the universe today and during its evolution remains largely unknown. Nuclear physicists seek to understand not just the familiar forms of matter we see around us, but also exotic forms such as those which existed in the first microseconds after the birth of the cosmos and that exist today inside neutron stars. The NP program addresses three tightly interrelated scientific thrusts: 1) how the strong nuclear force assembles quarks and gluons into protons and neutrons; 2) the structure of nuclei and how the known elements are produced in the cosmos; and 3) what evidence for science beyond our present understanding can be discovered in the decays of nuclei and the properties of the neutron.

The NP program continues support for the high-priority efforts and capabilities to maintain U.S. leadership in some areas of nuclear science. Specifically, it supports high-priority research of the nuclear physics community, as well as the development of cutting-edge approaches for producing isotopes critical to the nation, including ground breaking research on the production of alpha emitting isotopes in sufficient quantity to enable clinical trials for cancer therapy. Mission readiness is maintained for the production of radioactive isotopes that are in short supply for research and a wide array of applications.

Science Laboratories Infrastructure (SLI).—The Science Laboratories Infrastructure (SLI) program supports scientific and technological innovation at the Office of Science (SC) laboratories by funding and sustaining mission-ready infrastructure and fostering safe and environmentally responsible operations. The program provides state-of-the-art facilities and infrastructure that are flexible, reliable, and sustainable in support of scientific discovery. The SLI program also funds Payments in Lieu of Taxes to local communities around the Argonne, Brookhaven, and Oak Ridge National Laboratories.

Safeguards and Security.—The Safeguards and Security (S&S) program is designed to ensure appropriate security measures are in place to support the SC mission requirement of open scientific research and to protect critical assets within SC laboratories. This is accomplished by providing physical controls that will mitigate possible risks to the laboratories' employees, nuclear and special materials, classified and sensitive information, and facilities. The S&S program also provides funding for cyber security for the laboratories' information technology systems to protect electronic data while enabling the SC mission.

Workforce Development for Teachers and Scientists.—The Workforce Development for Teachers and Scientists (WDTS) program mission is to help ensure that DOE has a sustained pipeline of science, technology, engineering, and mathematics (STEM) workers. This is accomplished through support of undergraduate internships, graduate thesis research, and visiting faculty programs at the DOE laboratories; and annual, nationwide, middle- and high-school science competitions culminating in the National Science Bowl in Washington, D.C. These investments help develop the next generation of scientists and engineers to support the DOE mission, administer programs, and conduct research.

Program Direction.— Science Program Direction supports a highly skilled Federal workforce to develop and oversee SC investments in research and scientific user facilities. SC investments deliver scientific dis-

coveries and major scientific tools that transform our understanding of nature and advance the energy, economic, and national security of the United States. In addition, SC provides public access to DOE scientific findings to further leverage the Federal science investment and advance the scientific enterprise. SC requires highly skilled scientific and technical program and project managers, as well as experts in areas such as acquisition, finance, legal, construction, and infrastructure management, human resources, and environmental, safety, and health oversight. SC plans, executes, and manages basic science research programs that address critical national needs. Oversight of DOE's basic research portfolio, which includes grants and contracts supporting nearly 19,000 researchers located at 300 universities and other institutions and 17 national laboratories, as well as supervision of major construction projects, is a Federal responsibility.

Object Classification (in millions of dollars)

Identification code 089–0222–0–1–251	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	104	101	96
11.3 Other than full-time permanent	2	2	2
11.5 Other personnel compensation	1	1	2
11.8 Special personal services payments	2	2	.....
11.9 Total personnel compensation	109	106	100
12.1 Civilian personnel benefits	33	32	31
21.0 Travel and transportation of persons	4	4	4
23.1 Rental payments to GSA	1	1	1
23.2 Rental payments to others	2	2	2
23.3 Communications, utilities, and miscellaneous charges	3	3	3
25.1 Advisory and assistance services	24	23	23
25.2 Other services from non-Federal sources	34	33	33
25.3 Other goods and services from Federal sources	29	28	28
25.4 Operation and maintenance of facilities	3,307	3,219	2,697
25.5 Research and development contracts	148	144	144
25.7 Operation and maintenance of equipment	1	1	1
26.0 Supplies and materials	2	2	2
31.0 Equipment	223	217	200
32.0 Land and structures	659	641	500
41.0 Grants, subsidies, and contributions	908	883	704
99.0 Direct obligations	5,487	5,339	4,473
99.0 Reimbursable obligations	553	520	520
99.9 Total new obligations, unexpired accounts	6,040	5,859	4,993

Employment Summary

Identification code 089–0222–0–1–251	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	917	881	785

ADVANCED RESEARCH PROJECTS AGENCY—ENERGY

(INCLUDING CANCELLATION OF FUNDS)

For Department of Energy administrative expenses necessary in carrying out the activities authorized by section 5012 of the America COMPETES Act (Public Law 110–69), \$20,000,000, to remain available until September 30, 2019: Provided, That of the unobligated balances from prior year appropriations available under this heading, \$46,367,000 is hereby permanently cancelled: Provided further, That no amounts may be cancelled from amounts that were previously designated by the Congress as an emergency requirement pursuant to a concurrent resolution on the budget or the Balanced Budget and Emergency Deficit Control Act of 1985: Provided further, That of the funding made available under this heading for ARPA-E projects in prior Acts, \$45,000,000 shall be available for program direction, to remain available until expended: Provided further, That no amounts may be repurposed pursuant to this paragraph from amounts that were designated by the Congress as an emergency requirement pursuant to a concurrent resolution on the budget or the Balanced Budget and Emergency Deficit Control Act of 1985.

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.

Program and Financing (in millions of dollars)

Identification code 089–0337–0–1–270	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 ARPA-E Projects	278	253	144
0002 Program Direction	33	32	29
0799 Total direct obligations	311	285	173
0801 Advanced Research Projects Agency - Energy (Reimbursable)	1		
0900 Total new obligations, unexpired accounts	312	285	173
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	244	230	235
1021 Recoveries of prior year unpaid obligations	7		
1050 Unobligated balance (total)	251	230	235
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	291	290	20
1131 Unobligated balance of appropriations permanently reduced			-46
1160 Appropriation, discretionary (total)	291	290	-26
1900 Budget authority (total)	291	290	-26
1930 Total budgetary resources available	542	520	209
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	230	235	36
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	437	498	496
3010 New obligations, unexpired accounts	312	285	173
3020 Outlays (gross)	-239	-287	-252
3040 Recoveries of prior year unpaid obligations, unexpired	-7		
3041 Recoveries of prior year unpaid obligations, expired	-5		
3050 Unpaid obligations, end of year	498	496	417
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-3	-2	-2
3071 Change in uncollected pymts, Fed sources, expired	1		
3090 Uncollected pymts, Fed sources, end of year	-2	-2	-2
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	434	496	494
3200 Obligated balance, end of year	496	494	415
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	291	290	-26
Outlays, gross:			
4010 Outlays from new discretionary authority	22	14	1
4011 Outlays from discretionary balances	217	273	251
4020 Outlays, gross (total)	239	287	252
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-1		
Additional offsets against gross budget authority only:			
4052 Offsetting collections credited to expired accounts	1		
4060 Additional offsets against budget authority only (total)	1		
4070 Budget authority, net (discretionary)	291	290	-26
4080 Outlays, net (discretionary)	238	287	252
4180 Budget authority, net (total)	291	290	-26
4190 Outlays, net (total)	238	287	252

The U.S. Department of Energy's Advanced Research Projects Agency-Energy (ARPA-E) was established by the America COMPETES Act of 2007 (Public Law 110–69), as amended. ARPA-E is being eliminated in the FY 2018 Budget in accordance with Administration priorities. ARPA-E will wind down operations in FY 2018 with the expectation that it will shut down in FY 2019, with remaining monitoring and contract closeout activities transferred elsewhere within DOE.

Object Classification (in millions of dollars)

Identification code 089–0337–0–1–270	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	1	6	4

11.3 Other than full-time permanent	5		
11.9 Total personnel compensation	6	6	4
12.1 Civilian personnel benefits	2	2	2
21.0 Travel and transportation of persons	2	2	2
25.1 Advisory and assistance services	2	16	18
25.2 Other services from non-Federal sources	16		
25.3 Other goods and services from Federal sources	4	6	6
25.4 Operation and maintenance of facilities	38	38	29
25.5 Research and development contracts	241	215	112
99.0 Direct obligations	311	285	173
99.0 Reimbursable obligations	1		
99.9 Total new obligations, unexpired accounts	312	285	173

Employment Summary

Identification code 089–0337–0–1–270	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	47	56	44

ENERGY SUPPLY AND CONSERVATION**Program and Financing** (in millions of dollars)

Identification code 089–0224–0–1–999	2016 actual	2017 est.	2018 est.
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	7	7	7
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected	1		
1701 Change in uncollected payments, Federal sources	-1		
1930 Total budgetary resources available	7	7	7
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	7	7	7
Change in obligated balance:			
Uncollected payments:			
3060 Obligated balance transferred to other accts	-2	-1	-1
3070 Change in uncollected pymts, Fed sources, unexpired	1		
3090 Uncollected pymts, Fed sources, end of year	-1	-1	-1
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	-2	-1	-1
3200 Obligated balance, end of year	-1	-1	-1
Budget authority and outlays, net:			
Discretionary:			
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-1		
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	1		
4080 Outlays, net (discretionary)	-1		
4180 Budget authority, net (total)			
4190 Outlays, net (total)	-1		

NUCLEAR ENERGY

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for nuclear energy 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, \$703,000,000, to remain available until expended: Provided, That of such amount, \$66,500,000 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.

NUCLEAR ENERGY—Continued
Program and Financing (in millions of dollars)

Identification code 089-0319-0-1-999	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0032 Reactor Concepts RD&D	137	137	94
0041 Fuel Cycle R&D	197	250	89
0042 Integrated University Program	5	.....	.....
0043 Nuclear Energy Enabling Technologies R&D	108	89	105
0091 Research and Development programs, subtotal	447	476	288
0301 Radiological Facilities Management	25	7	9
0401 Idaho Facilities Management	223	227	204
0450 Idaho National Laboratory safeguards and security	126	129	133
0451 International Nuclear Safety	2	.....	.....
0491 Infrastructure programs, subtotal	351	356	337
0501 Small Modular Reactor Licensing Technical Support Program	63	89	.....
0502 Supercritical Transformational Electric Power Generation	9	.....	.....
0551 Program Direction	79	89	67
0552 International Nuclear Energy Cooperation	3	5	2
0591 Other direct program activities, subtotal	154	183	69
0799 Total direct obligations	977	1,022	703
0801 Nuclear Energy (Reimbursable)	122	122	120
0900 Total new obligations, unexpired accounts	1,099	1,144	823
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	31	40	.....
1021 Recoveries of prior year unpaid obligations	20	.....	.....
1050 Unobligated balance (total)	51	40	.....
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	986	984	703
1120 Appropriations transferred to other accts [089-0222]	-15	.....	.....
1160 Appropriation, discretionary (total)	971	984	703
Spending authority from offsetting collections, discretionary:			
1700 Collected	118	120	120
1701 Change in uncollected payments, Federal sources	-1	.....	.....
1750 Spending auth from offsetting collections, disc (total)	117	120	120
1900 Budget authority (total)	1,088	1,104	823
1930 Total budgetary resources available	1,139	1,144	823
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	40	.....	.....
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	706	719	739
3010 New obligations, unexpired accounts	1,099	1,144	823
3020 Outlays (gross)	-1,066	-1,124	-1,086
3040 Recoveries of prior year unpaid obligations, unexpired	-20	.....	.....
3050 Unpaid obligations, end of year	719	739	476
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-69	-68	-68
3070 Change in uncollected pymts, Fed sources, unexpired	1	.....	.....
3090 Uncollected pymts, Fed sources, end of year	-68	-68	-68
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	637	651	671
3200 Obligated balance, end of year	651	671	408
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	1,088	1,104	823
Outlays, gross:			
4010 Outlays from new discretionary authority	515	612	476
4011 Outlays from discretionary balances	551	512	610
4020 Outlays, gross (total)	1,066	1,124	1,086
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-101	-120	-120
4033 Non-Federal sources	-17	.....	.....
4040 Offsets against gross budget authority and outlays (total)	-118	-120	-120
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	1	.....	.....
4070 Budget authority, net (discretionary)	971	984	703
4080 Outlays, net (discretionary)	948	1,004	966
4180 Budget authority, net (total)	971	984	703

4190 Outlays, net (total) 948 1,004 966

The Office of Nuclear Energy (NE) funds a range of research and development activities and supports federal nuclear energy Research and Development (R&D) infrastructure. The FY 2018 Budget continues programmatic support for advanced reactor R&D activities; fuel cycle R&D; and the safe, environmentally compliant, and cost-effective operation of the Department's facilities vital to nuclear energy R&D activities.

Reactor Concepts Research, Development and Demonstration.—This program develops new and advanced reactor designs and technologies and conducts R&D on advanced technologies for light water reactors (LWR).

Fuel Cycle Research and Development.—This program conducts R&D on advanced fuel cycle technologies that have the potential to improve resource utilization and energy generation, reduce waste generation, enhance safety, and limit proliferation risk.

Nuclear Energy Enabling Technologies.—This program conducts R&D and strategic infrastructure investments to develop innovative and crosscutting nuclear energy technologies, including investments in modeling and simulation tools and providing access to unique nuclear energy research capabilities through the Nuclear Science User Facilities (NSUF).

Radiological Facilities Management.—This program supports the continued operation of U.S. university research reactors by providing university research reactor fuel services, as well as maintenance of, and safety upgrades to, fuel fabrication equipment and facilities.

Idaho Facilities Management.—This program manages the planning, acquisition, operation, maintenance, and disposition of the NE owned facilities and capabilities at the Idaho National Laboratory (INL), maintains Department of Energy mission-supporting facilities and capabilities at the INL in a safe, compliant status to support the Department's nuclear energy research, testing of naval reactor fuels and reactor core components, and a diverse range of national security technology programs that support the National Nuclear Security Administration (NNSA) and other federal agencies such as the Department of Homeland Security in the areas of critical infrastructure protection, nuclear nonproliferation, and incident response.

Idaho Site-wide Safeguards and Security.—This program supports the INL complex nuclear facility infrastructure and enables R&D in support of multiple program missions.

International Nuclear Energy Cooperation.—This program supports the Department's international activities related to civil nuclear energy, including analysis, development, coordination and implementation of international civil nuclear energy policy and integration of international nuclear technical activities.

Program Direction.—This program provides the federal staffing resources and associated costs required to support the overall direction and execution of the NE programs.

Object Classification (in millions of dollars)

Identification code 089-0319-0-1-999	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	41	41	33
11.3 Other than full-time permanent	1	1	1
11.5 Other personnel compensation	1	1	1
11.9 Total personnel compensation	43	43	35
12.1 Civilian personnel benefits	15	15	12
21.0 Travel and transportation of persons	2	2	2
25.1 Advisory and assistance services	7	7	7
25.2 Other services from non-Federal sources	117	117	85
25.3 Other goods and services from Federal sources	15	15	12
25.4 Operation and maintenance of facilities	686	731	472
25.7 Operation and maintenance of equipment	1	1	1
31.0 Equipment	9	9	9
41.0 Land and structures	22	22	18
41.0 Grants, subsidies, and contributions	60	60	50
99.0 Direct obligations	977	1,022	703
99.0 Reimbursable obligations	122	122	120

99.9 Total new obligations, unexpired accounts 1,099 1,144 823

Employment Summary

Identification code 089-0319-0-1-999	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	356	340	291
2001 Reimbursable civilian full-time equivalent employment	3	3	3

ELECTRICITY DELIVERY AND ENERGY RELIABILITY

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for electricity delivery and energy reliability 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, \$120,000,000, to remain available until expended: Provided, That of such amount, \$27,000,000 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.

Program and Financing (in millions of dollars)

Identification code 089-0318-0-1-271	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0011 Clean Energy Transmission and Reliability	36	39	13
0012 Smart Grid R&D	32	35	10
0013 Cybersecurity for Energy Delivery Systems	67	62	42
0014 Energy Storage	19	20	8
0015 Transformer Resilience and Advanced Components	3	5	5
0020 Infrastructure Security and Energy Restoration	10	9	9
0030 National Electricity Delivery	8	7	6
0040 Program Direction	30	28	27
0799 Total direct obligations	205	205	120
0801 Reimbursable work	3	3	3
0809 Reimbursable program activities, subtotal	3	3	3
0900 Total new obligations, unexpired accounts	208	208	123
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	26	26	30
1021 Recoveries of prior year unpaid obligations	3		
1050 Unobligated balance (total)	29	26	30
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	206	206	120
1120 Appropriations transferred to other accts [089-0222]	-4		
1160 Appropriation, discretionary (total)	202	206	120
Spending authority from offsetting collections, discretionary:			
1700 Collected	3	3	3
1701 Change in uncollected payments, Federal sources		3	3
1750 Spending auth from offsetting collections, disc (total)	3	6	6
1900 Budget authority (total)	205	212	126
1930 Total budgetary resources available	234	238	156
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	26	30	33
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	170	232	181
3010 New obligations, unexpired accounts	208	208	123
3020 Outlays (gross)	-143	-259	-269
3040 Recoveries of prior year unpaid obligations, unexpired	-3		
3050 Unpaid obligations, end of year	232	181	35
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-2	-2	-5
3070 Change in uncollected pymts, Fed sources, unexpired		-3	-3
3090 Uncollected pymts, Fed sources, end of year	-2	-5	-8
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	168	230	176
3200 Obligated balance, end of year	230	176	27

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	205	212	126
Outlays, gross:			
4010 Outlays from new discretionary authority	42	130	78
4011 Outlays from discretionary balances	101	129	191
4020 Outlays, gross (total)	143	259	269
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-2	-3	-3
4033 Non-Federal sources	-1		
4040 Offsets against gross budget authority and outlays (total)	-3	-3	-3
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired		-3	-3
4070 Budget authority, net (discretionary)	202	206	120
4080 Outlays, net (discretionary)	140	256	266
4180 Budget authority, net (total)	202	206	120
4190 Outlays, net (total)	140	256	266

The mission of the Office of Electricity Delivery and Energy Reliability (OE) is to drive electric grid modernization and resiliency in energy infrastructure. OE leads the Department of Energy's efforts to strengthen, transform, and improve energy infrastructure so that consumers have access to reliable, secure, and clean sources of energy. OE programs include:

Transmission Reliability.—The Transmission Reliability program helps improve the reliability and resiliency of the U.S. transmission system through early stage research and development (R&D) focused on measurement and control of the electricity system and risk assessment to address challenges across integrated energy systems.

Resilient Distribution Systems (RDS).—The RDS program focuses on addressing the challenges facing electric power grid by developing the innovative technologies, tools, and techniques to modernize the distribution portion of the electric delivery system. RDS pursues strategic investments to improve reliability, resiliency, faster outage recovery, and operational efficiency, building upon previous and ongoing grid modernization efforts.

Cybersecurity for Energy Delivery System (CEDS).—The CEDS program supports research on cutting edge cybersecurity solutions, information sharing to enhance situational awareness, implementing tools to aid industry to improve their cybersecurity posture, and building an effective, timely, and coordinated cyber incident management capability in the energy sector.

Energy Storage.—The Energy Storage program focuses on accelerating the development of new materials and device technologies that can lead to significant improvements in the cost and performance of energy storage systems and accelerated adoption of the energy storage solutions.

Transformer Resilience and Advanced Components (TRAC).—The TRAC program addresses challenges facing transformers and other critical components in support of grid modernization. Research in advanced materials, components, and devices will provide the fundamental physical capabilities required in the future grid and encourage the adoption of new technologies and approaches.

Transmission Permitting & Technical Assistance.—The Transmission Permitting & Technical Assistance program provides technical assistance to states, regional entities, and tribes to help them develop and improve their programs, policies, and laws that facilitate the development of reliable and affordable electricity infrastructure. The program implements the electricity grid modernization requirements contained in the Energy Policy Act of 2005 and the Energy Independence and Security Act of 2007, and authorizes the export of electric energy and processes permits for the construction of transmission infrastructure across international borders.

Infrastructure Security and Energy Restoration (ISER).—The ISER program leads efforts for securing the U.S. energy infrastructure against all hazards, reducing the impact of disruptive events, and responding to and facilitating recovery from energy disruptions, in collaboration with industry, State and local governments.

Program Direction.—Program Direction provides for the costs associated with the Federal workforce and contractor services that support OE's mis-

ELECTRICITY DELIVERY AND ENERGY RELIABILITY—Continued

sion. These costs include salaries, benefits, travel, training, building occupancy, IT systems, and other related expenses.

Object Classification (in millions of dollars)

Identification code 089–0318–0–1–271	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	11	11	11
11.3 Other than full-time permanent	1	1	1
11.9 Total personnel compensation	12	12	12
12.1 Civilian personnel benefits	4	4	6
21.0 Travel and transportation of persons	1	1	1
25.1 Advisory and assistance services	17	16	9
25.2 Other services from non-Federal sources	3	3	2
25.3 Other goods and services from Federal sources	4	4	2
25.4 Operation and maintenance of facilities	96	100	52
25.5 Research and development contracts	63	60	30
32.0 Land and structures	5	5	6
99.0 Direct obligations	205	205	120
99.0 Reimbursable obligations	3	3	3
99.9 Total new obligations, unexpired accounts	208	208	123

Employment Summary

Identification code 089–0318–0–1–271	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	118	118	99
2001 Reimbursable civilian full-time equivalent employment	1	2	2

ENERGY EFFICIENCY AND RENEWABLE ENERGY

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for energy efficiency and renewable energy 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, \$636,149,000, to remain available until expended: Provided, That of such amount, \$125,849,000 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.

