

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, **[\$410,000,000]** \$434,699,000, to remain available until September 30, **[2020]** 2021, including official reception and representation expenses not to exceed **[\$12,000