Program and Financing (in millions of dollars)

Identification code 089–0321–0–1–270	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Vehicle Technologies	351	269	148
0002 Bioenergy Technologies	196	298	120
0003 Hydrogen & Fuel Cell Technologies	114	92	68
0091 Sustainable Transportation, subtotal	661	659	336
0101 Solar Energy	238	324	134
0102 Wind Energy	56	145	66
0103 Water Power	59	97	44
0104 Geothermal Technologies	47	76	38
0191 Renewable Electricity, subtotal	400	642	282
0201 Advanced Manufacturing	186	315	149
0202 Building Technologies	202	160	107
0203 Weatherization & Intergovernmental Activities	270	267	14
0204 Federal Energy Management Program	31	30	17
0291 Energy Efficiency, subtotal	689	772	287
0301 Program Direction & Support	166	163	126
0302 Strategic Programs	20	23	.....
0303 Facilities & Infrastructure	62	62	92
0391 EERE Corporate Support, subtotal	248	248	218
0799 Total direct obligations	1,998	2,321	1,123
0810 Energy Efficiency and Renewable Energy (Reimbursable)	152	152	152
0900 Total new obligations, unexpired accounts	2,150	2,473	1,275

Budgetary resources:

1000 Unobligated balance brought forward, Oct 1	655	774	556
1021 Recoveries of prior year unpaid obligations	83	36	14
1050 Unobligated balance (total)	738	810	570
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	2,073	2,069	636
1120 Appropriations transferred to other accts [089–0222]	–30	.....	.....
1131 Unobligated balance of appropriations permanently reduced	–4	–3	.....
1160 Appropriation, discretionary (total)	2,039	2,066	636
Spending authority from offsetting collections, discretionary:			
1700 Collected	153	153	153
1701 Change in uncollected payments, Federal sources	–5	.....	.....
1750 Spending auth from offsetting collections, disc (total)	148	153	153
1900 Budget authority (total)	2,187	2,219	789
1930 Total budgetary resources available	2,925	3,029	1,359
Memorandum (non-add) entries:			
1940 Unobligated balance expiring	–1	.....	.....
1941 Unexpired unobligated balance, end of year	774	556	84

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	2,110	2,288	2,834
3010 New obligations, unexpired accounts	2,150	2,473	1,275
3020 Outlays (gross)	–1,889	–1,891	–1,976
3040 Recoveries of prior year unpaid obligations, unexpired	–83	–36	–14
3050 Unpaid obligations, end of year	2,288	2,834	2,119
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	–105	–100	–100
3070 Change in uncollected pymts, Fed sources, unexpired	5	.....	.....
3090 Uncollected pymts, Fed sources, end of year	–100	–100	–100
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	2,005	2,188	2,734
3200 Obligated balance, end of year	2,188	2,734	2,019

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	2,187	2,219	789
Outlays, gross:			
4010 Outlays from new discretionary authority	465	715	326
4011 Outlays from discretionary balances	1,424	1,176	1,650
4020 Outlays, gross (total)	1,889	1,891	1,976
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	–86	–76	–76
4033 Non-Federal sources	–67	–77	–77
4040 Offsets against gross budget authority and outlays (total)	–153	–153	–153
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	5	.....	.....
4060 Additional offsets against budget authority only (total)	5	.....	.....
4070 Budget authority, net (discretionary)	2,039	2,066	636
4080 Outlays, net (discretionary)	1,736	1,738	1,823
4180 Budget authority, net (total)	2,039	2,066	636
4190 Outlays, net (total)	1,736	1,738	1,823

The Department of Energy's Office of Energy Efficiency and Renewable Energy (EERE) is the U.S. Government's primary clean energy technology organization. EERE works closely with the National Laboratories, and with many of America's best innovators and businesses to support high-impact, early-stage applied research and development (R&D) activities in sustainable transportation, renewable power, and energy efficiency.

Sustainable Transportation.—Conducts early-stage R&D through program offices focused on vehicle technologies, bioenergy, and hydrogen and fuel cell technologies to enable industry to develop and deploy clean, domestic fuels and efficient, convenient, and affordable transportation choices that improve U.S. energy security, economic productivity, and environmental quality.

Renewable Power.—Conducts early-stage R&D through program offices focused on solar, wind, water, and geothermal energy technologies to enable industry to develop and deploy affordable, reliable, and renewable electricity options that allow regional optimization, indigenous resources utilization, and improves the resilience, reliability, and security of the electricity grid.

Energy Efficiency.—Conducts early-stage R&D through program offices focused on advanced manufacturing and building technologies to strengthen the body of knowledge that enables industry to improve the energy productivity, affordability, and energy security of our buildings and manufacturing sectors. Also funds the development of statutorily-mandated efficiency standards and provides Federal energy management technical assistance.

Corporate Programs.—Supports EERE operations and management through program direction (e.g., salaries and benefits, support services, working capital, etc.) and facilities and infrastructure at the National Renewable Energy Laboratory (e.g., general plant projects, general purpose equipment, safeguards and security, etc.)

Object Classification (in millions of dollars)

Identification code 089–0321–0–1–270	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	70	69	54
11.3 Other than full-time permanent	4	4	4
11.5 Other personnel compensation	1	1	.....
11.9 Total personnel compensation	75	74	58
12.1 Civilian personnel benefits	24	23	17
21.0 Travel and transportation of persons	5	5	2
23.3 Communications, utilities, and miscellaneous charges	4	4	4
25.1 Advisory and assistance services	118	117	40
25.2 Other services from non-Federal sources	39	39	15
25.3 Other goods and services from Federal sources	26	26	10
25.4 Operation and maintenance of facilities	936	1,173	770
25.5 Research and development contracts	173	217	162
31.0 Equipment	4	4	4
32.0 Land and structures	1	1	1
41.0 Grants, subsidies, and contributions	593	638	40
99.0 Direct obligations	1,998	2,321	1,123
99.0 Reimbursable obligations	152	152	152
99.9 Total new obligations, unexpired accounts	2,150	2,473	1,275

Employment Summary

Identification code 089–0321–0–1–270	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	634	634	458

NON-DEFENSE ENVIRONMENTAL CLEANUP

For Department of Energy expenses, including the purchase, construction, and acquisition of plant and capital equipment and other expenses necessary for non-defense environmental cleanup 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, \$218,400,000, to remain available until expended.

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.

Program and Financing (in millions of dollars)

Identification code 089–0315–0–1–271	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0002 Fast Flux Test Facility	3	3	2
0003 Gaseous Diffusion Plants	104	104	100
0004 Small Sites	93	88	55
0005 West Valley Demonstration Project	59	59	61
0007 Mercury Storage Facility .....	.....	1	.....
0799 Total direct obligations	259	255	218
0801 Non-defense Environmental Cleanup (Reimbursable)	30	29	29
0900 Total new obligations, unexpired accounts	289	284	247
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	2	2	2

1021 Recoveries of prior year unpaid obligations	4	.....	.....
1050 Unobligated balance (total)	6	2	2
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	255	255	218
Spending authority from offsetting collections, discretionary:			
1700 Collected	30	29	29
1900 Budget authority (total)	285	284	247
1930 Total budgetary resources available	291	286	249
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	2	2	2

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	151	158	140
3010 New obligations, unexpired accounts	289	284	247
3020 Outlays (gross)	–278	–302	–301
3040 Recoveries of prior year unpaid obligations, unexpired	–4	.....	.....
3050 Unpaid obligations, end of year	158	140	86
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	–2	–2	–2
3090 Uncollected pymts, Fed sources, end of year	–2	–2	–2
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	149	156	138
3200 Obligated balance, end of year	156	138	84

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	285	284	247
Outlays, gross:			
4010 Outlays from new discretionary authority	163	207	182
4011 Outlays from discretionary balances	115	95	119
4020 Outlays, gross (total)	278	302	301
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	–1	.....	.....
4033 Non-Federal sources	–29	–29	–29
4040 Offsets against gross budget authority and outlays (total)	–30	–29	–29
4070 Budget authority, net (discretionary)	255	255	218
4080 Outlays, net (discretionary)	248	273	272
4180 Budget authority, net (total)	255	255	218
4190 Outlays, net (total)	248	273	272

The Non-Defense Environmental Cleanup program includes funds to manage and clean up sites used for civilian energy research and non-defense related activities. These activities resulted in radioactive, hazardous, and mixed waste contamination that requires remediation, stabilization, or some other type of corrective action, as well as the decontamination and decommissioning of former research and production buildings and supporting infrastructure. The budget displays the cleanup program by site and activity.

West Valley Demonstration Project.—Funds waste disposition, building decontamination, and removal of non-essential facilities in the near-term.

Gaseous Diffusion Plants.—Funds surveillance and maintenance of the former Uranium Program facilities and manages legacy polychlorinated biphenyl contamination. The program also includes the operation of two depleted uranium hexafluoride conversion facilities at Paducah, Kentucky, and Portsmouth, Ohio, which are converting the depleted uranium hexafluoride into a more stable form for reuse or disposition.

Fast Flux Test Facility.—Funds the long-term surveillance and maintenance and eventual decontamination and decommissioning of the Fast Flux Test Facility, constructed and operated from the 1960s through 1980s.

Small Sites.—Funds cleanup, closure, and post-closure environmental activities at a number of geographic sites across the nation, including the Energy Technology Engineering Center and Moab, as well as non-defense activities at Idaho and Oak Ridge. Some sites are associated with other Department of Energy programs, particularly the Office of Science, and will have continuing missions after EM completes the cleanup. Others will transition to the Office of Legacy Management or private-sector entities for post-closure activities.

NON-DEFENSE ENVIRONMENTAL CLEANUP—Continued

Object Classification (in millions of dollars)

Identification code 089-0315-0-1-271	2016 actual	2017 est.	2018 est.
Direct obligations:			
25.2 Other services from non-Federal sources	11	11	9
25.3 Other goods and services from Federal sources	1	1	1
25.4 Operation and maintenance of facilities	230	226	194
32.0 Land and structures	5	5	4
41.0 Grants, subsidies, and contributions	12	12	10
99.0 Direct obligations	259	255	218
99.0 Reimbursable obligations	30	29	29
99.9 Total new obligations, unexpired accounts	289	284	247

FOSSIL ENERGY RESEARCH AND DEVELOPMENT

(INCLUDING USE OF PRIOR YEAR BALANCES)

For Department of Energy expenses necessary in carrying out fossil energy research and development activities, under the authority of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), including the acquisition of interest, including defeasible and equitable interests in any real property or any facility or for plant or facility acquisition or expansion, and for conducting inquiries, technological investigations and research concerning the extraction, processing, use, and disposal of mineral substances without objectionable social and environmental costs (30 U.S.C. 3, 1602, and 1603), \$280,000,000, to remain available until expended: Provided, That of such amount \$58,478,000 shall be available until September 30, 2019, for program direction: Provided further, That \$55,178,000 from funds appropriated under this heading in prior Acts shall be deobligated, if necessary, and shall be made available for activities under this heading without regard to the provisions in the Act in which the funds were originally appropriated: Provided further, That no amounts may be repurposed pursuant to this paragraph from amounts that were designated by the Congress as an emergency requirement pursuant to a concurrent resolution on the budget or the Balanced Budget and Emergency Deficit Control Act of 1985.

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.

Program and Financing (in millions of dollars)

Identification code 089-0213-0-1-271	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0002 Carbon Capture	66	66	16
0003 Carbon Storage	67	67	15
0004 Advanced Energy Systems	101	101	46
0005 Cross-Cutting Research	44	44	38
0007 Program Direction			58
0012 Program Direction - Management	113	113	
0013 Program Direction - NETL R&D	53	53	
0014 Plant and Capital Equipment	16	16	
0016 Environmental Restoration	8	8	
0017 Special Recruitment Program	2	2	
0020 Natural gas technologies	36	36	6
0021 Unconventional FE Technologies	17	17	15
0022 STEP (Supercritical CO2)	15	15	
0024 NETL Research and Operations			78
0025 NETL Infrastructure			63
0026 CCPI	160		
0799 Total direct obligations	698	538	335
0801 Fossil Energy Research and Development (Reimbursable)	1	1	1
0900 Total new obligations, unexpired accounts	699	539	336
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	35	368	517
1021 Recoveries of prior year unpaid obligations	413	55	
1050 Unobligated balance (total)	448	423	517
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	632	631	280
1120 Appropriations transferred to other accts [089-0222]	-14		
1160 Appropriation, discretionary (total)	618	631	280

Spending authority from offsetting collections, discretionary:			
1700 Collected	1	2	2
1900 Budget authority (total)	619	633	282
1930 Total budgetary resources available	1,067	1,056	799
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	368	517	463
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	1,177	772	564
3010 New obligations, unexpired accounts	699	539	336
3020 Outlays (gross)	-691	-692	-601
3040 Recoveries of prior year unpaid obligations, unexpired	-413	-55	
3050 Unpaid obligations, end of year	772	564	299
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-2	-2	-2
3090 Uncollected pymts, Fed sources, end of year	-2	-2	-2
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	1,175	770	562
3200 Obligated balance, end of year	770	562	297
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	619	633	282
Outlays, gross:			
4010 Outlays from new discretionary authority	173	253	113
4011 Outlays from discretionary balances	518	439	488
4020 Outlays, gross (total)	691	692	601
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4033 Non-Federal sources	-1	-2	-2
4040 Offsets against gross budget authority and outlays (total)	-1	-2	-2
4180 Budget authority, net (total)	618	631	280
4190 Outlays, net (total)	690	690	599

The Fossil Energy Research and Development (FER&D) program conducts research that supports the Nation's ability to use domestic fossil energy resources affordably, efficiently, and cleanly. The program funds early-stage R&D with academia, national laboratories, and the private sector to generate knowledge that industry can use to develop new products and processes. Program activities, including National Energy Technology Laboratory (NETL) R&D, focus on: 1) early-stage, high-risk fossil-fueled power systems and components that address challenges of reliability and improve the efficiency of existing units; 2) cross-cutting research to bridge fundamental science and early-stage applied engineering development for advanced materials and computational systems; 3) early-stage R&D on transformational CO2 capture technology applicable to both new and existing fossil-fueled facilities; and 4) CO2 storage, with emphasis on early-stage research focused on associated storage in depleted fields; offshore storage; and addressing the R&D challenges of injection. The program will also conduct early-stage research to generate new, novel understanding of shale geology and fracture dynamics for unconventional oil and natural gas resources. In addition, FER&D will conduct work focused on characterizing gas hydrates and will explore new concepts for novel technologies that could improve the reliability and operational efficiency of natural gas transmission, distribution, and storage facilities. NETL R&D includes funding for scientists, engineers, and project managers conducting both in-house and collaborative research. The NETL Infrastructure and Operations program supports the upkeep of NETL's lab footprint in three geographic locations: Morgantown, WV; Pittsburgh, PA; and Albany, OR. This budget request initiates an effort to consolidate NETL's multi-site footprint to a single operational complex. Program Direction provides for the Headquarters and NETL workforce responsible for the oversight and administration of FER&D. Also included is the Import/Export Authorization program, which will continue regulatory reviews and oversight of natural gas imports and exports.

Object Classification (in millions of dollars)

Identification code 089–0213–0–1–271	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	64	64	69
11.3 Other than full-time permanent	1	1	1
11.5 Other personnel compensation	1	1	1
11.9 Total personnel compensation	66	66	71
12.1 Civilian personnel benefits	21	21	21
21.0 Travel and transportation of persons	4	4	3
23.3 Communications, utilities, and miscellaneous charges	5	5	5
25.1 Advisory and assistance services	114	114	50
25.2 Other services from non-Federal sources	12	12	12
25.3 Other goods and services from Federal sources	11	11	11
25.4 Operation and maintenance of facilities	56	56	26
25.5 Research and development contracts	384	226	121
25.7 Operation and maintenance of equipment	3	3	3
26.0 Supplies and materials	2	2	2
31.0 Equipment	13	13	7
32.0 Land and structures	2	2	2
41.0 Grants, subsidies, and contributions	3	3	1
99.0 Direct obligations	696	538	335
99.5 Reimbursable obligations	1	1	1
99.0 Adjustment for rounding	2		
99.9 Total new obligations, unexpired accounts	699	539	336

Employment Summary

Identification code 089–0213–0–1–271	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	569	638	615

NAVAL PETROLEUM AND OIL SHALE RESERVES

For Department of Energy expenses necessary to carry out naval petroleum and oil shale reserve activities, \$4,900,000, to remain available until expended: Provided, That notwithstanding any other provision of law, unobligated funds remaining from prior years shall be available for all naval petroleum and oil shale reserve activities.

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.

Program and Financing (in millions of dollars)

Identification code 089–0219–0–1–271	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Production and Operations	11	21	18
0002 Naval Petroleum and Oil Shale Reserves Program Direction	4	2	2
0900 Total new obligations, unexpired accounts	15	23	20

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	21	27	21
1021 Recoveries of prior year unpaid obligations	1		
1050 Unobligated balance (total)	22	27	21
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	18	17	5
Spending authority from offsetting collections, discretionary:			
1700 Collected	2		
1900 Budget authority (total)	20	17	5
1930 Total budgetary resources available	42	44	26
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	27	21	6

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	10	10	8
3010 New obligations, unexpired accounts	15	23	20
3020 Outlays (gross)	–14	–25	–9
3040 Recoveries of prior year unpaid obligations, unexpired	–1		
3050 Unpaid obligations, end of year	10	8	19
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	10	10	8

3200 Obligated balance, end of year	10	8	19
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	20	17	5
Outlays, gross:			
4010 Outlays from new discretionary authority	1	11	3
4011 Outlays from discretionary balances	13	14	6
4020 Outlays, gross (total)	14	25	9
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	–2		
4180 Budget authority, net (total)	18	17	5
4190 Outlays, net (total)	12	25	9

Following the sale of the government's interests in Naval Petroleum Reserve 1 (NPR-1) in California (Elk Hills), post-sale environmental assessment/remediation activities continue to be required by the legally binding agreements under the Corrective Action Consent Agreement with the State of California Department of Toxic Substances Control (DTSC). Program activities encompass execution of a technical baseline, interim measures, environmental sampling and analysis, corrective measures, waste removal and disposal, and confirmatory sampling. In FY 2018, these activities will continue to serve as the basis for requests to DTSC to release DOE from further corrective action for 131 areas of concern at NPR-1.

The account also funds activities at Naval Petroleum Reserve 3 (NPR-3) in Wyoming (Teapot Dome), a stripper well oil field. On January 30, 2015, the Department finalized the sale of the Teapot Dome Oilfield. The Department will oversee post-sale remediation activities and ground water sampling for the closure of the landfill in compliance with National Environmental Policy Act and Wyoming Department of Environmental Quality requirements.

Object Classification (in millions of dollars)

Identification code 089–0219–0–1–271	2016 actual	2017 est.	2018 est.
Direct obligations:			
11.1 Personnel compensation: Full-time permanent	1	1	1
25.1 Advisory and assistance services		1	1
25.2 Other services from non-Federal sources		21	18
25.4 Operation and maintenance of facilities	14		
99.9 Total new obligations, unexpired accounts	15	23	20

Employment Summary

Identification code 089–0219–0–1–271	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	8	4	4

STRATEGIC PETROLEUM RESERVE

For Department of Energy expenses necessary for Strategic Petroleum Reserve facility development and operations and program management activities pursuant to the Energy Policy and Conservation Act (42 U.S.C. 6201 et seq.), \$180,000,000, to remain available until expended.

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.

Program and Financing (in millions of dollars)

Identification code 089–0218–0–1–274	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 SPR Management	22	29	29
0002 SPR Storage Facilities Development	190	188	151
0900 Total new obligations, unexpired accounts	212	217	180

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	5	5	

STRATEGIC PETROLEUM RESERVE—Continued

Program and Financing—Continued

Identification code 089–0218–0–1–274	2016 actual	2017 est.	2018 est.
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	212	212	180
1930 Total budgetary resources available	217	217	180
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	5		
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	106	113	143
3010 New obligations, unexpired accounts	212	217	180
3020 Outlays (gross)	–205	–187	–206
3050 Unpaid obligations, end of year	113	143	117
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	106	113	143
3200 Obligated balance, end of year	113	143	117
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	212	212	180
Outlays, gross:			
4010 Outlays from new discretionary authority	113	117	99
4011 Outlays from discretionary balances	92	70	107
4020 Outlays, gross (total)	205	187	206
4180 Budget authority, net (total)	212	212	180
4190 Outlays, net (total)	205	187	206

The Strategic Petroleum Reserve (SPR) provides strategic and economic security against foreign and domestic disruptions in oil supplies via an emergency stockpile of crude oil. The program fulfills United States' obligations under the International Energy Program, which avails the U.S. of International Energy Agency (IEA) assistance through its coordinated energy emergency response plans, and provides a deterrent against energy supply disruptions. The FY 2018 Budget will support the SPR's operational readiness and drawdown capabilities of 4.16MB/d. The program will continue both the degasification of crude oil inventory at the West Hackberry site as well as the cavern wellbore diagnostic and remediation activities across all SPR sites to ensure the availability of the SPR's crude oil inventory.

In addition to the discretionary budget request, the Budget proposes to sell approximately 270 million barrels of SPR crude by 2027, leaving roughly half of the remaining SPR inventory after all sales currently authorized by law are completed (approximately 250–260 million barrels). Given the long-term trajectory of domestic energy production and transportation capabilities, a smaller SPR is projected to be able to continue to meet international obligations and emergency needs. As sales progress, the proposal closes two of the four Gulf Coast SPR sites as determined by a comprehensive analysis of footprint and operations to be conducted. Statutory changes are accordingly proposed to enable these SPR sales and maintain the SPR's operational effectiveness.

Object Classification (in millions of dollars)

Identification code 089–0218–0–1–274	2016 actual	2017 est.	2018 est.
Direct obligations:			
11.1 Personnel compensation: Full-time permanent	12	12	12
12.1 Civilian personnel benefits	4	4	1
21.0 Travel and transportation of persons	1	1	1
23.2 Rental payments to others	2	2	2
23.3 Communications, utilities, and miscellaneous charges	2	2	2
25.2 Other services from non-Federal sources	11	11	11
25.4 Operation and maintenance of facilities	171	176	142
32.0 Land and structures	9	9	9
99.9 Total new obligations, unexpired accounts	212	217	180

Employment Summary

Identification code 089–0218–0–1–274	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	107	125	125
2001 Reimbursable civilian full-time equivalent employment	4	1	1

SPR PETROLEUM ACCOUNT

For the acquisition, transportation, and injection of petroleum products, and for other necessary expenses pursuant to the Energy Policy and Conservation Act of 1975, as amended (42 U.S.C. 6201 et seq.), sections 403 and 404 of the Bipartisan Budget Act of 2015 (42 U.S.C. 6241, 6239 note), and section 5010 of the 21st Century Cures Act (P.L. 114–255), \$8,400,000, to remain available until expended.

Program and Financing (in millions of dollars)

Identification code 089–0233–0–1–274	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 SPR Petroleum Account (Direct)			8
0900 Total new obligations (object class 26.0)			8
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	15	15	15
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation			8
1900 Budget authority (total)			8
1930 Total budgetary resources available	15	15	23
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	15	15	15
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	84	64	35
3010 New obligations, unexpired accounts			8
3020 Outlays (gross)	–20	–29	–36
3050 Unpaid obligations, end of year	64	35	7
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	84	64	35
3200 Obligated balance, end of year	64	35	7
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross			8
Outlays, gross:			
4010 Outlays from new discretionary authority			1
Mandatory:			
Outlays, gross:			
4101 Outlays from mandatory balances	20	29	35
4180 Budget authority, net (total)			8
4190 Outlays, net (total)	20	29	36

The SPR Petroleum Account funds SPR petroleum acquisition, transportation, and drawdown activities as well as the Northeast Gasoline Supply Reserve (NGSR). As a component of the SPR, the NGSR must follow the same statutory release authorities designed for the SPR, which incorporate national impact thresholds for release. Because the existing release threshold makes the NGSR operationally ineffective as a regional product reserve, and a cost-inefficient use of resources, the Budget proposes to disestablish the NGSR and sell its constituent 1,000,000 barrels of refined petroleum product during FY 2018. The Budget funds the drawdown costs to support non-emergency, multi-year oil sales in FY 2018 as directed by Sections 403 and 404 of the Bipartisan Budget Act of 2015 (P.L. 114–74) and Section 5010 of the 21st Century Cures Act (P.L. 114–255).

In addition to the discretionary budget request, the Budget proposes to sell approximately 270 million barrels of SPR crude oil by 2027. The proposal includes the sale of a sufficient number of barrels of SPR crude oil needed to raise at least \$1,000,000,000 in total sales revenue not later than fiscal year 2019 and subsequently proposes directed sales in fiscal years

2020 through 2027. Proceeds will be deposited in the General Fund of the Treasury for deficit reduction during the fiscal year in which the sales occur.

ENERGY SECURITY AND INFRASTRUCTURE MODERNIZATION FUND

As authorized by section 404 of the Bipartisan Budget Act of 2015 (Public Law 114–74; 42 U.S.C. 6239 note), the Secretary of Energy shall drawdown and sell not to exceed \$350,000,000 of crude oil from the Strategic Petroleum Reserve in fiscal year 2018: Provided, That the proceeds from such drawdown and sale shall be deposited in this account during fiscal year 2018: Provided further, That such amounts shall remain available until expended for necessary expenses to carry out modernization activities for the Strategic Petroleum Reserve.

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089–5615–0–2–274	2016 actual	2017 est.	2018 est.
0100 Balance, start of year			
Receipts:			
Current law:			
1130 Proceeds from Sale of Oil, Energy Security and Infrastructure Modernization Fund		375	350
2000 Total: Balances and receipts		375	350
Appropriations:			
Current law:			
2101 Energy Security and Infrastructure Modernization Fund		–375	–350
5099 Balance, end of year			

Program and Financing (in millions of dollars)

Identification code 089–5615–0–2–274	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0010 Energy security and infrastructure modernization		130	146
0900 Total new obligations, unexpired accounts (object class 25.4)		130	146
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1			245
Budget authority:			
Appropriations, discretionary:			
1101 Appropriation (special or trust fund)		375	350
1930 Total budgetary resources available		375	595
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year		245	449
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1			36
3010 New obligations, unexpired accounts		130	146
3020 Outlays (gross)		–94	–182
3050 Unpaid obligations, end of year		36	
Memorandum (non-add) entries:			
3100 Obligated balance, start of year			36
3200 Obligated balance, end of year		36	
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross		375	350
Outlays, gross:			
4010 Outlays from new discretionary authority		94	88
4011 Outlays from discretionary balances			94
4020 Outlays, gross (total)		94	182
4180 Budget authority, net (total)		375	350
4190 Outlays, net (total)		94	182

The Energy Security and Infrastructure Modernization Fund was established in Section 404 of the Bipartisan Budget Act of 2015 to finance a \$2 Billion modernization of the Strategic Petroleum Reserve (SPR). Funding raised through crude oil sales will support Life Extension and Marine Terminal Enhancement programs. Life extension investments are needed to ensure the SPR can maintain its operational readiness capability, meet its mission requirements, and operate in an environmentally responsible manner. Marine Terminal Enhancements will increase the distribution capacity of the SPR through the addition of dedicated marine terminals

within the SPR's distribution system. This FY 2018 funding level continues the financing structure of multi-year (2017 - 2020) oil sales that support an effective modernization program for the SPR. The Budget proposes to reduce the amount of sales available to fund modernization by half to \$1 Billion, as the SPR's long-term physical footprint is expected to decrease; \$1 Billion will be used for deficit reduction.

ENERGY INFORMATION ADMINISTRATION

For Department of Energy expenses necessary in carrying out the activities of the Energy Information Administration, \$118,000,000, to remain available until expended.

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.

Program and Financing (in millions of dollars)

Identification code 089–0216–0–1–276	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Obligations by Program Activity	120	120	124
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	2	4	6
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	122	122	118
1930 Total budgetary resources available	124	126	124
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	4	6	
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	37	35	43
3010 New obligations, unexpired accounts	120	120	124
3020 Outlays (gross)	–122	–112	–119
3050 Unpaid obligations, end of year	35	43	48
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	37	35	43
3200 Obligated balance, end of year	35	43	48
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	122	122	118
Outlays, gross:			
4010 Outlays from new discretionary authority	87	85	83
4011 Outlays from discretionary balances	35	27	36
4020 Outlays, gross (total)	122	112	119
4180 Budget authority, net (total)	122	122	118
4190 Outlays, net (total)	122	112	119

The U.S. Energy Information Administration (EIA) is the statistical and analytical agency within the U.S. Department of Energy. EIA collects, analyzes, and disseminates independent and impartial energy information to promote sound policymaking, efficient markets, and public understanding of energy and its interaction with the economy and the environment. As the nation's premier source of energy information, EIA conducts a data collection program covering the full spectrum of energy sources, end uses, and energy flows; generates short- and long-term domestic and international energy projections; and performs timely, informative energy analyses. The FY 2018 budget request enables EIA to maintain recent program enhancements, continue core statistical and analysis activities, and invest in planned cybersecurity initiatives.

Object Classification (in millions of dollars)

Identification code 089–0216–0–1–276	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	38	38	38
11.3 Other than full-time permanent	1	1	1

ENERGY INFORMATION ADMINISTRATION—Continued

Object Classification—Continued

Identification code 089–0216–0–1–276	2016 actual	2017 est.	2018 est.
11.9 Total personnel compensation	39	39	39
12.1 Civilian personnel benefits	12	12	12
23.3 Communications, utilities, and miscellaneous charges	7	7	7
25.1 Advisory and assistance services	45	45	52
25.3 Purchases of goods and services from Government accounts	12	12	11
25.4 Operation and maintenance of facilities	1	1	1
25.7 Operation and maintenance of equipment	2	2	2
31.0 Equipment	2	2	.....
99.9 Total new obligations, unexpired accounts	120	120	124

Employment Summary

Identification code 089–0216–0–1–276	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	375	375	370

FEDERAL ENERGY REGULATORY COMMISSION

SALARIES AND EXPENSES

For necessary expenses of the Federal Energy Regulatory Commission to carry out the provisions of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), including services as authorized by 5 U.S.C. 3109, official reception and representation expenses not to exceed \$3,000, and the hire of passenger motor vehicles, \$367,600,000, to remain available until expended: Provided, That notwithstanding any other provision of law, not to exceed \$367,600,000 of revenues from fees and annual charges, and other services and collections in fiscal year 2018 shall be retained and used for expenses necessary in this account, and shall remain available until expended: Provided further, That the sum herein appropriated from the general fund shall be reduced as revenues are received during fiscal year 2018 so as to result in a final fiscal year 2018 appropriation from the general fund estimated at not more than \$0.

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.

Program and Financing (in millions of dollars)

Identification code 089–0212–0–1–276	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0801 Ensure Just and Reasonable Rates, Terms & Conditions	150	157	168
0802 Promote Safe, Reliable, Secure & Efficient Infrastructure	116	123	132
0803 Mission Support through Organizational Excellence	59	62	68
0900 Total new obligations, unexpired accounts	325	342	368
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	17	23	.....
1021 Recoveries of prior year unpaid obligations	11	.....	.....
1050 Unobligated balance (total)	28	23	.....
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected	320	319	368
1930 Total budgetary resources available	348	342	368
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	23	.....	.....
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	55	58	78
3010 New obligations, unexpired accounts	325	342	368
3020 Outlays (gross)	–311	–322	–383
3040 Recoveries of prior year unpaid obligations, unexpired	–11	.....	.....
3050 Unpaid obligations, end of year	58	78	63
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	55	58	78
3200 Obligated balance, end of year	58	78	63

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	320	319	368
Outlays, gross:			
4010 Outlays from new discretionary authority	293	287	331
4011 Outlays from discretionary balances	18	35	52
4020 Outlays, gross (total)	311	322	383
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4034 Offsetting governmental collections	–320	–319	–368
4180 Budget authority, net (total) .....	.....	.....	.....
4190 Outlays, net (total)	–9	3	15

Memorandum (non-add) entries:

5090 Unexpired unavailable balance, SOY: Offsetting collections	15	15	15
5092 Unexpired unavailable balance, EOY: Offsetting collections	15	15	15

The Federal Energy Regulatory Commission (Commission) regulates and oversees key interstate aspects of the electric power (including hydro-power), natural gas and oil pipeline industries. The Commission assists consumers in obtaining reliable, efficient and sustainable energy services at a reasonable cost through appropriate regulatory and market means. Regulated entities pay fees and charges sufficient to recover the Commission's full cost of operations.

Ensure Just and Reasonable Rates, Terms, and Conditions.—One of the Commission's fundamental statutory responsibilities is to ensure that rates, terms and conditions for wholesale sales and transmission of electric energy and for transportation of natural gas are just and reasonable and not unduly discriminatory or preferential. To fulfill this responsibility, the Commission uses a combination of market and regulatory means, complemented by oversight and enforcement measures. For example, the Commission seeks to improve the competitiveness of organized wholesale electric markets, which in turn encourages entry of new resources, spurs innovation and deployment of new technologies, improves operating performance, and exerts downward pressure on costs. The Commission will continue to pursue market reforms and to evaluate the markets and interstate grid to improve economic efficiency, system operations, and reliability both in light of new developments and in response to state and federal policies to allow all resources to compete in these jurisdictional markets on a level playing field. Another example of the Commission's use of market and regulatory means in support of this goal is found in the Commission's requirements for public utility transmission providers to participate in an open and transparent regional transmission planning process and to allocate appropriately the costs of new transmission facilities stemming from such a process. In addition, the Commission approves cost-based, and where appropriate, market-based rates for the interstate transportation of natural gas and oil on jurisdictional pipelines, and for the interstate transmission and wholesale sale of electric energy. The Commission also prevents the accumulation and exercise of market power both by reviewing proposed mergers and other transactions in the electric industry to ensure that these proposals will not harm the public interest and by removing barriers that may deny access to the market and the interstate grid. The Commission accepts tariff provisions, as appropriate, to allow natural gas and oil pipelines and public utilities to modify their services to meet their customers' needs.

Oversight, surveillance and enforcement are essential complements to the Commission's approach to ensure that rates, terms and conditions of service are just and reasonable and not unduly discriminatory or preferential. The Commission conducts compliance audits, issues publicly available audit reports, and engages in formal and informal outreach efforts to promote effective compliance programs. Audits are planned and prioritized using a risk-based approach in order to maximize the impact of the Commission's resources. The Commission also conducts public and non-public investigations of possible violations of the statutes, regulations, rules, orders, and tariffs administered by the Commission. These investigations rely upon oversight and surveillance that employ sophisticated technology to monitor market behavior. When violations of sufficient seriousness are discovered, the Commission attempts to resolve the resulting investigation

through settlement with appropriate sanctions and future compliance improvements before initiating further enforcement proceedings.

Promote Safe, Reliable, Secure, and Efficient Infrastructure.—The Commission plays an important role in the development of energy infrastructure that operates efficiently, safely and reliably. One aspect of the Commission's role in energy infrastructure development stems from siting authority that includes licensing non-federal hydropower projects, certifying interstate natural gas pipelines and storage projects, authorizing liquefied natural gas (LNG) facilities, and, in certain circumstances, permitting electric transmission lines. Throughout all of these processes, the Commission's goal is to expedite application processing without compromising environmental responsibilities or public participation. The Commission encourages, and sometimes requires, project proponents to engage in early involvement with state and federal agencies, Indian tribes, affected landowners and the public. Another aspect of the Commission's role in energy infrastructure development stems from the Commission's responsibility for the safety of LNG and non-federal hydropower facilities throughout the entire life cycle of a project: design review, construction and operation. To meet this mandate, the Commission primarily relies on physical inspections of the facilities. The Commission is incorporating risk-informed decision making into its dam safety program. By doing so, the Commission is focusing its resources on those structures that pose the greatest risk to public safety.

The Commission also has an important role in protecting the reliability of the Nation's electric transmission grid. A Commission-certified Electric Reliability Organization (ERO) develops and enforces mandatory Reliability Standards, subject to the Commission's oversight and approval. The Reliability Standards address the planning and operation, as well as the cybersecurity and physical protection of the Nation's electric transmission grid. The ERO's Reliability Standards development process uses an open and inclusive process that employs extensive negotiation, consultation and coordination among many stakeholders. The Commission may also, upon its own motion or upon complaint, order the ERO to submit a proposed reliability standard or a modification of an existing reliability standard that addresses a specific reliability matter. To that end, the Commission incorporates performance data-driven, risk-informed decision making into its reliability oversight. In addition to establishing foundational and mandatory regulations, the Commission works collaboratively with the governmental and private sectors to utilize state-of-the-art practices as necessary to address advanced cyber and physical security threats to jurisdictional energy infrastructure that can endanger national security and public safety. The Commission works with the owners and operators of key critical infrastructure facilities to identify and share threat information, analyze system vulnerabilities, and assist with effective mitigation that is complementary to, but in excess of, mandatory regulations. This process enables not only nimble, targeted, and timely actions by the Commission, but also cooperation with other government agencies and industry participants.

Mission Support through Organizational Excellence.—The public interest is best served when the Commission operates in an efficient, responsive and transparent manner. The Commission achieves this operational state by maintaining processes and providing services in accordance with governing statutes, authoritative guidance, and prevailing best practices. Facilitating understanding of how the Commission carries out its responsibilities and maintaining public trust in the Commission are important components of the Commission's commitment to organizational excellence. Trust and understanding increase acceptance of Commission decisions. Through the use of the Commission's eLibrary and eSubscriptions web pages, the public can obtain extensive information concerning documents both submitted to and issued by the Commission. The Commission also manages several social media sites to promote transparency and open communication. More generally, the Commission prioritizes resource allocations and makes prudent investments to meet its program commitments. The Commission thus makes continued investments in its human capital, information technology (IT) resources, and physical infrastructure. The Commission alloc-

ates over two-thirds of its budget to directly cover the compensation costs of its employees on an annual basis. The Commission continues to focus its human capital efforts on the competencies and positions most affected by the potential loss of approximately 30 percent of its staff to retirement by FY 2020. The Commission will focus on the execution of its hiring processes to ensure it maximizes allocated financial resources in a timely fashion. Over the next three years, the Commission will pursue new projects that will advance priority IT initiatives. These projects will modernize core mission and support systems, expand existing data analytics and visualization capabilities, and improve the agency's cyber security posture. Through the successful execution of these projects, the Commission expects to maintain a cost-effective suite of IT products and services that will meet its near-term mission needs and provide a scalable platform to support future needs beyond 2020, while meeting applicable security mandates. The Commission is also undergoing a complex multi-year renovation effort within its headquarters building. The renovation project is expected to be completed during FY 2020 and will enable the agency to realize significant space savings. From project commencement through FY 2017, the Commission expects to fund \$5.5 million for this effort using prior year unobligated budget authority. The FY 2018 request includes increases of approximately \$11.2 million to continue the modernization effort.

Object Classification (in millions of dollars)

Identification code 089–0212–0–1–276	2016 actual	2017 est.	2018 est.
Reimbursable obligations:			
Personnel compensation:			
11.1 Full-time permanent	170	174	178
11.3 Other than full-time permanent	5	5	6
11.5 Other personnel compensation	2	3	3
11.9 Total personnel compensation	177	182	187
12.1 Civilian personnel benefits	54	58	62
21.0 Travel and transportation of persons	3	3	3
23.1 Rental payments to GSA	32	33	33
23.2 Rental payments to others	1	1	1
23.3 Communications, utilities, and miscellaneous charges	2	2	2
24.0 Printing and reproduction	2	2	2
25.1 Advisory and assistance services	9	10	9
25.2 Other services from non-Federal sources	9	13	14
25.3 Other goods and services from Federal sources	2	2	2
25.4 Operation and maintenance of facilities	2	2	2
25.7 Operation and maintenance of equipment	24	26	28
26.0 Supplies and materials	2	3	3
31.0 Equipment	5	5	12
32.0 Land and structures	1		8
99.0 Reimbursable obligations	325	342	368
99.9 Total new obligations, unexpired accounts	325	342	368

Employment Summary

Identification code 089–0212–0–1–276	2016 actual	2017 est.	2018 est.
2001 Reimbursable civilian full-time equivalent employment	1,472	1,465	1,465

CLEAN COAL TECHNOLOGY

Program and Financing (in millions of dollars)

Identification code 089–0235–0–1–271	2016 actual	2017 est.	2018 est.
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	5	2	2
1029 Other balances withdrawn to Treasury	–4		
1050 Unobligated balance (total)	1	2	2
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected	1		
1900 Budget authority (total)	1		
1930 Total budgetary resources available	2	2	2
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	2	2	2

CLEAN COAL TECHNOLOGY—Continued
Program and Financing—Continued

Identification code 089–0235–0–1–271	2016 actual	2017 est.	2018 est.
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	1		
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4033 Non-Federal sources	–1		
4180 Budget authority, net (total)			
4190 Outlays, net (total)	–1		

The Clean Coal Technology Program was established in the 1980s to perform commercial-scale demonstrations of advanced coal-based technologies. All projects have concluded and only closeout activities remain.

ULTRA-DEEPWATER AND UNCONVENTIONAL NATURAL GAS AND OTHER PETROLEUM
RESEARCH FUND

Program and Financing (in millions of dollars)

Identification code 089–5523–0–2–271	2016 actual	2017 est.	2018 est.
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	1	1	1
1930 Total budgetary resources available	1	1	1
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	1	1	1
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	48	15	7
3020 Outlays (gross)	–33	–8	–6
3050 Unpaid obligations, end of year	15	7	1
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	48	15	7
3200 Obligated balance, end of year	15	7	1
Budget authority and outlays, net:			
Mandatory:			
Outlays, gross:			
4101 Outlays from mandatory balances	33	8	6
4180 Budget authority, net (total)			
4190 Outlays, net (total)	33	8	6

The Energy Policy Act of 2005 (Public Law 109–58) created a mandatory Ultra-Deepwater and Unconventional Natural Gas and Other Petroleum Research program beginning in 2007. Subtitle J of Title IX of the Energy Policy Act of 2005 (42 U.S.C. 16371 et seq.) was repealed and all unobligated balances in this account were rescinded by the Bipartisan Budget Control Act of FY 2013.

PAYMENTS TO STATES UNDER FEDERAL POWER ACT

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089–5105–0–2–806	2016 actual	2017 est.	2018 est.
0100 Balance, start of year			
Receipts:			
Current law:			
1110 Licenses under Federal Power Act from Public Lands and National Forests, Payment to States (37 1/2%)	4	5	5
2000 Total: Balances and receipts	4	5	5
Appropriations:			
Current law:			
2101 Payments to States under Federal Power Act	–4	–5	–5
5099 Balance, end of year			

Program and Financing (in millions of dollars)

Identification code 089–5105–0–2–806	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Payments to States under Federal Power Act (Direct)	4	5	5
0900 Total new obligations (object class 41.0)	4	5	5
Budgetary resources:			
Budget authority:			
Appropriations, mandatory:			
1201 Appropriation (special or trust fund)	4	5	5
1930 Total budgetary resources available	4	5	5
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	4	4	
3010 New obligations, unexpired accounts	4	5	5
3020 Outlays (gross)	–4	–9	–5
3050 Unpaid obligations, end of year	4		
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	4	4	
3200 Obligated balance, end of year	4		
Budget authority and outlays, net:			
Mandatory:			
4090 Budget authority, gross	4	5	5
Outlays, gross:			
4100 Outlays from new mandatory authority		5	5
4101 Outlays from mandatory balances	4	4	
4110 Outlays, gross (total)	4	9	5
4180 Budget authority, net (total)	4	5	5
4190 Outlays, net (total)	4	9	5

The States are paid 37.5 percent of the receipts from licenses for occupancy and use of national forests and public lands within their boundaries issued by the Federal Energy Regulatory Commission (16 U.S.C. 810).

NORTHEAST HOME HEATING OIL RESERVE

For Department of Energy expenses necessary for Northeast Home Heating Oil Reserve storage, operation, and management activities pursuant to the Energy Policy and Conservation Act (42 U.S.C. 6201 et seq.), \$6,500,000, to remain available until expended.

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.

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089–5369–0–2–274	2016 actual	2017 est.	2018 est.
0100 Balance, start of year	1	1	1
2000 Total: Balances and receipts	1	1	1
5099 Balance, end of year	1	1	1

Program and Financing (in millions of dollars)

Identification code 089–5369–0–2–274	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 NEHOR	10	7	7
0900 Total new obligations (object class 25.2)	10	7	7
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	10	8	9
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	8	8	7
1930 Total budgetary resources available	18	16	16
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	8	9	9

Change in obligated balance:			
Unpaid obligations:			
3000	Unpaid obligations, brought forward, Oct 1	4	5
3010	New obligations, unexpired accounts	10	7
3020	Outlays (gross)	-9	-11
			-8
3050	Unpaid obligations, end of year	5	1
Memorandum (non-add) entries:			
3100	Obligated balance, start of year	4	5
3200	Obligated balance, end of year	5	1
Budget authority and outlays, net:			
Discretionary:			
4000	Budget authority, gross	8	8
	Outlays, gross:		
4010	Outlays from new discretionary authority		6
4011	Outlays from discretionary balances	9	5
			2
4020	Outlays, gross (total)	9	11
4180	Budget authority, net (total)	8	8
4190	Outlays, net (total)	9	11
			8

The Northeast Home Heating Oil Reserve provides an emergency supply of home heating oil for the Northeast States during times of inventory shortages and significant threats to immediate supply. The FY 2018 Budget continues to maintain a 1 million barrel inventory of ultra-low sulfur distillate, stored in Northeast commercial storage terminals (Groton, CT; Revere, MA; and Port Reading, NJ), to provide a short-term emergency supplement to the Northeast systems' commercial supply of heating oil.

NUCLEAR WASTE DISPOSAL

For Department of Energy expenses necessary for nuclear waste disposal activities to carry out the purposes of the Nuclear Waste Policy Act of 1982 (Public Law 97-425), as amended (the "NWPAA"), including the acquisition of any real property or facility construction, or expansion, and interim storage activities, \$90,000,000, to remain available until expended, and to be derived from the Nuclear Waste Fund: Provided, That of the funds made available in this Act for nuclear waste disposal and defense nuclear waste disposal activities, 1.62 percent shall be provided to the Office of the Attorney General of the State of Nevada solely for expenditures, other than salaries and expenses of State employees, to conduct scientific oversight responsibilities and participate in licensing activities pursuant to the NWPAA: Provided further, That of the funds made available in this Act for nuclear waste disposal and defense nuclear waste disposal activities, 2.91 percent shall be provided to affected units of local government, as defined in the NWPAA, to conduct appropriate activities and participate in licensing activities under section 116(c) of the NWPAA: Provided further, That of the amounts provided to affected units of local government, 7.5 percent shall be made available to affected units of local government in California with the balance made available to affected units of local government in Nevada for distribution as determined by the Nevada affected units of local government: Provided further, That of the funds made available in this Act for nuclear waste disposal and defense nuclear waste disposal activities, 0.16 percent shall be provided to the affected federally-recognized Indian tribes, as defined in the NWPAA, solely for expenditures, other than salaries and expenses of tribal employees, to conduct appropriate activities and participate in licensing activities under section 118(b) of the NWPAA: Provided further, That of the funds made available in this Act for nuclear waste disposal and defense nuclear waste disposal activities, 3.0 percent shall be provided to Nye County, Nevada, 0.05 percent shall be provided to Clark County, Nevada, and 0.46 percent shall be provided to the State of Nevada as payment equal to taxes under section 116(c)(3) of the NWPAA: Provided further, That within 90 days of the completion of each Federal fiscal year, the Office of the Attorney General of the State of Nevada, each affected federally-recognized Indian tribe, and each of the affected units of local government shall provide certification to the Department of Energy that all funds expended from such payments have been expended for activities authorized by the NWPAA and this Act: Provided further, That failure to provide such certification shall cause such entity to be prohibited from any further funding provided for similar activities: Provided further, That none of the funds herein appropriated may be: (1) used for litigation expenses; or (2) used to support multi-State efforts or other coalition building activities inconsistent with the restrictions contained in this Act: Provided further, That all proceeds and recoveries realized by the Secretary in carrying out activities authorized by the NWPAA, including but not limited to any proceeds from the sale of assets, shall be credited to this account, to remain available until expended, for carrying out the purposes of this account.

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5227-0-2-271		2016 actual	2017 est.	2018 est.
0100	Balance, start of year	33,836	35,567	37,417
Receipts:				
Current law:				
1130	Nuclear Waste Disposal Fund	302	388	386
1140	Earnings on Investments, Nuclear Waste Disposal Fund	1,433	1,466	1,534
1199	Total current law receipts	1,735	1,854	1,920
1999	Total receipts	1,735	1,854	1,920
2000	Total: Balances and receipts	35,571	37,421	39,337
Appropriations:				
Current law:				
2101	Nuclear Waste Disposal			-90
2101	Salaries and Expenses			-30
2101	Salaries and Expenses	-4	-4	-4
2199	Total current law appropriations	-4	-4	-124
2999	Total appropriations	-4	-4	-124
5099	Balance, end of year	35,567	37,417	39,213

Program and Financing (in millions of dollars)

Identification code 089-5227-0-2-271		2016 actual	2017 est.	2018 est.
Obligations by program activity:				
0001	Repository	1	13	90
Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	14	13	
Budget authority:				
Appropriations, discretionary:				
1101	Appropriation (special or trust fund)			90
1930	Total budgetary resources available	14	13	90
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	13		
Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	7	6	17
3010	New obligations, unexpired accounts	1	13	90
3020	Outlays (gross)	-2	-2	-38
3050	Unpaid obligations, end of year	6	17	69
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	7	6	17
3200	Obligated balance, end of year	6	17	69
Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross			90
	Outlays, gross:			
4010	Outlays from new discretionary authority			36
4011	Outlays from discretionary balances	2	2	2
4020	Outlays, gross (total)	2	2	38
4180	Budget authority, net (total)			90
4190	Outlays, net (total)	2	2	38
Memorandum (non-add) entries:				
5000	Total investments, SOY: Federal securities: Par value	51,812	52,424	53,890
5001	Total investments, EOY: Federal securities: Par value	52,424	53,890	55,424

The mission of the Yucca Mountain and Interim Storage programs is to fulfill the Federal Government's obligations to address nuclear waste in a safe and fiscally responsible way.

With the resumption of the Yucca Mountain licensing process, the FY 2018 Budget proposes funding through two separate appropriation accounts, the Nuclear Waste Disposal and Defense Nuclear Waste Disposal appropriations. The overview narrative and detailed justification for the entire program, as supported by both accounts, is presented in the Nuclear Waste Disposal section of the FY 2018 Budget.

The programs implement the Administration's decision to resume the Yucca Mountain license application process for disposal of spent nuclear fuel (SNF) and high level waste (HLW) while establishing a robust interim

NUCLEAR WASTE DISPOSAL—Continued

storage capability. The FY 2018 Budget includes the reestablishment of organizational, essential management, and subject matter expert, capabilities needed for the resumed participation in the Nuclear Regulatory Commission (NRC) licensing process for disposal of SNF and HLW, consistent with the provisions of the Nuclear Waste Policy Act of 1982 (NWPAA).

The Yucca Mountain and Interim Storage programs are critical to enhancing the national and economic security goals of the nation. The management of SNF and HLW must protect the health, safety of citizens and the environment in the United States.

The Nation's commercial and defense SNF and HLW must be safely and permanently isolated to minimize the risk to human health and the environment. Effective management of these materials will ensure that our country remains competitive in the global economy, maintains national security, supports cleanup of weapons sites, continues operation of the U.S. Navy's nuclear-powered vessels, and advances our international non-proliferation goals.

Object Classification (in millions of dollars)

Identification code 089-5227-0-2-271	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent			25
11.3 Other than full-time permanent			1
11.5 Other personnel compensation			1
11.9 Total personnel compensation			27
12.1 Civilian personnel benefits			5
21.0 Travel and transportation of persons			1
23.2 Rental payments to others			2
25.1 Advisory and assistance services		2	13
25.2 Other services from non-Federal sources	1	11	16
25.3 Other goods and services from Federal sources			1
25.4 Operation and maintenance of facilities			14
41.0 Grants, subsidies, and contributions			11
99.9 Total new obligations, unexpired accounts	1	13	90

Employment Summary

Identification code 089-5227-0-2-271	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment			83

URANIUM SUPPLY AND ENRICHMENT ACTIVITIES

The unappropriated receipts currently in the Uranium Supply and Enrichment Activities account shall be transferred to and merged with the Uranium Enrichment Decontamination and Decommissioning Fund and shall be available only to the extent provided in advance in appropriations Acts.

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5226-0-2-271	2016 actual	2017 est.	2018 est.
0100 Balance, start of year	861	861	861
2000 Total: Balances and receipts	861	861	861
Appropriations:			
Current law:			
2101 Uranium Supply and Enrichment Activities			-861
5099 Balance, end of year	861	861	

Program and Financing (in millions of dollars)

Identification code 089-5226-0-2-271	2016 actual	2017 est.	2018 est.
Budgetary resources:			
Budget authority:			
Appropriations, discretionary:			
1101 Appropriation (special or trust fund)			861
1120 Appropriations transferred to other acct [089-5231]			-861
4180 Budget authority, net (total)			
4190 Outlays, net (total)			

This account funded operations of the Department's uranium enrichment facilities for commercial sales prior to 1992. These facilities are now shut down and are significantly contaminated by decades of operations for defense and non-defense activities. Under the Energy Policy Act of 1992, the Uranium Enrichment Decontamination and Decommissioning (UED&D) Fund pays, subject to appropriation, the decontamination and decommissioning costs of the Department's gaseous diffusion plants in Tennessee, Ohio, and Kentucky. The Administration proposes to transfer the amount remaining in this account to the UED&D Fund due to higher-than-expected cleanup costs. Funding so transferred will be precluded from obligation until appropriated for the authorized purpose of the UED&D Fund.

URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING FUND

For Department of Energy expenses necessary in carrying out uranium enrichment facility decontamination and decommissioning, remedial actions, and other activities of title II of the Atomic Energy Act of 1954, and title X, subtitle A, of the Energy Policy Act of 1992, \$752,749,000, to be derived from the Uranium Enrichment Decontamination and Decommissioning Fund, to remain available until expended, of which \$30,000,000 shall be available in accordance with title X, subtitle A, of the Energy Policy Act of 1992.

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.

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5231-0-2-271	2016 actual	2017 est.	2018 est.
0100 Balance, start of year	2,884	2,282	1,558
Receipts:			
Current law:			
1140 Earnings on Investments, Decontamination and Decommissioning Fund	72	43	29
2000 Total: Balances and receipts	2,956	2,325	1,587
Appropriations:			
Current law:			
2101 Uranium Enrichment Decontamination and Decommissioning Fund	-674	-767	-753
2134 Uranium Enrichment Decontamination and Decommissioning Fund			861
2199 Total current law appropriations	-674	-767	108
2999 Total appropriations	-674	-767	108
5099 Balance, end of year	2,282	1,558	1,695

Program and Financing (in millions of dollars)

Identification code 089-5231-0-2-271	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Oak Ridge	195	195	146
0002 Paducah	199	200	202
0003 Portsmouth	224	318	351
0004 Pension and Community and Regulatory Support	21	21	24
0005 Title X Uranium/Thorium Reimbursement Program	33	33	30
0900 Total new obligations, unexpired accounts	672	767	753
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	9	11	11
Budget authority:			
Appropriations, discretionary:			
1101 Appropriation (special or trust fund)	674	767	753
1121 Appropriations transferred from other acct [089-5226]			861
1134 Appropriations precluded from obligation			-861
1160 Appropriation, discretionary (total)	674	767	753
1711 Spending authority from offsetting collections, discretionary: Spending authority from offsetting collections transferred from other accounts [486-4054]			1,593
1725 Spending authority from offsetting collections precluded from obligation (limitation on obligations)			-1,593
1900 Budget authority (total)	674	767	753
1930 Total budgetary resources available	683	778	764

Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	11	11	11
Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	324	233	219
3010	New obligations, unexpired accounts	672	767	753
3020	Outlays (gross)	-763	-781	-757
3050	Unpaid obligations, end of year	233	219	215
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	324	233	219
3200	Obligated balance, end of year	233	219	215
Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	674	767	753
Outlays, gross:				
4010	Outlays from new discretionary authority	517	537	527
4011	Outlays from discretionary balances	246	244	230
4020	Outlays, gross (total)	763	781	757
4180	Budget authority, net (total)	674	767	753
4190	Outlays, net (total)	763	781	757
Memorandum (non-add) entries:				
5000	Total investments, SOY: Federal securities: Par value	3,183	2,497	1,866
5001	Total investments, EOY: Federal securities: Par value	2,497	1,866	3,580

Decontamination and Decommissioning Activities.—Funds: 1) projects to decontaminate, decommission, and remediate the sites and facilities of the gaseous diffusion plants at Portsmouth, Ohio; Paducah, Kentucky; and East Tennessee Technology Park, Oak Ridge, Tennessee and; 2) pensions and post-retirement medical benefits for active and inactive gaseous diffusion plant workers.

Uranium and Thorium Reimbursement Program.—Provides reimbursement to uranium and thorium licensees for the Government's share of cleanup costs pursuant to Title X of the Energy Policy Act of 1992.

Object Classification (in millions of dollars)

Identification code 089–5231–0–2–271				
2016 actual				
2017 est.				
2018 est.				
Direct obligations:				
25.1	Advisory and assistance services	11	13	12
25.2	Other services from non-Federal sources	43	49	48
25.4	Operation and maintenance of facilities	585	668	656
31.0	Equipment	4	4	4
32.0	Land and structures	26	30	30
41.0	Grants, subsidies, and contributions	3	3	3
99.9	Total new obligations, unexpired accounts	672	767	753

URANIUM SALES AND REMEDIATION

Program and Financing (in millions of dollars)

Identification code 089–5530–0–2–271				
2016 actual				
2017 est.				
2018 est.				
Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	2	2	2
3050	Unpaid obligations, end of year	2	2	2
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	2	2	2
3200	Obligated balance, end of year	2	2	2
4180	Budget authority, net (total)			
4190	Outlays, net (total)			

The Energy and Water Development Appropriations Act of 2006 provided the Department of Energy authority to barter, transfer, or sell uranium and to use any proceeds, without fiscal year limitation, to remediate contaminated uranium inventories held by the Secretary of Energy.

ISOTOPE PRODUCTION AND DISTRIBUTION PROGRAM FUND

Program and Financing (in millions of dollars)

Identification code 089–4180–0–3–271				
2016 actual				
2017 est.				
2018 est.				
Obligations by program activity:				
0801	Isotope Production and Distribution Reimbursable program	69	69	69
Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	10	12	12
1021	Recoveries of prior year unpaid obligations	2		
1050	Unobligated balance (total)	12	12	12
Budget authority:				
Spending authority from offsetting collections, discretionary:				
1700	Collected	69	69	69
1930	Total budgetary resources available	81	81	81
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	12	12	12
Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	39	37	30
3010	New obligations, unexpired accounts	69	69	69
3020	Outlays (gross)	-69	-76	-75
3040	Recoveries of prior year unpaid obligations, unexpired	-2		
3050	Unpaid obligations, end of year	37	30	24
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	39	37	30
3200	Obligated balance, end of year	37	30	24
Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	69	69	69
Outlays, gross:				
4010	Outlays from new discretionary authority	29	69	69
4011	Outlays from discretionary balances	40	7	6
4020	Outlays, gross (total)	69	76	75
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources	-22	-22	-22
4033	Non-Federal sources	-47	-47	-47
4040	Offsets against gross budget authority and outlays (total)	-69	-69	-69
4080	Outlays, net (discretionary)		7	6
4180	Budget authority, net (total)			
4190	Outlays, net (total)		7	6

Object Classification (in millions of dollars)

Identification code 089–4180–0–3–271				
2016 actual				
2017 est.				
2018 est.				
Reimbursable obligations:				
25.2	Other services from non-Federal sources	4	4	4
25.4	Operation and maintenance of facilities	58	58	58
31.0	Equipment	2	2	2
32.0	Land and structures	3	3	3
41.0	Grants, subsidies, and contributions	2	2	2
99.9	Total new obligations, unexpired accounts	69	69	69

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING LOAN PROGRAM

(INCLUDING CANCELLATION OF FUNDS)

Of the unobligated balances available from amounts appropriated for the cost of direct loans in section 129 of the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009 (Public Law 110–329), \$4,311,615,000 is hereby permanently cancelled.

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.

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING LOAN PROGRAM—Continued
Program and Financing (in millions of dollars)

Identification code 089-0322-0-1-272	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
Credit program obligations:			
0709 Administrative expenses	5	5	2
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	4,294	4,296	4,315
1021 Recoveries of prior year unpaid obligations	1	19	.....
1050 Unobligated balance (total)	4,295	4,315	4,315
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	6	5	.....
1131 Unobligated balance of appropriations permanently reduced .....	.....	.....	-4,312
1160 Appropriation, discretionary (total)	6	5	-4,312
1900 Budget authority (total)	6	5	-4,312
1930 Total budgetary resources available	4,301	4,320	3
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	4,296	4,315	1
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	46	46	26
3010 New obligations, unexpired accounts	5	5	2
3020 Outlays (gross)	-4	-6	-9
3040 Recoveries of prior year unpaid obligations, unexpired	-1	-19	.....
3050 Unpaid obligations, end of year	46	26	19
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	46	46	26
3200 Obligated balance, end of year	46	26	19
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	6	5	-4,312
Outlays, gross:			
4010 Outlays from new discretionary authority	1	4	.....
4011 Outlays from discretionary balances	3	2	9
4020 Outlays, gross (total)	4	6	9
4180 Budget authority, net (total)	6	5	-4,312
4190 Outlays, net (total)	4	6	9

Summary of Loan Levels, Subsidy Budget Authority and Outlays by Program (in millions of dollars)

Identification code 089-0322-0-1-272	2016 actual	2017 est.	2018 est.
Direct loan subsidy outlays:			
134001 Direct Auto Loans	6
Direct loan reestimates:			
135001 Direct Auto Loans	-12	-15	.....
Administrative expense data:			
3510 Budget authority	5	.....
3580 Outlays from balances	1	3
3590 Outlays from new authority	4	.....

Section 136 of the Energy Independence and Security Act of 2007 established a direct loan program to support the development of advanced technology vehicles and associated components in the United States, known as the Advanced Technology Vehicles Manufacturing Loan Program (ATVM). The 2009 Continuing Resolution (CR), enacted on September 30, 2008, appropriated \$7.5 billion to support a maximum of \$25 billion in loans. ATVM provides loans to automobile and automobile part manufacturers for the cost of re-equipping, expanding, or establishing manufacturing facilities in the United States to produce advanced technology vehicles or qualified components and for associated engineering integration costs. This program is being eliminated in the FY 2018 Budget in accordance with Administration priorities, including the focusing of resources toward early-stage research and development. The Loan Programs Office will wind down operations in FY 2018 with the expectation that it will shut down in FY 2019 with remaining loan monitoring and closeout activities transferred to another office.

The Budget eliminates the ATVM Loan Program and proposes to cancel all remaining loan volume authority and appropriated credit subsidy. The Loan Programs Office will utilize unobligated balances carried forward from prior year appropriations to cover loan portfolio monitoring and administrative expenses: including salaries for its full time employees as well as the cost of outside advisors for financial, legal, engineering, credit, and market analysis in addition to the cost of monitoring the existing portfolio. All activities not essential for the continued monitoring of the portfolio will be terminated.

Object Classification (in millions of dollars)

Identification code 089-0322-0-1-272	2016 actual	2017 est.	2018 est.
Direct obligations:			
11.1 Personnel compensation: Full-time permanent	1	1	1
25.1 Advisory and assistance services	2	2	1
25.3 Other goods and services from Federal sources	2	2	.....
99.9 Total new obligations, unexpired accounts	5	5	2

Employment Summary

Identification code 089-0322-0-1-272	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	8	8	4

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING DIRECT LOAN FINANCING
ACCOUNT**Program and Financing** (in millions of dollars)

Identification code 089-4579-0-3-272	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
Credit program obligations:			
0713 Payment of interest to Treasury	1	2	2
0715 Interest paid to FFB	111	95	88
0742 Downward reestimates paid to receipt accounts	11	14	.....
0743 Interest on downward reestimates	1	1	.....
0900 Total new obligations, unexpired accounts	124	112	90
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	182	164	765
1021 Recoveries of prior year unpaid obligations .....	.....	259	.....
1023 Unobligated balances applied to repay debt	-116	.....	.....
1024 Unobligated balance of borrowing authority withdrawn .....	.....	-259	.....
1050 Unobligated balance (total)	66	164	765
Financing authority:			
Borrowing authority, mandatory:			
1400 Borrowing authority	7	10	10
Spending authority from offsetting collections, mandatory:			
1800 Collected	749	703	723
1801 Change in uncollected payments, Federal sources .....	.....	.....	-6
1825 Spending authority from offsetting collections applied to repay debt	-534	.....	.....
1850 Spending auth from offsetting collections, mand (total)	215	703	717
1900 Budget authority (total)	222	713	727
1930 Total budgetary resources available	288	877	1,492
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	164	765	1,402
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	1,040	1,040	781
3010 New obligations, unexpired accounts	124	112	90
3020 Outlays (gross)	-124	-112	-290
3040 Recoveries of prior year unpaid obligations, unexpired .....	.....	-259	.....
3050 Unpaid obligations, end of year	1,040	781	581
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-43	-43	-43
3070 Change in uncollected pymts, Fed sources, unexpired .....	.....	.....	6
3090 Uncollected pymts, Fed sources, end of year	-43	-43	-37
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	997	997	738

3200	Obligated balance, end of year	997	738	544
Financing authority and disbursements, net:				
Mandatory:				
4090	Budget authority, gross	222	713	727
Financing disbursements:				
4110	Outlays, gross (total)	124	112	290
Offsets against gross financing authority and disbursements:				
Offsetting collections (collected) from:				
4120	Payment from program account			-6
4122	Interest on uninvested funds	-4	-3	-10
4123	Non-Federal sources (interest)	-95	-77	-65
4123	Non-Federal sources (principal)	-650	-623	-642
4130	Offsets against gross budget authority and outlays (total)	-749	-703	-723
Additional offsets against financing authority only (total):				
4140	Change in uncollected pymts, Fed sources, unexpired			6
4160	Budget authority, net (mandatory)	-527	10	10
4170	Outlays, net (mandatory)	-625	-591	-433
4180	Budget authority, net (total)	-527	10	10
4190	Outlays, net (total)	-625	-591	-433

Status of Direct Loans (in millions of dollars)

Identification code 089-4579-0-3-272		2016 actual	2017 est.	2018 est.
Position with respect to appropriations act limitation on obligations:				
1121	Limitation available from carry-forward	16,680	16,939	
1143	Unobligated limitation carried forward (P.L. 110-329) (-)	-16,680	-16,939	
Cumulative balance of direct loans outstanding:				
1210	Outstanding, start of year	4,510	3,860	3,237
1231	Disbursements: Direct loan disbursements			200
1251	Repayments: Repayments and prepayments	-650	-623	-642
1290	Outstanding, end of year	3,860	3,237	2,795

Balance Sheet (in millions of dollars)

Identification code 089-4579-0-3-272		2015 actual	2016 actual
ASSETS:			
Federal assets:			
1101	Fund balances with Treasury	139	121
Investments in US securities:			
1106	Receivables, net	9	7
Net value of assets related to post-1991 direct loans receivable:			
1401	Direct loans receivable, gross	4,510	3,860
1402	Interest receivable	4	4
1405	Allowance for subsidy cost (-)	-102	-73
1499	Net present value of assets related to direct loans	4,412	3,791
1999	Total assets	4,560	3,919
LIABILITIES:			
Federal liabilities:			
2101	Accounts payable	20	22
2103	Debt	4,540	3,897
2999	Total liabilities	4,560	3,919
4999	Total upward reestimate subsidy BA [89-0322]	4,560	3,919

TITLE 17 INNOVATIVE TECHNOLOGY LOAN GUARANTEE PROGRAM**(INCLUDING CANCELLATION OF FUNDS)**

Such sums as are derived from amounts received from borrowers pursuant to section 1702(b) of the Energy Policy Act of 2005 under this heading in prior Acts, shall be collected in accordance with section 502(7) of the Congressional Budget Act of 1974: Provided, That for necessary administrative expenses to carry out this Loan Guarantee program, \$2,000,000 is appropriated, to remain available until September 30, 2019: Provided further, That \$2,000,000 of the fees collected pursuant to section 1702(h) of the Energy Policy Act of 2005 shall be credited as offsetting collections to this account to cover administrative expenses and shall remain available until expended, so as to result in a final fiscal year 2018 appropriation from the general fund estimated at not more than \$0: Provided further, That fees collected under section 1702(h) in excess of the amount appropriated for administrative expenses shall not be available until appropriated: Provided further, That the Department of Energy shall not subordinate any loan obligation to other financing in violation of section 1702 of the Energy Policy Act of 2005 or subordinate

any Guaranteed Obligation to any loan or other debt obligations in violation of section 609.10 of title 10, Code of Federal Regulations: Provided further, That the authority provided in prior year appropriations Acts for commitments to guarantee loans under title XVII of the Energy Policy Act of 2005, excluding amounts for commitments made by October 1, 2017, is hereby permanently cancelled: Provided further, That of the unobligated balances from prior year appropriations available under this heading in the American Recovery and Reinvestment Act of 2009 (Public Law 111-5) for the cost to guarantee loans, \$383,433,000 is hereby permanently cancelled.

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.

Program and Financing (in millions of dollars)

Identification code 089-0208-0-1-271		2016 actual	2017 est.	2018 est.
Obligations by program activity:				
Credit program obligations:				
0705	Reestimates of direct loan subsidy	4	8	
0706	Interest on reestimates of direct loan subsidy	37	4	
0709	Administrative expenses	39	37	30
0900	Total new obligations, unexpired accounts	80	49	30
Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	665	669	677
1001	Discretionary unobligated balance brought fwd, Oct 1	665	669	
1021	Recoveries of prior year unpaid obligations	1	3	
1050	Unobligated balance (total)	666	672	677
Budget authority:				
Appropriations, discretionary:				
1100	Appropriation	37	15	
1131	Unobligated balance of appropriations permanently reduced			-383
1160	Appropriation, discretionary (total)	37	15	-383
Appropriations, mandatory:				
1200	Appropriation	41	12	
Spending authority from offsetting collections, discretionary:				
1700	Collected	5	27	2
1900	Budget authority (total)	83	54	-381
1930	Total budgetary resources available	749	726	296
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	669	677	266
Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	66	68	62
3010	New obligations, unexpired accounts	80	49	30
3020	Outlays (gross)	-77	-52	-38
3040	Recoveries of prior year unpaid obligations, unexpired	-1	-3	
3050	Unpaid obligations, end of year	68	62	54
Uncollected payments:				
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-1		
3071	Change in uncollected pymts, Fed sources, expired	1		
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	65	68	62
3200	Obligated balance, end of year	68	62	54

Budget authority and outlays, net:

Discretionary:				
4000	Budget authority, gross	42	42	-381
Outlays, gross:				
4010	Outlays from new discretionary authority	20	35	2
4011	Outlays from discretionary balances	16	5	36
4020	Outlays, gross (total)	36	40	38
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources	-1		
4033	Non-Federal sources	-5	-27	-2
4040	Offsets against gross budget authority and outlays (total)	-6	-27	-2
Additional offsets against gross budget authority only:				
4052	Offsetting collections credited to expired accounts	1		
4060	Additional offsets against budget authority only (total)	1		
4070	Budget authority, net (discretionary)	37	15	-383
4080	Outlays, net (discretionary)	30	13	36
Mandatory:				
4090	Budget authority, gross	41	12	

TITLE 17 INNOVATIVE TECHNOLOGY LOAN GUARANTEE PROGRAM—Continued
Program and Financing—Continued

Identification code 089–0208–0–1–271	2016 actual	2017 est.	2018 est.
Outlays, gross:			
4100 Outlays from new mandatory authority	41	12	.....
4180 Budget authority, net (total)	78	27	–383
4190 Outlays, net (total)	71	25	36
Memorandum (non-add) entries:			
5090 Unexpired unavailable balance, SOY: Offsetting collections	47	47	47
5092 Unexpired unavailable balance, EOY: Offsetting collections	47	47	47
Summary of Loan Levels, Subsidy Budget Authority and Outlays by Program (in millions of dollars)			
Identification code 089–0208–0–1–271	2016 actual	2017 est.	2018 est.
Direct loan levels supportable by subsidy budget authority:			
115001 Section 1703 FFB Loans (Self Pay) .....	.....	1,842	.....
115999 Total direct loan levels .....	.....	1,842	.....
Direct loan subsidy (in percent):			
132001 Section 1703 FFB Loans (Self Pay) .....	.....	0.00	.....
132999 Weighted average subsidy rate .....	.....	0.00	.....
Direct loan subsidy outlays:			
134001 Section 1703 FFB Loans (Self Pay)	–48	–43	–35
134002 Section 1705 FFB Loans .....	.....	5	10
134999 Total subsidy outlays	–48	–38	–25
Direct loan reestimates:			
135001 Section 1703 FFB Loans (Self Pay)	–14	10	.....
135002 Section 1705 FFB Loans	15	–88	.....
135999 Total direct loan reestimates	1	–78	.....
Guaranteed loan subsidy outlays:			
234002 Section 1705 Loan Guarantees .....	.....	.....	9
234999 Total subsidy outlays .....	.....	.....	9
Guaranteed loan reestimates:			
235002 Section 1705 Loan Guarantees	–71	–20	.....
235999 Total guaranteed loan reestimates	–71	–20	.....
Administrative expense data:			
3510 Budget authority	42	.....	.....
3580 Outlays from balances	20	.....	.....
3590 Outlays from new authority	16	.....	.....

The Title XVII Innovative Technology Loan Guarantee Program (Title XVII), as authorized by the Energy Policy Act of 2005 and executed by the Department of Energy's (DOE) Loan Programs Office (LPO), encourages early commercial use of new or significantly improved technologies in energy projects. Projects supported by DOE loan guarantees must avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases; employ new or significantly improved technologies compared to commercial technologies in service in the United States at the time the guarantee is issued; and offer a reasonable prospect of repayment of the principal and interest on the guaranteed obligation. Section 1703 of the Act authorizes DOE to provide loan guarantees for innovative energy projects in categories including renewable energy systems, advanced nuclear facilities, coal gasification, carbon sequestration, energy efficiency, and various other types of projects. This program is being eliminated in the FY 2018 Budget in accordance with Administration priorities, including the focusing of resources toward early-stage research and development. The Loan Programs Office will wind down operations in FY 2018 with the expectation that it will shut down in FY 2019 with remaining loan monitoring and closeout activities transferred to another office.

The Budget eliminates the Title XVII program and proposes to cancel all remaining loan volume authority. In addition to \$2,000,000 in appropriation offset by \$2,000,000 in collections, the Loan Programs Office will utilize unobligated balances carried forward from prior year appropriations to cover loan portfolio monitoring and administrative expenses; including salaries for its full time employees as well as the cost of outside advisors for financial, legal, engineering, credit, and market analysis in addition to

the cost of monitoring the existing portfolio. All activities not essential for the continued monitoring of the portfolio will be terminated.

The American Reinvestment and Recovery Act of 2009 (Public Law 111–5) amended the program's authorizing statute and provided \$2.5 billion in credit subsidy for a temporary program to support loan guarantees for commercial or advanced renewable energy systems, electric power transmission systems, and leading edge biofuel projects. Authority for the temporary program to extend new loans expired September 30, 2011. Prior to expiration, DOE provided loan guarantees to 28 projects totaling over \$16 billion in loan volume. Four projects withdrew prior to any disbursement of funds. The Budget proposes to cancel \$383 million in unobligated credit subsidy while retaining \$96 million to cover the cost of potential modifications as determined in the national interest by Presidential waiver from rescission under Sec 1306 of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Pub. L 111–203).

Object Classification (in millions of dollars)

Identification code 089–0208–0–1–271	2016 actual	2017 est.	2018 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent	10	10	9
11.9 Total personnel compensation	10	10	9
12.1 Civilian personnel benefits	3	3	3
25.1 Advisory and assistance services	20	20	13
25.3 Other goods and services from Federal sources	3	3	3
25.4 Operation and maintenance of facilities	1	1	1
26.0 Supplies and materials	1	1	1
41.0 Grants, subsidies, and contributions	41	12	.....
99.0 Direct obligations	79	50	30
99.5 Adjustment for rounding	1	–1	.....
99.9 Total new obligations, unexpired accounts	80	49	30

Employment Summary

Identification code 089–0208–0–1–271	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	82	82	80

TITLE 17 INNOVATIVE TECHNOLOGY DIRECT LOAN FINANCING ACCOUNT

Program and Financing (in millions of dollars)

Identification code 089–4455–0–3–271	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
Credit program obligations:			
0710 Direct loan obligations .....	.....	1,842	.....
0713 Payment of interest to Treasury	8	11	14
0715 Interest paid to FFB	325	360	399
0742 Downward reestimates paid to receipt accounts	32	74	.....
0743 Interest on downward reestimates	8	16	.....
0900 Total new obligations, unexpired accounts	373	2,303	413
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	1,107	1,086	979
1021 Recoveries of prior year unpaid obligations .....	.....	19	.....
1023 Unobligated balances applied to repay debt	–360	–403	–164
1024 Unobligated balance of borrowing authority withdrawn .....	.....	–19	.....
1050 Unobligated balance (total)	747	683	815
Financing authority:			
Borrowing authority, mandatory:			
1400 Borrowing authority	95	1,929	100
1422 Borrowing authority applied to repay debt	–2	.....	.....
1440 Borrowing authority, mandatory (total)	93	1,929	100
Spending authority from offsetting collections, mandatory:			
1800 Collected	875	719	511
1801 Change in uncollected payments, Federal sources .....	.....	–5	–10
1825 Spending authority from offsetting collections applied to repay debt	–256	–44	–18
1850 Spending auth from offsetting collections, mand (total)	619	670	483
1900 Budget authority (total)	712	2,599	583

1930	Total budgetary resources available	1,459	3,282	1,398
1941	Memorandum (non-add) entries:			
	Unexpired unobligated balance, end of year	1,086	979	985

Change in obligated balance:

3000	Unpaid obligations:			
	Unpaid obligations, brought forward, Oct 1	4,249	3,075	3,545
3010	New obligations, unexpired accounts	373	2,303	413
3020	Outlays (gross)	-1,547	-1,814	-1,716
3040	Recoveries of prior year unpaid obligations, unexpired	-19		
3050	Unpaid obligations, end of year	3,075	3,545	2,242
	Uncollected payments:			
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-47	-47	-42
3070	Change in uncollected pymts, Fed sources, unexpired		5	10
3090	Uncollected pymts, Fed sources, end of year	-47	-42	-32
	Memorandum (non-add) entries:			
3100	Obligated balance, start of year	4,202	3,028	3,503
3200	Obligated balance, end of year	3,028	3,503	2,210

Financing authority and disbursements, net:

4090	Mandatory:			
	Budget authority, gross	712	2,599	583
	Financing disbursements:			
4110	Outlays, gross (total)	1,547	1,814	1,716
	Offsets against gross financing authority and disbursements:			
	Offsetting collections (collected) from:			
4120	Payment from program account		-5	-10
4120	Upward reestimate	-4	-8	
4120	Interest on reestimate	-37	-4	
4122	Interest on uninvested funds	-46	-56	-57
4123	Interest payments	-338	-279	-289
4123	Principal payments	-450	-272	-155
4123	Fees		-95	
4130	Offsets against gross budget authority and outlays (total)	-875	-719	-511
	Additional offsets against financing authority only (total):			
4140	Change in uncollected pymts, Fed sources, unexpired		5	10
4160	Budget authority, net (mandatory)	-163	1,885	82
4170	Outlays, net (mandatory)	672	1,095	1,205
4180	Budget authority, net (total)	-163	1,885	82
4190	Outlays, net (total)	672	1,095	1,205

Status of Direct Loans (in millions of dollars)

Identification code 089-4455-0-3-271	2016 actual	2017 est.	2018 est.
Position with respect to appropriations act limitation on obligations:			
1121	Limitation available from carry-forward	26,125	26,125
1143	Unobligated limitation carried forward (P.L. xx) (-)	-26,125	-24,283
1150	Total direct loan obligations		1,842
Cumulative balance of direct loans outstanding:			
1210	Outstanding, start of year	11,630	12,231
1231	Disbursements: Direct loan disbursements	1,125	1,309
1251	Repayments: Repayments and prepayments	-450	-272
1261	Adjustments: Capitalized interest	1	42
1263	Write-offs for default: Direct loans	-75	
1290	Outstanding, end of year	12,231	13,310

Balance Sheet (in millions of dollars)

Identification code 089-4455-0-3-271	2015 actual	2016 actual
ASSETS:		
Federal assets:		
1101	Fund balances with Treasury	1,060
	Investments in US securities:	
1106	Receivables, net	213
	Net value of assets related to post-1991 direct loans receivable:	
1401	Direct loans receivable, gross	11,630
1402	Interest receivable	67
1405	Allowance for subsidy cost (-)	-1,597
1499	Net present value of assets related to direct loans	10,100
1999	Total assets	11,373
LIABILITIES:		
Federal liabilities:		
2101	Accounts payable	168
2103	Debt	11,205
2999	Total liabilities	11,373

4999	Total liabilities and net position	11,373	12,004
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TITLE 17 INNOVATIVE TECHNOLOGY GUARANTEED LOAN FINANCING ACCOUNT**Program and Financing (in millions of dollars)**

Identification code 089-4577-0- -271	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
Credit program obligations:			
0711	Default claim payments on principal	15	11
0712	Default claim payments on interest	4	4
0742	Downward reestimates paid to receipt accounts	64	16
0743	Interest on downward reestimates	8	4
0900	Total new obligations, unexpired accounts	72	39

Budgetary resources:

1000	Unobligated balance:		
	Unobligated balance brought forward, Oct 1	234	167
	Financing authority:		
	Borrowing authority, mandatory:		
1400	Borrowing authority	1	3
	Spending authority from offsetting collections, mandatory:		
1800	Collected	5	4
1801	Change in uncollected payments, Federal sources		-9
1825	Spending authority from offsetting collections applied to repay debt		-4
1850	Spending auth from offsetting collections, mand (total)	5	4
1900	Budget authority (total)	5	5
1930	Total budgetary resources available	239	172
	Memorandum (non-add) entries:		
1941	Unexpired unobligated balance, end of year	167	133

Change in obligated balance:

3010	Unpaid obligations:		
	New obligations, unexpired accounts	72	39
3020	Outlays (gross)	-72	-39
	Uncollected payments:		
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-9	-9
3070	Change in uncollected pymts, Fed sources, unexpired		9
3090	Uncollected pymts, Fed sources, end of year	-9	-9
	Memorandum (non-add) entries:		
3100	Obligated balance, start of year	-9	-9
3200	Obligated balance, end of year	-9	-9

Financing authority and disbursements, net:

4090	Mandatory:		
	Budget authority, gross	5	5
	Financing disbursements:		
4110	Outlays, gross (total)	72	39
	Offsets against gross financing authority and disbursements:		
	Offsetting collections (collected) from:		
4120	Payment from program account		-9
4122	Interest on uninvested funds	-5	-4
4123	Principal payments		-7
4123	Interest Payments		-2
4130	Offsets against gross budget authority and outlays (total)	-5	-4
	Additional offsets against financing authority only (total):		
4140	Change in uncollected pymts, Fed sources, unexpired		9
4160	Budget authority, net (mandatory)	1	-1
4170	Outlays, net (mandatory)	67	35
4180	Budget authority, net (total)	1	-1
4190	Outlays, net (total)	67	35

Status of Guaranteed Loans (in millions of dollars)

Identification code 089-4577-0- -271	2016 actual	2017 est.	2018 est.
Position with respect to appropriations act limitation on commitments:			
2121	Limitation available from carry-forward		
2143	Uncommitted limitation carried forward		
2150	Total guaranteed loan commitments		
Cumulative balance of guaranteed loans outstanding:			
2210	Outstanding, start of year	3,086	2,937
2231	Disbursements of new guaranteed loans		93
2251	Repayments and prepayments	-149	-128

TITLE 17 INNOVATIVE TECHNOLOGY GUARANTEED LOAN FINANCING
ACCOUNT—Continued
Status of Guaranteed Loans—Continued

Identification code 089-4577-0--271	2016 actual	2017 est.	2018 est.
2261 Adjustments: Terminations for default that result in loans receivable		-15	-11
2290 Outstanding, end of year	2,937	2,794	2,747
Memorandum:			
2299 Guaranteed amount of guaranteed loans outstanding, end of year	2,350	2,235	2,198
Addendum:			
Cumulative balance of defaulted guaranteed loans that result in loans receivable:			
2310 Outstanding, start of year			19
2331 Disbursements for guaranteed loan claims		15	11
2351 Repayments of loans receivable			-9
2364 Other adjustments, net		4	4
2390 Outstanding, end of year		19	25

Balance Sheet (in millions of dollars)

Identification code 089-4577-0--271	2015 actual	2016 actual
ASSETS:		
Federal assets:		
1101 Fund balances with Treasury	225	158
Investments in US securities:		
1106 Receivables, net		
1501 Net value of assets related to post-1991 acquired defaulted guaranteed loans receivable: Defaulted guaranteed loans receivable, gross		
1999 Total assets	225	158
LIABILITIES:		
2101 Federal liabilities: Accounts payable	70	19
2204 Non-Federal liabilities: Liabilities for loan guarantees	155	139
2999 Total liabilities	225	158
4999 Total liabilities and net position	225	158

POWER MARKETING ADMINISTRATION

Federal Funds

OPERATION AND MAINTENANCE, ALASKA POWER ADMINISTRATION

The Alaska Power Administration (APA) was created in 1967 by the Secretary of the Interior to assume the functions of the Bureau of Reclamation in Alaska. These functions include operations, maintenance, transmission, and power marketing of the two Federal hydroelectric projects (Eklutna and Snettisham), and the investigation of future water and power development programs. All Alaska activities of APA, including the Juneau headquarters office, were terminated on September 30, 1998. A fund is maintained to liquidate the remaining obligations of the APA.

OPERATION AND MAINTENANCE, SOUTHEASTERN POWER ADMINISTRATION

For necessary expenses of operation and maintenance of power transmission facilities and of marketing electric power and energy, including transmission wheeling and ancillary services, pursuant to section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), as applied to the Southeastern Power Administration (Southeastern or SEPA) marketing area, \$6,379,000, including official reception and representation expenses in an amount not to exceed \$1,500, to remain available until expended: Provided, That notwithstanding 31 U.S.C. 3302 and section 5 of the Flood Control Act of 1944, up to \$6,379,000 collected by the Southeastern Power Administration from the sale of power and related services shall be credited to this account as discretionary offsetting collections, to remain available until expended for the sole purpose of funding the annual expenses of the Southeastern Power Administration: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2018 appropriation estimated at not more than \$0: Provided further, That notwithstanding 31 U.S.C. 3302, up to \$59,985,000 collected by the Southeast-

ern Power Administration pursuant to the Flood Control Act of 1944 to recover purchase power and wheeling expenses shall be credited to this account as offsetting collections, to remain available until expended for the sole purpose of making purchase power and wheeling expenditures: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred (excluding purchase power and wheeling expenses).

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.

Program and Financing (in millions of dollars)

Identification code 089-0302-0-1-271	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0801 Purchase Power and Wheeling	50	61	60
0802 Annual Expenses and other costs repaid in one year	7	6	6
0900 Total new obligations, unexpired accounts	57	67	66
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	13	29	29
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation		6	
Spending authority from offsetting collections, discretionary:			
1700 Collected	73	61	66
1900 Budget authority (total)	73	67	66
1930 Total budgetary resources available	86	96	95
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	29	29	29
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	10	11	5
3010 New obligations, unexpired accounts	57	67	66
3020 Outlays (gross)	-56	-73	-65
3050 Unpaid obligations, end of year	11	5	6
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	10	11	5
3200 Obligated balance, end of year	11	5	6
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	73	67	66
Outlays, gross:			
4010 Outlays from new discretionary authority	39	65	63
4011 Outlays from discretionary balances	17	8	2
4020 Outlays, gross (total)	56	73	65
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4033 Non-Federal sources	-73	-61	-66
4040 Offsets against gross budget authority and outlays (total)	-73	-61	-66
4180 Budget authority, net (total)	-17	6	
4190 Outlays, net (total)	-17	12	-1

The Southeastern Power Administration (Southeastern) markets power generated at 22 U.S. Army Corps of Engineers' hydroelectric generating plants in an eleven-State area of the Southeast. Power deliveries are made by means of contracting for use of transmission facilities owned by others.

Southeastern sells wholesale power primarily to publicly and cooperatively-owned electric distribution utilities. Southeastern does not own or operate any transmission facilities. Its long-term contracts provide for periodic electric rate adjustments to ensure that the Federal Government recovers the costs of operations and the capital invested in power facilities, with interest, in keeping with statutory requirements. As in past years, the budget continues to provide funding for annual expenses and purchase power and wheeling expenses through discretionary offsetting collections derived from power receipts collected to recover those expenses.

Program Direction.—Provision is made for negotiation and administration of transmission and power contracts, collection of revenues, accounting and budget activities, development of wholesale power rates, amortization of the Federal power investment, energy efficiency and competitiveness

program, investigation and planning of proposed water resources projects, scheduling and dispatch of power generation, scheduling storage and release of water, administration of contractual operation requirements, and determination of methods of operating generating plants individually and in coordination with others to obtain maximum utilization of resources.

Purchase Power and Wheeling.—Provision is made for the payment of wheeling fees and for the purchase of electricity in connection with the disposal of power under contracts with utility companies. Customers are encouraged to use alternative funding mechanisms, including customer advances and net billing to finance these activities. Offsetting collections to fund these ongoing operating services are also available up to \$60 million in 2018.

Reimbursable Program.—The Consolidated Appropriations Act, 2008 (P.L. No. 110–161) provided Southeastern with authority to accept advance payment from customers for reimbursable work associated with operations and maintenance activities, consistent with those authorized in section 5 of the Flood Control Act of 1944. Funds received from any State, municipality, corporation, association, firm, district, or individual as an advance payment for reimbursable work will be credited to Southeastern's account and remain available until expended.

Object Classification (in millions of dollars)

Identification code 089–0302–0–1–271	2016 actual	2017 est.	2018 est.
Reimbursable obligations:			
11.1 Personnel compensation: Full-time permanent	4	4	4
12.1 Civilian personnel benefits	1	1	1
25.2 Purchase Power and Wheeling	50	61	60
25.2 Other services from non-Federal sources	2	1	1
99.0 Reimbursable obligations	57	67	66
99.9 Total new obligations, unexpired accounts	57	67	66

Employment Summary

Identification code 089–0302–0–1–271	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	37	37	40

CONTINUING FUND, SOUTHEASTERN POWER ADMINISTRATION

A continuing fund maintained from receipts from the sale and transmission of electric power in the Southeastern service area is available to defray emergency expenses necessary to ensure continuity of service (16 U.S.C. 825s-2). The fund was last activated in FY 2009 to finance power purchases associated with below normal hydro power generation due to severe drought. Consistent with sound business practices, the Southeastern Power Administration has implemented a policy to recover all emergency costs associated with purchased power and wheeling within one year from the time funds are expended.

OPERATION AND MAINTENANCE, SOUTHWESTERN POWER ADMINISTRATION

For necessary expenses of operation and maintenance of power transmission facilities and of marketing electric power and energy, for construction and acquisition of transmission lines, substations and appurtenant facilities, and for administrative expenses, including official reception and representation expenses in an amount not to exceed \$1,500 in carrying out section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), as applied to the Southwestern Power Administration, \$30,288,000, to remain available until expended: Provided, That notwithstanding 31 U.S.C. 3302 and section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), up to \$18,888,000 collected by the Southwestern Power Administration from the sale of power and related services shall be credited to this account as discretionary offsetting collections, to remain available until expended, for the sole purpose of funding the annual expenses of the Southwestern Power Administration: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2018 appropriation estimated at not more than \$11,400,000: Provided further, That notwithstanding 31 U.S.C.

3302, up to \$83,000,000 collected by the Southwestern Power Administration pursuant to the Flood Control Act of 1944 to recover purchase power and wheeling expenses shall be credited to this account as offsetting collections, to remain available until expended for the sole purpose of making purchase power and wheeling expenditures: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred (excluding purchase power and wheeling expenses).

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.

Program and Financing (in millions of dollars)

Identification code 089–0303–0–1–271	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Systems operation and maintenance	5	5	3
0003 Construction	4	4	5
0004 Program direction	2	2	3
0200 Direct program subtotal	11	11	11
0799 Total direct obligations	11	11	11
0801 Annual expenses	30	36	33
0805 Purchase power and wheeling	2	63	83
0810 Other reimbursable activities	20	37	37
0899 Total reimbursable obligations	52	136	153
0900 Total new obligations, unexpired accounts	63	147	164
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	81	98	100
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	11	13	11
Spending authority from offsetting collections, discretionary:			
1700 Collected	69	136	153
1900 Budget authority (total)	80	149	164
1930 Total budgetary resources available	161	247	264
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	98	100	100
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	85	88	38
3010 New obligations, unexpired accounts	63	147	164
3020 Outlays (gross)	–60	–197	–181
3050 Unpaid obligations, end of year	88	38	21
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	85	88	38
3200 Obligated balance, end of year	88	38	21
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	80	149	164
Outlays, gross:			
4010 Outlays from new discretionary authority	19	144	160
4011 Outlays from discretionary balances	41	53	21
4020 Outlays, gross (total)	60	197	181
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	–	–6	–6
4033 Non-Federal sources	–69	–130	–147
4040 Offsets against gross budget authority and outlays (total)	–69	–136	–153
4070 Budget authority, net (discretionary)	11	13	11
4080 Outlays, net (discretionary)	–9	61	28
4180 Budget authority, net (total)	11	13	11
4190 Outlays, net (total)	–9	61	28

The Southwestern Power Administration (Southwestern) operates in a six-state area marketing and delivering renewable hydroelectric power produced at the U.S. Army Corps of Engineers' dams. Southwestern operates and maintains 1,380 miles of high voltage transmission lines, 26 substations/switching stations, associated power system controls, and communication sites. Southwestern also constructs additions and modifications to existing facilities.

OPERATION AND MAINTENANCE, SOUTHWESTERN POWER ADMINISTRATION—Continued

Southwestern markets and delivers its power at wholesale rates primarily to public bodies and rural electric cooperatives. In compliance with statutory requirements, Southwestern's power sales contracts provide for periodic rate adjustments to ensure that the Federal Government recovers all costs of operations, other costs allocated to power, and the capital investments in power facilities, with interest. Southwestern is also responsible for scheduling and dispatching power and negotiating power sales contracts to meet changing customer load requirements. As in past years, the budget continues to provide funding for annual expenses and purchase power and wheeling expenses through discretionary offsetting collections derived from power receipts collected to recover those expenses.

Program Direction.—Provides compensation and all related expenses for personnel who market, deliver, operate, and maintain Southwestern's high-voltage interconnected power system and associated facilities.

Operations and Maintenance.—Provides essential electrical and communications equipment replacements and upgrades, capitalized moveable equipment, technical services, and supplies and materials necessary for the safe, reliable, and cost effective operation and maintenance of the power system.

Purchase Power and Wheeling.—Provides for the purchase and delivery of energy to meet limited peaking power contractual obligations. Federal power receipts and alternative financing methods, including net billing, bill crediting, and customer advances are used to fund system-purchased power support and other contractual services. Customers will provide other power resources and/or purchases for the remainder of their firm loads.

Construction.—Provides for replacement, addition or upgrade of existing infrastructure to sustain reliable delivery of power to its customers, contain annual maintenance costs, and improve overall efficiency.

Reimbursable Program.—This activity involves services provided by Southwestern to others under various types of reimbursable arrangements.

Object Classification (in millions of dollars)

Identification code 089-0303-0-1-271	2016 actual	2017 est.	2018 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent	2	2	3
11.9 Total personnel compensation	2	2	3
25.2 Other services from non-Federal sources	8	7	6
26.0 Supplies and materials	1	1	1
31.0 Equipment	1	1	1
99.0 Direct obligations	11	11	11
99.0 Reimbursable obligations	52	136	153
99.9 Total new obligations, unexpired accounts	63	147	164

Employment Summary

Identification code 089-0303-0-1-271	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	15	10	10
2001 Reimbursable civilian full-time equivalent employment	151	184	184

OPERATION AND MAINTENANCE, SOUTHWESTERN POWER ADMINISTRATION

(Legislative proposal, subject to PAYGO)

This proposal would authorize the Federal government to sell the transmission assets of the Southwestern Power Administration, which operates and maintains 1,380 miles of high voltage transmission lines and 26 substations/switching stations.

CONTINUING FUND, SOUTHWESTERN POWER ADMINISTRATION

Program and Financing (in millions of dollars)

Identification code 089-5649-0-2-271	2016 actual	2017 est.	2018 est.
4180 Budget authority, net (total)			
4190 Outlays, net (total)			

Memorandum (non-add) entries:

5080 Outstanding debt, SOY	-68	-68	-68
5081 Outstanding debt, EOY	-68	-68	-68

A continuing fund, maintained from receipts from the sale and transmission of electric power in the Southwestern service area, is available permanently for emergency expenses necessary to ensure continuity of electric service and continuous operation of the facilities. The fund is also available on an ongoing basis to pay for purchase power and wheeling expenses when the Administrator determines that such expenses are necessary to meet contractual obligations for the sale and delivery of power during periods of below-average generation (16 U.S.C. 825s-1 as amended further by Public Law No. 101-101). The fund was last activated in FY 2009 to repair and replace damaged transmission lines due to an ice storm.

CONSTRUCTION, REHABILITATION, OPERATION AND MAINTENANCE, WESTERN AREA POWER ADMINISTRATION

For carrying out the functions authorized by title III, section 302(a)(1)(E) of the Act of August 4, 1977 (42 U.S.C. 7152), and other related activities including conservation and renewable resources programs as authorized, \$267,686,000, including official reception and representation expenses in an amount not to exceed \$1,500, to remain available until expended, of which \$265,661,000 shall be derived from the Department of the Interior Reclamation Fund: Provided, That notwithstanding 31 U.S.C. 3302, section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), and section 1 of the Interior Department Appropriation Act, 1939 (43 U.S.C. 392a), up to \$174,314,000 collected by the Western Area Power Administration from the sale of power and related services shall be credited to this account as discretionary offsetting collections, to remain available until expended, for the sole purpose of funding the annual expenses of the Western Area Power Administration: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2018 appropriation estimated at not more than \$93,372,000, of which \$91,347,000 is derived from the Reclamation Fund: Provided further, That notwithstanding 31 U.S.C. 3302, up to \$308,925,000 collected by the Western Area Power Administration pursuant to the Flood Control Act of 1944 and the Reclamation Project Act of 1939 to recover purchase power and wheeling expenses shall be credited to this account as offsetting collections, to remain available until expended for the sole purpose of making purchase power and wheeling expenditures: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred (excluding purchase power and wheeling expenses).

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.

Program and Financing (in millions of dollars)

Identification code 089-5068-0-2-271	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Systems operation and maintenance	42	42	39
0004 Program direction	47	46	42
0091 Direct Program by Activities - Subtotal (1 level)	89	88	81
0100 Total operating expenses	89	88	81
0101 Capital investment	5	5	12
0799 Total direct obligations	94	93	93
0802 Purchase Power and Wheeling	118	367	309
0803 Annual Expenses	199	211	209
0804 Other Reimbursable	207	524	643
0809 Reimbursable program activities, subtotal	524	1,102	1,161
0899 Total reimbursable obligations	524	1,102	1,161
0900 Total new obligations, unexpired accounts	618	1,195	1,254

Budgetary resources:

1000 Unobligated balance:			
Unobligated balance brought forward, Oct 1	640	622	624
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	6	7	2

1101	Appropriation (special or trust fund)	88	88	91
1160	Appropriation, discretionary (total)	94	95	93
	Spending authority from offsetting collections, discretionary:			
1700	Collected	498	1,102	1,126
1701	Change in uncollected payments, Federal sources	8		
1750	Spending auth from offsetting collections, disc (total)	506	1,102	1,126
1900	Budget authority (total)	600	1,197	1,219
1930	Total budgetary resources available	1,240	1,819	1,843
	Memorandum (non-add) entries:			
1941	Unexpired unobligated balance, end of year	622	624	589
Change in obligated balance:				
	Unpaid obligations:			
3000	Unpaid obligations, brought forward, Oct 1	334	282	416
3010	New obligations, unexpired accounts	618	1,195	1,254
3020	Outlays (gross)	-670	-1,061	-856
3050	Unpaid obligations, end of year	282	416	814
	Uncollected payments:			
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-46	-54	-54
3070	Change in uncollected pymts, Fed sources, unexpired	-8		
3090	Uncollected pymts, Fed sources, end of year	-54	-54	-54
	Memorandum (non-add) entries:			
3100	Obligated balance, start of year	288	228	362
3200	Obligated balance, end of year	228	362	760
Budget authority and outlays, net:				
	Discretionary:			
4000	Budget authority, gross	600	1,197	1,219
	Outlays, gross:			
4010	Outlays from new discretionary authority	108	374	380
4011	Outlays from discretionary balances	562	687	476
4020	Outlays, gross (total)	670	1,061	856
	Offsets against gross budget authority and outlays:			
	Offsetting collections (collected) from:			
4030	Federal sources	-125	-239	-389
4033	Non-Federal sources	-373	-863	-737
4040	Offsets against gross budget authority and outlays (total)	-498	-1,102	-1,126
	Additional offsets against gross budget authority only:			
4050	Change in uncollected pymts, Fed sources, unexpired	-8		
4070	Budget authority, net (discretionary)	94	95	93
4080	Outlays, net (discretionary)	172	-41	-270
4180	Budget authority, net (total)	94	95	93
4190	Outlays, net (total)	172	-41	-270
Memorandum (non-add) entries:				
5080	Outstanding debt, SOY	-12,709	-12,709	-12,709
5081	Outstanding debt, EOY	-12,709	-12,709	-12,709

The Western Area Power Administration (WAPA) markets electric power in 15 central and western states from federally-owned power plants operated primarily by the Bureau of Reclamation, the Army Corps of Engineers, and the International Boundary and Water Commission. WAPA operates and maintains about 17,000 circuit-miles of high-voltage transmission lines, more than 300 substations/switchyards and associated power system controls, and communication and electrical facilities for 15 separate power projects. WAPA also constructs additions and modifications to existing facilities.

In keeping with statutory requirements, WAPA's long-term power contracts allow for periodic rate adjustments to ensure that the Federal Government recovers costs of operations, other costs allocated to power, and the capital investment in power facilities, with interest.

Power is sold to wholesale customers such as municipalities, cooperatives, irrigation districts, public utility districts, State and Federal Government agencies, and private utilities. Receipts are deposited in the Reclamation Fund, the Falcon and Amistad Operating and Maintenance Fund, the General Fund, the Colorado River Dam Fund, and the Colorado River Basins Power Marketing Fund.

As in past years, the budget continues to provide funding for annual expenses and purchase power and wheeling expenses through discretionary offsetting collections derived from power receipts collected to recover those expenses.

Systems Operation and Maintenance.—Provides essential electrical and communication equipment replacements and upgrades, capitalized moveable equipment, technical services, and supplies and materials necessary for safe reliable operation and cost-effective maintenance of the power systems.

Purchase Power and Wheeling.—Provision is made for the payment of wheeling fees and for the purchase of electricity in connection with the distribution of power under contracts with utility companies. Customers are encouraged to contract for power and wheeling on their own, or use alternative funding mechanisms, including customer advances, net billing, and bill crediting to finance these activities. Ongoing operating services are also available on a reimbursable basis.

System Construction.—WAPA's construction and rehabilitation activity emphasizes replacement and upgrades of existing infrastructure to sustain reliable power delivery to its customers, to contain annual maintenance costs, and to improve overall operational efficiency. WAPA will continue to participate in joint construction projects with customers to encourage more widespread transmission access.

Program Direction.—Provides compensation and all related expenses for the workforce that operates and maintains WAPA's high-voltage inter-connected transmission system (systems operation and maintenance program), and those that plan, design, and supervise the construction of replacements, upgrades, and additions (system construction program) to the transmission facilities.

Reimbursable Program.—This program involves services provided by WAPA to others under various types of reimbursable arrangements. WAPA will continue to spend out of the Colorado River Dam Fund for operations and maintenance activities associated with the Boulder Canyon Project via a reimbursable arrangement with the Interior Department's Bureau of Reclamation. The Colorado River Dam Fund is a revolving fund operated by the Bureau of Reclamation. Authority for WAPA to obligate directly from the Colorado River Dam Fund comes from section 104(a) of the Hoover Power Plant Act of 1984.

Object Classification (in millions of dollars)

Identification code 089-5068-0-2-271	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	19	17	20
11.5 Other personnel compensation	3	2	2
11.9 Total personnel compensation	22	19	22
12.1 Civilian personnel benefits	7	5	6
21.0 Travel and transportation of persons	1	1	1
22.0 Transportation of things	1	1	1
23.3 Communications, utilities, and miscellaneous charges	1	1	1
25.1 Advisory and assistance services		5	
25.2 Other services from non-Federal sources	20	18	10
26.0 Supplies and materials	1	2	2
31.0 Equipment	12	19	22
32.0 Land and structures	29	22	28
99.0 Direct obligations	94	93	93
99.0 Reimbursable obligations	524	1,102	1,161
99.9 Total new obligations, unexpired accounts	618	1,195	1,254

Employment Summary

Identification code 089-5068-0-2-271	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	156	171	172
2001 Reimbursable civilian full-time equivalent employment	1,011	1,031	1,050

CONSTRUCTION, REHABILITATION, OPERATION AND MAINTENANCE, WESTERN AREA
POWER ADMINISTRATION

(Legislative proposal, subject to PAYGO)

This proposal would authorize the Federal government to sell the transmission assets of the Western Area Power Administration, which operates

CONSTRUCTION, REHABILITATION, OPERATION AND MAINTENANCE, WESTERN AREA
POWER ADMINISTRATION—Continued

and maintains about 17,000 circuit-miles of high voltage transmission lines and more than 300 substations/switching yards.

WESTERN AREA POWER ADMINISTRATION, BORROWING AUTHORITY, RECOVERY ACT.

Program and Financing (in millions of dollars)

Identification code 089-4404-0-3-271	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0102 Transmission Infrastructure Program Projects	7	800	1,185
0811 Western Area Power Administration, Borrowing Authority, Recovery (Reimbursable)	1	7	35
0900 Total new obligations, unexpired accounts	8	807	1,220
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	10	12	16
1001 Discretionary unobligated balance brought fwd, Oct 1	2	2	.....
Budget authority:			
1400 Borrowing authority, mandatory:		800	1,185
Spending authority from offsetting collections, discretionary:			
1700 Collected	5	7	31
Spending authority from offsetting collections, mandatory:			
1800 Collected	5	4	4
1900 Budget authority (total)	10	811	1,220
1930 Total budgetary resources available	20	823	1,236
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	12	16	16
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	26	26	353
3010 New obligations, unexpired accounts	8	807	1,220
3020 Outlays (gross)	-8	-480	-645
3050 Unpaid obligations, end of year	26	353	928
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	26	26	353
3200 Obligated balance, end of year	26	353	928
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	5	7	31
Outlays, gross:			
4010 Outlays from new discretionary authority		7	31
4011 Outlays from discretionary balances	5	.....	.....
4020 Outlays, gross (total)	5	7	31
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-3	.....	-3
4033 Non-Federal sources	-2	-7	-28
4040 Offsets against gross budget authority and outlays (total)	-5	-7	-31
Mandatory:			
4090 Budget authority, gross	5	804	1,189
Outlays, gross:			
4100 Outlays from new mandatory authority	1	454	289
4101 Outlays from mandatory balances	2	19	325
4110 Outlays, gross (total)	3	473	614
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4123 Non-Federal sources	-5	-4	-4
4180 Budget authority, net (total) .....	.....	800	1,185
4190 Outlays, net (total)	-2	469	610

Summary of Budget Authority and Outlays (in millions of dollars)

	2016 actual	2017 est.	2018 est.
Enacted/requested:			
Budget Authority .....	.....	800	1,185
Outlays	-2	469	610
Legislative proposal, subject to PAYGO:			
Budget Authority .....	.....	.....	-1,185
Outlays .....	.....	.....	-610
Total:			
Budget Authority .....	.....	800	.....

Outlays -2 469

The American Recovery and Reinvestment Act of 2009 (the Act) provided Western Area Power Administration (WAPA) borrowing authority for the purpose of constructing, financing, facilitating, planning, operating, maintaining, or studying construction of new or upgraded electric power transmission lines and related facilities with at least one terminus within the area served by WAPA, and for delivering or facilitating the delivery of power generated by renewable energy resources. This authority to borrow from the United States Treasury is available to WAPA on a permanent, indefinite basis, with the amount of borrowing outstanding not to exceed \$3.25 billion at any one time. WAPA established the Transmission Infrastructure Program (TIP) to manage and administer this borrowing authority and its related program requirements.

Object Classification (in millions of dollars)

Identification code 089-4404-0-3-271	2016 actual	2017 est.	2018 est.
Direct obligations:			
11.1 Personnel compensation: Full-time permanent	1	.....	.....
25.2 Other services from non-Federal sources	3	.....	.....
33.0 Investments and loans .....	.....	800	1,185
43.0 Interest and dividends	3	.....	.....
99.0 Direct obligations	7	800	1,185
Reimbursable obligations:			
11.1 Personnel compensation: Full-time permanent .....	.....	2	2
25.1 Advisory and assistance services .....	.....	2	7
25.2 Other services from non-Federal sources	1	3	4
43.0 Interest and dividends .....	.....	.....	22
99.0 Reimbursable obligations	1	7	35
99.9 Total new obligations, unexpired accounts	8	807	1,220

Employment Summary

Identification code 089-4404-0-3-271	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	9	.....	.....
2001 Reimbursable civilian full-time equivalent employment	3	17	19

WESTERN AREA POWER ADMINISTRATION, BORROWING AUTHORITY, RECOVERY ACT.

(Legislative proposal, subject to PAYGO)

Program and Financing (in millions of dollars)

Identification code 089-4404-4-3-271	2016 actual	2017 est.	2018 est.
Budgetary resources:			
Budget authority:			
Borrowing authority, mandatory:			
1400 Borrowing authority	-1,185
1900 Budget authority (total)	-1,185
1930 Total budgetary resources available	-1,185
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	-1,185
Change in obligated balance:			
Unpaid obligations:			
3020 Outlays (gross)	610
3050 Unpaid obligations, end of year	610
Memorandum (non-add) entries:			
3200 Obligated balance, end of year	610
Budget authority and outlays, net:			
Mandatory:			
4090 Budget authority, gross	-1,185
Outlays, gross:			
4100 Outlays from new mandatory authority	-610
4180 Budget authority, net (total)	-1,185
4190 Outlays, net (total)	-610

This proposal would repeal Western Area Power Administration (WAPA)'s emergency borrowing authority authorized by the American Recovery and Reinvestment Act of 2009 for the purpose of constructing

and/or funding projects within WAPA's service territory that deliver or facilitate the delivery of power generated by renewable energy resources.

EMERGENCY FUND, WESTERN AREA POWER ADMINISTRATION

Program and Financing (in millions of dollars)

Identification code 089-5069-0-2-271	2016 actual	2017 est.	2018 est.
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	1	1	1
1930 Total budgetary resources available	1	1	1
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	1	1	1
4180 Budget authority, net (total)			
4190 Outlays, net (total)			
Memorandum (non-add) entries:			
5080 Outstanding debt, SOY	-55	-55	-55
5081 Outstanding debt, EOY	-55	-55	-55

An emergency fund maintained from receipts from the sale and transmission of electric power is available to defray expenses necessary to ensure continuity of service. The fund was last activated in fiscal year 2010 to repair and replace damaged transmission lines due to severe winter storm conditions. This work has since been completed.

FALCON AND AMISTAD OPERATING AND MAINTENANCE FUND

For operation, maintenance, and emergency costs for the hydroelectric facilities at the Falcon and Amistad Dams, \$4,176,000, to remain available until expended, and to be derived from the Falcon and Amistad Operating and Maintenance Fund of the Western Area Power Administration, as provided in section 2 of the Act of June 18, 1954 (68 Stat. 255): Provided, That notwithstanding the provisions of that Act and of 31 U.S.C. 3302, up to \$3,948,000 collected by the Western Area Power Administration from the sale of power and related services from the Falcon and Amistad Dams shall be credited to this account as discretionary offsetting collections, to remain available until expended for the sole purpose of funding the annual expenses of the hydroelectric facilities of these Dams and associated Western Area Power Administration activities: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2018 appropriation estimated at not more than \$228,000: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred: Provided further, That for fiscal year 2018, the Administrator of the Western Area Power Administration may accept up to \$872,000 in funds contributed by United States power customers of the Falcon and Amistad Dams for deposit into the Falcon and Amistad Operating and Maintenance Fund, and such funds shall be available for the purpose for which contributed in like manner as if said sums had been specifically appropriated for such purpose: Provided further, That any such funds shall be available without further appropriation and without fiscal year limitation for use by the Commissioner of the United States Section of the International Boundary and Water Commission for the sole purpose of operating, maintaining, repairing, rehabilitating, replacing, or upgrading the hydroelectric facilities at these Dams in accordance with agreements reached between the Administrator, Commissioner, and the power customers.

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.

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5178-0-2-271	2016 actual	2017 est.	2018 est.
0100 Balance, start of year	6	7	8
Receipts:			
Current law:			
1130 Falcon and Amistad Operating and Maintenance Fund Receipts	1	1	1
2000 Total: Balances and receipts	7	8	9
5099 Balance, end of year	7	8	9

Program and Financing (in millions of dollars)

Identification code 089-5178-0-2-271	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0801 Reimbursable program activity - Annual expenses	4	4	4
0802 Reimbursable program activity - Alternative Financing			1
0900 Total new obligations (object class 25.3)	4	4	5
Budgetary resources:			
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Offsetting collections	4	4	5
1930 Total budgetary resources available	4	4	5
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	8	9	7
3010 New obligations, unexpired accounts	4	4	5
3020 Outlays (gross)	-3	-6	-7
3050 Unpaid obligations, end of year	9	7	5
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	8	9	7
3200 Obligated balance, end of year	9	7	5
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	4	4	5
Outlays, gross:			
4010 Outlays from new discretionary authority	1	3	3
4011 Outlays from discretionary balances	2	3	4
4020 Outlays, gross (total)	3	6	7
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4033 Non-Federal sources	-4	-4	-5
4180 Budget authority, net (total)			
4190 Outlays, net (total)	-1	2	2

Pursuant to section 2 of the Act of June 18, 1954, as amended, Western Area Power Administration is requesting funding for the Falcon and Amistad Operating and Maintenance Fund to defray operations, maintenance, and emergency (OM&E) expenses for the hydroelectric facilities at Falcon and Amistad Dams on the Rio Grande River. Most of these funds will be made available to the United States Section of the International Boundary and Water Commission through a reimbursable agreement. Within the fund, \$200,000 is for an emergency reserve that will remain unobligated unless unanticipated expenses arise. The budget provides funding for annual expenses through discretionary offsetting collections derived from power receipts collected to recover those expenses.

COLORADO RIVER BASINS POWER MARKETING FUND, WESTERN AREA POWER ADMINISTRATION

Program and Financing (in millions of dollars)

Identification code 089-4452-0-3-271	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0801 Program direction	57	62	58
0802 Equipment, Contracts and Related Expenses	83	152	127
0900 Total new obligations, unexpired accounts	140	214	185
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	142	133	133
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected	131	237	208
1720 Capital transfer of spending authority from offsetting collections to general fund		-23	-23
1750 Spending auth from offsetting collections, disc (total)	131	214	185
1930 Total budgetary resources available	273	347	318
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	133	133	133

**COLORADO RIVER BASINS POWER MARKETING FUND, WESTERN AREA POWER
ADMINISTRATION—Continued**
Program and Financing—Continued

Identification code 089-4452-0-3-271	2016 actual	2017 est.	2018 est.
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	49	44	50
3010 New obligations, unexpired accounts	140	214	185
3020 Outlays (gross)	-145	-208	-207
3050 Unpaid obligations, end of year	44	50	28
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-1	-1	-1
3090 Uncollected pymts, Fed sources, end of year	-1	-1	-1
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	48	43	49
3200 Obligated balance, end of year	43	49	27
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	131	214	185
Outlays, gross:			
4010 Outlays from new discretionary authority	32	48	41
4011 Outlays from discretionary balances	113	160	166
4020 Outlays, gross (total)	145	208	207
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-5	-6	-5
4033 Non-Federal sources	-126	-231	-203
4040 Offsets against gross budget authority and outlays (total)	-131	-237	-208
4070 Budget authority, net (discretionary)		-23	-23
4080 Outlays, net (discretionary)	14	-29	-1
4180 Budget authority, net (total)		-23	-23
4190 Outlays, net (total)	14	-29	-1

Western Area Power Administration's (WAPA) operation and maintenance (O&M) and power marketing expenses for the Colorado River Storage Project, the Colorado River Basin Project, the Seedskadee Project, the Dolores Project, and the Fort Peck Project are financed from power revenues.

Colorado River Storage Project.—WAPA markets power and operates and maintains the power transmission facilities of the Colorado River Storage Project consisting of four major storage units: Glen Canyon on the Colorado River in Arizona, Flaming Gorge on the Green River in Utah, Navajo on the San Juan River in New Mexico, and the Wayne N. Aspinall unit on the Gunnison River in Colorado.

Colorado River Basin Project.—This project includes WAPA's expenses associated with the Central Arizona Project and the United States entitlement from the Navajo coal-fired powerplant. Revenues in excess of operating expenses are transferred to the Lower Colorado River Basin Development Fund.

Seedskadee Project.—This project includes WAPA's expenses for O&M, power marketing, and transmission of hydroelectric power from the Fontenelle Dam power plant in southwestern Wyoming.

Dolores Project.—This project includes WAPA's expenses for O&M, power marketing, and transmission of hydroelectric power from power plants at McPhee Dam and Towaoc Canal in southwestern Colorado.

Fort Peck Project.—Revenues collected by WAPA are used to defray operation and maintenance and power marketing expenses associated with the power generation and transmission facilities of the Fort Peck Project, and WAPA operates and maintains the transmission system and performs power marketing functions.

Equipment, Contracts and Related Expenses.—WAPA operates and maintains approximately 4,000 miles of transmission lines, substations, switchyards, communications, and control equipment associated with this fund. Wholesale power is provided to utilities over interconnected high-voltage transmission systems. In keeping with statutory requirements, long-term power contracts provide for periodic rate adjustments to ensure that the Federal Government recovers all costs of O&M, and all capital invested

in power, with interest. This activity provides for the supplies, materials, services, capital equipment replacements, and additions, including communications and control equipment, purchase power, transmission and wheeling services, and interest payments to the U.S. Treasury.

Program Direction.—The personnel compensation and related expenses for all these activities are quantified under Program Direction.

Object Classification (in millions of dollars)

Identification code 089-4452-0-3-271	2016 actual	2017 est.	2018 est.
Reimbursable obligations:			
Personnel compensation:			
11.1 Full-time permanent	28	29	28
11.5 Other personnel compensation	2	3	3
11.9 Total personnel compensation	30	32	31
12.1 Civilian personnel benefits	10	11	11
21.0 Travel and transportation of persons	2	2	2
22.0 Transportation of things	1	1	1
23.1 Rental payments to GSA	1	1	2
23.3 Communications, utilities, and miscellaneous charges	1	1	1
25.1 Advisory and assistance services		6	6
25.2 Other services from non-Federal sources	61	129	104
25.3 Other goods and services from Federal sources	11	6	5
26.0 Supplies and materials	3	4	3
31.0 Equipment	4	2	4
32.0 Land and structures	16	12	11
43.0 Interest and dividends		7	4
99.9 Total new obligations, unexpired accounts	140	214	185

Employment Summary

Identification code 089-4452-0-3-271	2016 actual	2017 est.	2018 est.
2001 Reimbursable civilian full-time equivalent employment	280	302	280

BONNEVILLE POWER ADMINISTRATION FUND

Expenditures from the Bonneville Power Administration Fund, established pursuant to Public Law 93-454, are approved for official reception and representation expenses in an amount not to exceed \$5,000: Provided, That during fiscal year 2018, no new direct loan obligations may be made.

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.

Program and Financing (in millions of dollars)

Identification code 089-4045-0-3-271	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0801 Power business line	1,435	1,260	1,274
0802 Residential exchange	219	296	316
0803 Bureau of Reclamation	133	158	168
0804 Corp of Engineers	238	251	257
0805 Colville settlement	17	22	23
0806 U.S. Fish & Wildlife	29	33	33
0807 Planning council	11	12	12
0808 Fish and Wildlife	258	274	277
0809 Reimbursable program activities, subtotal	2,340	2,306	2,360
0811 Transmission business line	454	499	522
0812 Conservation and energy efficiency	160	173	170
0813 Interest	343	253	272
0814 Pension and health benefits	34	36	37
0819 Reimbursable program activities, subtotal	991	961	1,001
0821 Power business line	187	246	265
0822 Transmission services	277	531	439
0824 Fish and Wildlife	16	45	51
0825 Capital Equipment	24	25	27
0826 Projects funded in advance	272	42	40
0827 Capitalized Bond Premiums		2	2
0829 Reimbursable program activities, subtotal	776	891	824
0900 Total new obligations, unexpired accounts	4,107	4,158	4,185

Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	13	13	536
1023	Unobligated balances applied to repay debt		-2	-526
1050	Unobligated balance (total)	13	11	10
Budget authority:				
Borrowing authority, mandatory:				
1400	Borrowing authority	429	849	784
Contract authority, mandatory:				
1600	Contract authority	2,650		
Spending authority from offsetting collections, mandatory:				
1800	Collected	3,409	4,114	4,114
1801	Change in uncollected payments, Federal sources	-3		
1802	Offsetting collections (previously unavailable)	9	9	9
1810	Spending authority from offsetting collections transferred to other accounts [096-3123]	-113		
1823	New and/or unobligated balance of spending authority from offsetting collections temporarily reduced	-9	-9	
1825	Spending authority from offsetting collections applied to repay debt	-319	-280	-333
1826	Spending authority from offsetting collections applied to liquidate contract authority	-1,946		
1850	Spending auth from offsetting collections, mand (total)	1,028	3,834	3,790
1900	Budget authority (total)	4,107	4,683	4,574
1930	Total budgetary resources available	4,120	4,694	4,584
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	13	536	399
Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	3,248	3,436	3,438
3010	New obligations, unexpired accounts	4,107	4,158	4,185
3020	Outlays (gross)	-3,919	-4,156	-4,185
3050	Unpaid obligations, end of year	3,436	3,438	3,438
Uncollected payments:				
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-328	-325	-325
3070	Change in uncollected pymts, Fed sources, unexpired	3		
3090	Uncollected pymts, Fed sources, end of year	-325	-325	-325
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	2,920	3,111	3,113
3200	Obligated balance, end of year	3,111	3,113	3,113
Budget authority and outlays, net:				
Mandatory:				
4090	Budget authority, gross	4,107	4,683	4,574
Outlays, gross:				
4100	Outlays from new mandatory authority	3,885	3,956	4,085
4101	Outlays from mandatory balances	34	200	100
4110	Outlays, gross (total)	3,919	4,156	4,185
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4120	Federal sources	-50	-90	-90
4121	Interest on Federal securities	-7		
4123	Non-Federal sources	-3,352	-4,024	-4,024
4130	Offsets against gross budget authority and outlays (total)	-3,409	-4,114	-4,114
Additional offsets against gross budget authority only:				
4140	Change in uncollected pymts, Fed sources, unexpired	3		
4160	Budget authority, net (mandatory)	701	569	460
4170	Outlays, net (mandatory)	510	42	71
4180	Budget authority, net (total)	701	569	460
4190	Outlays, net (total)	510	42	71
Memorandum (non-add) entries:				
5000	Total investments, SOY: Federal securities: Par value	690	475	475
5001	Total investments, EOY: Federal securities: Par value	475	475	475
5052	Obligated balance, SOY: Contract authority	1,946	2,650	2,650
5053	Obligated balance, EOY: Contract authority	2,650	2,650	2,650
5090	Unexpired unavailable balance, SOY: Offsetting collections	9	9	9
5092	Unexpired unavailable balance, EOY: Offsetting collections	9	9	

Status of Direct Loans (in millions of dollars)

Identification code 089-4045-0-3-271	2016 actual	2017 est.	2018 est.
Cumulative balance of direct loans outstanding:			
1210 Outstanding, start of year	2	2	2
1290 Outstanding, end of year	2	2	2

Bonneville Power Administration (BPA) is a Federal electric power marketing agency in the Pacific Northwest. BPA markets hydroelectric power from 21 multipurpose water resource projects of the U.S. Army Corps of Engineers and 10 projects of the U.S. Bureau of Reclamation, plus some energy from non-Federal generating projects in the region. These generating resources and BPA's transmission system are operated as an integrated power system with operating and financial results combined and reported as the Federal Columbia River Power System (FCRPS). BPA provides about 50 percent of the region's electric energy supply and about three-fourths of the region's high-voltage electric power transmission capacity.

BPA is responsible for meeting the net firm power requirements of its requesting customers through a variety of means, including energy conservation programs, acquisition of renewable and other resources, and power exchanges with utilities both in and outside the region.

BPA finances its operations with a business-type budget under the Government Corporation Control Act, 31 U.S.C. 9101-10, on the basis of the self-financing authority provided by the Federal Columbia River Transmission System Act of 1974 (Transmission Act) (Public Law 93-454) and the U.S. Treasury borrowing authority provided by the Transmission Act, the Pacific Northwest Electric Power Planning and Conservation Act (Pacific Northwest Power Act) (Public Law 96-501) for energy conservation, renewable energy resources, capital fish facilities, and other purposes, the American Recovery and Reinvestment Act of 2009 (Public Law 111-5), and other legislation. Authority to borrow from the U.S. Treasury is available to the BPA on a permanent, indefinite basis. The amount of U.S. Treasury borrowing outstanding at any time cannot exceed \$7.70 billion. BPA finances its approximate \$4.4 billion annual cost of operations and investments primarily using power and transmission revenues and loans from the U.S. Treasury.

Operating Expenses-Transmission Services.—Provides for operating over 15,000 circuit miles of high-voltage transmissions lines and 261 substations, and for maintaining the facilities and equipment of the Bonneville transmission system in 2018.

Power Services.—Provides for the planning, contractual acquisition and oversight of reliable, cost effective resources. These resources are needed to serve BPA's portion of the region's forecasted net electric load requirements. This activity also includes protection, mitigation and enhancement of fish and wildlife affected by hydroelectric facilities on the Columbia River and its tributaries in accordance with the Pacific Northwest Power Act. This activity provides for payment of the operation and maintenance (O&M) costs allocated to power the 31 U.S. Army Corps of Engineers and U.S. Bureau of Reclamation hydro projects, amortization on the capital investment in power generating facilities, and irrigation assistance at U.S. Bureau of Reclamation facilities. This activity also provides for the planning, contractual acquisition and oversight of reliable, cost effective conservation. It also provides for extending the benefits of low-cost Federal power to the residential and small farm customers of investor-owned and publicly-owned utilities, in accordance with the Pacific Northwest Power Act and for activities of the Pacific Northwest Electric Power and Conservation Planning Council required by the Pacific Northwest Power Act.

Interest.—Provides for payments to the U.S. Treasury for interest on U.S. Treasury borrowings to finance BPA's capital investments under \$7.70 billion of U.S. Treasury borrowing authority provided by the Transmission Act, the Pacific Northwest Power Act for energy conservation, renewable energy resources, capital fish facilities, and other purposes, the American Recovery and Reinvestment Act of 2009, and other legislation. This interest category also includes interest on U.S. Army Corps of Engineers, BPA and U.S. Bureau of Reclamation appropriated debt.

Capital Investments-Transmission Services.—Provides for the planning, design and construction of transmission lines, substation and control system additions, replacements, and enhancements to the FCRPS transmission system for a reliable, efficient and cost-effective regional transmission system. Provides for planning, design, and construction work to repair or

BONNEVILLE POWER ADMINISTRATION FUND—Continued

replace existing transmission lines, substations, control systems, and general facilities of the FCRPS transmission system.

Power Services.—Provides for direct funding of additions, improvements, and replacements at existing Federal hydroelectric projects in the Northwest. It also provides for capital investments to implement environmental activities, and protect, mitigate, and enhance fish and wildlife affected by hydroelectric facilities on the Columbia River and its tributaries, in accordance with the Pacific Northwest Power Act. This activity provides for the planning, contractual acquisition and oversight of reliable, cost effective conservation.

Capital Equipment/Capitalized Bond Premium.—Provides for capital information technologies, and office furniture and equipment, and software capital development in support of all BPA programs. It also provides for bond premiums incurred for refinancing of bonds.

Total Capital Obligations.—The 2018 capital obligations are estimated to be \$783.6 million.

Contingencies.—Although contingencies are not specifically funded, the need may arise to provide for purchase of power in low-water years; for repair and/or replacement of facilities affected by natural and man-made emergencies, including the resulting additional costs for contracting, construction, and operation and maintenance work; for unavoidable increased costs for the planned program due to necessary but unforeseen adjustments, including engineering and design changes, contractor and other claims and relocations; or for payment of a retrospective premium adjustment in excess nuclear property insurance.

Financing.—The Transmission Act provides for the use by BPA of all receipts, collections, and recoveries in cash from all sources, including the sale of bonds, to finance the annual budget programs of BPA. These receipts result primarily from the sale of power and transmission services. The Transmission Act also provides for authority to borrow from the U.S. Treasury at rates comparable to borrowings at open market rates for similar issues. BPA has \$7.70 billion of U.S. Treasury borrowing authority provided by the Transmission Act, the Pacific Northwest Power Act for energy conservation, renewable energy resources, capital fish facilities, and other purposes, the American Recovery and Reinvestment Act of 2009, and other legislation. At the end of 2016, BPA had outstanding bonds with the U.S. Treasury of \$4,758.7 million. At the end of 2016, BPA also had \$8,015.8 million of non-Federal debt outstanding, including Energy Northwest bonds. BPA will rely primarily on its U.S. Treasury borrowing authority to finance capital projects, but may also elect to use cash reserves generated by revenues from customers or seek third party financing sources when feasible to finance some of these investments.

In 2016, BPA made payments to the Treasury of \$1,875 million and also expects to make payments of \$668 million in 2017 and \$701 million in 2018. The 2018 payment is expected to be distributed as follows: interest on bonds and appropriations (\$303 million), amortization (\$333 million), and other (\$65 million). BPA also received credits totaling approximately \$70 million applied against its Treasury payments in 2016 to reflect amounts diverted to fish mitigation efforts, but not allocable to power, in the Columbia and Snake River systems.

BPA, with input from its stakeholders, considers other strategies to sustain funding for its infrastructure investment requirements as well. BPA's Financial Plan defines strategies and policies for guiding how BPA will manage risk and variability of electricity markets and water years. It also describes how BPA will continue to manage to ensure it meets its Treasury repayment responsibilities.

Direct Loans.—During 2018, no new direct loan obligations may be made.

Operating Results.—Total revenues are forecast at approximately \$4.1 billion in 2018.

It should be noted that BPA's revenue forecasts are based on several critical assumptions about both the supply of and demand for Federal energy. During the operating year, deviation from the conditions assumed in

a rate case may result in a variation in actual revenues of several hundred million dollars from the forecast.

Consistent with Administration policy, BPA will continue to fully recover, from the sale of electric power and transmission, funds sufficient to cover the full cost of Civil Service Retirement System and Post-Retirement Health Benefits for its employees. The entire cost of BPA and the power share of FCRPS U.S. Army Corps of Engineers and U.S. Bureau of Reclamation employees working under the Federal Employees Retirement System is fully recovered in wholesale electric power and transmission rates.

Balance Sheet (in millions of dollars)

Identification code 089-4045-0-3-271	2015 actual	2016 actual
ASSETS:		
Federal assets:		
1101 Fund balances with Treasury	350	55
Investments in US securities:		
1106 Receivables, net	1	1
1206 Non-Federal assets: Receivables, net	327	323
Other Federal assets:		
1802 Inventories and related properties	112	117
1803 Property, plant and equipment, net	6,782	7,109
1901 Other assets	16,336	15,455
1999 Total assets	23,908	23,060
LIABILITIES:		
Federal liabilities:		
2102 Interest payable	75	77
2103 Debt	9,512	8,473
Non-Federal liabilities:		
2201 Accounts payable	315	393
2203 Debt	5,890	5,949
2207 Other	8,116	8,168
2999 Total liabilities	23,908	23,060
4999 Total liabilities and net position	23,908	23,060

Object Classification (in millions of dollars)

Identification code 089-4045-0-3-271	2016 actual	2017 est.	2018 est.
Reimbursable obligations:			
11.1 Personnel compensation: Full-time permanent	344	345	347
12.1 Civilian personnel benefits	157	157	158
21.0 Travel and transportation of persons	22	15	15
22.0 Transportation of things	2	2	2
23.1 Rental payments to GSA	1	1	1
23.3 Communications, utilities, and miscellaneous charges	18	18	18
25.1 Advisory and assistance services	126	126	127
25.2 Other services from non-Federal sources	2,320	2,291	2,308
25.5 Research and development contracts	11	12	12
26.0 Supplies and materials	29	29	29
31.0 Equipment	553	554	558
32.0 Land and structures	256	257	258
41.0 Grants, subsidies, and contributions		46	46
42.0 Insurance claims and indemnities		36	36
43.0 Interest and dividends	268	269	270
99.9 Total new obligations, unexpired accounts	4,107	4,158	4,185

Employment Summary

Identification code 089-4045-0-3-271	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	2,880	3,100	3,100

BONNEVILLE POWER ADMINISTRATION FUND

(Legislative proposal, subject to PAYGO)

This proposal would authorize the Federal government to sell the transmission assets of the Bonneville Power Administration, which operates and maintains over 15,000 circuit-miles of high voltage transmission lines and 261 substations.

DEPARTMENTAL ADMINISTRATION

Federal Funds

DEPARTMENTAL ADMINISTRATION

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.

Program and Financing (in millions of dollars)

Identification code 089-0228-0-1-276	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0003 Office of the Secretary	6	5	5
0004 Office of Congressional and Intergovernmental Affairs	6	6	6
0005 Office of Public Affairs	4	3	3
0006 General Counsel	33	31	33
0008 Economic Impact and Diversity	9	11	10
0009 Chief Financial Officer	2	.....	.....
0011 Human Capital Management	25	25	26
0012 Indian Energy Policy	20	20	10
0013 Energy Policy and Systems Analysis	32	32	10
0014 International Affairs	32	19	19
0015 Office of Small and Disadvantaged Business Utilization	3	3	3
0018 Management	63	63	53
0020 Project Management Oversight and Assessment .....	.....	.....	15
0025 Office of Technology Transitions .....	.....	.....	6
0045 Strategic partnership projects	11	40	40
0799 Total direct obligations	246	258	239
0801 Departmental Administration (Reimbursable)	25	25	25
0900 Total new obligations, unexpired accounts	271	283	264
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	86	68	33
1011 Unobligated balance transfer from other acct [072-1037]	14	.....	.....
1021 Recoveries of prior year unpaid obligations	5	.....	.....
1050 Unobligated balance (total)	105	68	33
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	163	163	146
Spending authority from offsetting collections, discretionary:			
1700 Collected	85	85	96
1900 Budget authority (total)	248	248	242
1930 Total budgetary resources available	353	316	275
Memorandum (non-add) entries:			
1940 Unobligated balance expiring	-14	.....	.....
1941 Unexpired unobligated balance, end of year	68	33	11
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	98	118	54
3010 New obligations, unexpired accounts	271	283	264
3020 Outlays (gross)	-242	-347	-286
3040 Recoveries of prior year unpaid obligations, unexpired	-5	.....	.....
3041 Recoveries of prior year unpaid obligations, expired	-4	.....	.....
3050 Unpaid obligations, end of year	118	54	32
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	98	118	54
3200 Obligated balance, end of year	118	54	32

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	248	248	242
Outlays, gross:			
4010 Outlays from new discretionary authority	143	204	199
4011 Outlays from discretionary balances	99	143	87
4020 Outlays, gross (total)	242	347	286
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-25	-25	-36
4033 Non-Federal sources	-60	-60	-60
4040 Offsets against gross budget authority and outlays (total)	-85	-85	-96
4070 Budget authority, net (discretionary)	163	163	146
4080 Outlays, net (discretionary)	157	262	190
4180 Budget authority, net (total)	163	163	146
4190 Outlays, net (total)	157	262	190

Office of the Secretary (OSE).—Directs and leads the management of the Department and provides policy guidance to line and staff organizations in the accomplishment of DOE's mission.

Congressional and Intergovernmental Affairs (CI).—Responsible for DOE's liaison, communication, coordinating, directing, and promoting the Department's policies and legislative initiatives with Congress, State, territorial, Tribal and local government officials, and other Federal agencies.

Public Affairs (PA).—Responsible for directing and managing the Department's policies and initiatives with the public, news media, and other stakeholders. PA serves as the Department's chief spokesperson with the news media, shapes initiatives aimed at educating the press and public about energy issues, builds and maintains the Energy.gov internet platform.

General Counsel (GC).—Responsible for providing legal services to all Department 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 is responsible for the coordination and clearance of proposed legislation affecting energy policy and Department activities. 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.

Economic Impact and Diversity (ED).—Develops and executes DOE policies to implement applicable statutes and Executive Orders that impact diversity goals affecting equal employment opportunities, minority businesses, minority educational institutions, and historically underrepresented communities. ED identifies ways of ensuring that underrepresented populations are afforded an opportunity to participate fully in DOE programs and the rapidly expanding energy marketplace.

Chief Financial Officer (CFO).—Assures the effective management and financial integrity of DOE programs, activities, and resources by developing, implementing, and monitoring DOE-wide policies and systems in the areas of budget administration, finance and accounting, internal controls and financial policy, corporate financial systems, and strategic planning.

Chief Information Officer (CIO).—Provides advice and assistance to the Secretary and other senior managers to ensure that information technology is acquired and information resources are managed in a manner that complies with policies and procedures of statutory and Administration requirements.

Chief Human Capital Officer (HC).—Provides DOE leadership on the impact and use of policies, proposals, programs, partnership agreements and relationships related to all aspects of human capital management. HC seeks solutions that address workforce issues in the areas of recruiting, hiring, motivating, succession planning, competency development, training and learning, retention, and diversity.

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. The program is being phased out and will be closed in FY 2018 to eliminate duplication of effort and thereby increase DOE efficiency.

DEPARTMENTAL ADMINISTRATION—Continued

International Affairs (IA).—Advises Departmental leadership on strategic implementation of the United States' international energy policy, in line with energy security and energy market objectives. IA develops and leads the Department's bilateral and multilateral R&D cooperation, including investment and trade activities with other nations and international agencies, and represents the Department and the United States Government in inter-agency processes, intergovernmental forums, and bilateral and multilateral proceedings that address energy policies, strategies and objectives.

Office of Small and Disadvantaged Business Utilization (OSDBU).—Responsible for maximizing contracting and subcontracting opportunities for small businesses interested in doing business with the Department. A primary responsibility of OSDBU is to work in partnership with Departmental program elements to achieve prime and subcontracting small business goals set forth by statute and the U.S. Small Business Administration.

Office of Management (MA).—Provides DOE with centralized direction and oversight for the full range of management, procurement and administrative services. MA is responsible for project and contract management policy development and oversight, acquisition and contract administration, and delivery of procurement services to DOE headquarters organizations. MA activities include the management of headquarters facilities, Department-wide implementation of Federal sustainability goals, and other related functions of the Department.

Project Management Oversight and Assessment (PM).—Provides 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 project management career development program for DOE's Federal Project Directors. PM also provides independent oversight of Environmental Management's portfolio of capital asset projects that are \$100 million or greater, including all activities involved with on-site cost, schedule, technical and management status reviews, as well as analyzing and reporting performance progress of the projects. PM will also provide cost estimating and program evaluation.

Strategic Partnership Programs (SPP).—(formerly, Cost of Work for Others) Covers the cost of work performed under orders placed with the Department by non-DOE entities that are precluded by law from making advance payments and certain revenue programs. Reimbursement of these costs is made through deposits of offsetting collections to this account.

Office of Indian Energy Policy and Programs (IE).—Directs, fosters, coordinates, and implements energy planning, education, management, and competitive grant programs that assist Tribes with clean energy development and infrastructure, capacity building, energy costs, and electrification of Indian lands and homes. IE coordinates programmatic activity across the Department related to development of clean energy resources on Indian lands, and works with other federal government agencies, Indian Tribes, and Tribal organizations to promote Indian energy policies and initiatives.

Office of Technology Transitions (OTT).—Facilitates wide-reaching availability of DOE's capabilities and technologies for private sector commercialization. OTT serves a multi-disciplinary role, providing strategic management of DOE's tech-to-market activities, including the statutory Technology Commercialization Fund. OTT coordinates technology transition activities, data and analyses within the DOE—across Programs, field offices and the National Labs—as well as with other federal agencies to reduce redundancies and improve the likelihood and speed of outcomes toward technology transfer and development of DOE research outputs.

Object Classification (in millions of dollars)

Identification code 089-0228-0-1-276	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	78	78	73
11.3 Other than full-time permanent	11	11	11
11.5 Other personnel compensation	1	1	1
11.9 Total personnel compensation	90	90	85

12.1 Civilian personnel benefits	27	27	27
21.0 Travel and transportation of persons	4	4	4
23.3 Communications, utilities, and miscellaneous charges	1	1	1
24.0 Pamphlets, Documents, Subscriptions and Publications	1	1	1
25.1 Advisory and assistance services	19	19	19
25.2 Other services from non-Federal sources	15	15	15
25.3 Other goods and services from Federal sources	36	36	36
25.4 Operation and maintenance of facilities	26	55	48
26.0 Other Services	2	10	3
41.0 Grants, subsidies, and contributions	16		
44.0 Non-Capitalized Personal Property	2		
44.0 Refunds	7		
99.0 Direct obligations	246	258	239
99.0 Reimbursable obligations	25	25	25
99.9 Total new obligations, unexpired accounts	271	283	264

Employment Summary

Identification code 089-0228-0-1-276	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	728	836	864

OFFICE OF THE INSPECTOR GENERAL

For expenses necessary for the Office of the Inspector General in carrying out the provisions of the Inspector General Act of 1978, \$49,000,000, to remain available until September 30, 2019.

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.

Program and Financing (in millions of dollars)

Identification code 089-0236-0-1-276	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0001 Office of the Inspector General (Direct)	49	48	49
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	8	5	3
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	46	46	49
1930 Total budgetary resources available	54	51	52
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	5	3	3
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	5	4	4
3010 New obligations, unexpired accounts	49	48	49
3020 Outlays (gross)	-50	-48	-49
3050 Unpaid obligations, end of year	4	4	4
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	5	4	4
3200 Obligated balance, end of year	4	4	4
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	46	46	49
Outlays, gross:			
4010 Outlays from new discretionary authority	38	39	42
4011 Outlays from discretionary balances	12	9	7
4020 Outlays, gross (total)	50	48	49
4180 Budget authority, net (total)	46	46	49
4190 Outlays, net (total)	50	48	49

The Office of Inspector General (OIG) provides Department-wide (including the National Nuclear Security Administration and the Federal Energy Regulatory Commission) audit, inspection, and investigative functions to identify and recommend corrections for management and administrative deficiencies, which create conditions for existing or potential instances of fraud, waste, abuse or violations of law. The audit function provides financial and performance audits of programs and operations. The inspection

function provides independent inspection and analysis of the performance of programs and operations. The investigative function provides for the detection and investigation of improper and illegal activities involving programs, personnel, and operations. Through these efforts, the OIG identifies opportunities for cost savings and operational efficiency; identifies programs that are not meeting performance expectations; recovers monies to the Department and the Treasury as a result of civil and criminal prosecutions; and identifies ways to make Departmental programs safer and more secure.

Object Classification (in millions of dollars)

Identification code 089-0236-0-1-276	2016 actual	2017 est.	2018 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	29	29	30
11.5 Other personnel compensation	2	2	2
11.9 Total personnel compensation	31	31	32
12.1 Civilian personnel benefits	12	12	12
21.0 Travel and transportation of persons	1	1	1
25.1 Advisory and assistance services	1	1	1
25.3 Other goods and services from Federal sources	3	2	2
31.0 Equipment	1	1	1
99.9 Total new obligations, unexpired accounts	49	48	49

Employment Summary

Identification code 089-0236-0-1-276	2016 actual	2017 est.	2018 est.
1001 Direct civilian full-time equivalent employment	281	279	279

WORKING CAPITAL FUND

Program and Financing (in millions of dollars)

Identification code 089-4563-0-4-276	2016 actual	2017 est.	2018 est.
Obligations by program activity:			
0801 Payroll and other personnel (Merged into Corporate Business Systems)	14		
0802 Project management and career development program	2	2	2
0810 Supplies	2	3	2
0812 Copying Services	3	4	4
0813 Printing and graphics	5	4	5
0814 Building Occupancy (Rent, Operations & Maintenance)	132	107	112
0815 Corporate Business Systems	35	48	47
0816 Mail and Transportation Services	4	4	4
0817 Financial Statement Audits	10	12	12
0818 Procurement Management	3	16	16
0820 Telecommunication	31	32	37
0821 Overseas Presence	14	16	16
0822 Interagency Transfers	7	11	9
0823 Health Services	2	2	2
0824 CyberOne	31	33	35
0825 Corporate Training Services	2	3	3
0826 A-123 / Internal Controls	2	2	3
0827 Pension Studies		1	1
0900 Total new obligations, unexpired accounts	299	300	310

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	30	18	
1021 Recoveries of prior year unpaid obligations	1		
1050 Unobligated balance (total)	31	18	
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected	286	282	310
1930 Total budgetary resources available	317	300	310
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	18		

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	131	167	92
3010 New obligations, unexpired accounts	299	300	310
3020 Outlays (gross)	-262	-375	-364

3040 Recoveries of prior year unpaid obligations, unexpired	-1		
3050 Unpaid obligations, end of year	167	92	38
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	131	167	92
3200 Obligated balance, end of year	167	92	38

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	286	282	310
Outlays, gross:			
4010 Outlays from new discretionary authority	130	271	298
4011 Outlays from discretionary balances	132	104	66
4020 Outlays, gross (total)	262	375	364
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-286	-282	-310
4180 Budget authority, net (total)			
4190 Outlays, net (total)	-24	93	54

The Department's Working Capital Fund (WCF) provides the following shared services: rent and building operations, telecommunications, cybersecurity, automated office systems including the Standard Accounting and Reporting System, Strategic Integrated Procurement Enterprise System, payment processing, payroll and personnel processing, administrative services, training and health services, overseas representation, interagency transfers, procurement management, audits, and controls for financial reporting. The WCF helps the Department reduce waste and improve efficiency.

Object Classification (in millions of dollars)

Identification code 089-4563-0-4-276	2016 actual	2017 est.	2018 est.
Reimbursable obligations:			
Personnel compensation:			
11.1 Full-time permanent	11	11	11
11.8 Special personal services payments	2	1	1
11.9 Total personnel compensation	13	12	12
12.1 Civilian personnel benefits	4	5	5
21.0 Travel and transportation of persons	1	1	1
22.0 Transportation of things		2	2
23.1 Rental payments to GSA	72	64	66
23.2 Rental payments to others	2	1	1
23.3 Communications, utilities, and miscellaneous charges	15	14	15
24.0 Printing and reproduction	3	3	3
25.1 Advisory and assistance services	45	51	53
25.2 Other services from non-Federal sources	18	16	17
25.3 Other goods and services from Federal sources	75	83	86
25.4 Operation and maintenance of facilities	25	35	35
26.0 Supplies and materials		1	1
31.0 Equipment	15	5	5
32.0 Land and structures	11	7	8
99.9 Total new obligations, unexpired accounts	299	300	310

Employment Summary

Identification code 089-4563-0-4-276	2016 actual	2017 est.	2018 est.
2001 Reimbursable civilian full-time equivalent employment	74	94	94

GENERAL FUND RECEIPT ACCOUNTS

(in millions of dollars)

	2016 actual	2017 est.	2018 est.
Offsetting receipts from the public:			
089-089400 Fees and Recoveries, Federal Energy Regulatory Commission	16	9	9
089-223400 Sale of Strategic Petroleum Reserve Oil		525	840
089-223400 Legislative proposal, subject to PAYGO			500
089-224500 Sale and Transmission of Electric Energy, Falcon Dam	1		
089-224700 Sale and Transmission of Electric Energy, Southwestern Power Administration	105	72	68
089-224800 Sale and Transmission of Electric Energy, Southeastern Power Administration	163	189	175

General Fund Receipt Accounts—Continued

	2016 actual	2017 est.	2018 est.
089-224900 Sale of Power and Other Utilities, not Otherwise Classified	80	30	30
089-267910 Title 17 Innovative Technology Loan Guarantees, Negative Subsidies	48	43	35
089-279530 DOE ATVM Direct Loans Downward Reestimate Account	12	15	.....
089-279730 DOE Loan Guarantees Downward Reestimate Account	112	110	.....
089-288900 Repayments on Miscellaneous Recoverable Costs, not Otherwise Classified	34	36	37
089-322000 All Other General Fund Proprietary Receipts Including Budget Clearing Accounts	42	14	14
General Fund Offsetting receipts from the public	613	1,043	1,708
Intragovernmental payments:			
089-388500 Undistributed Intragovernmental Payments and Receivables from Cancelled Accounts .....	.....	7	7
General Fund Intragovernmental payments .....	.....	7	7

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

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).

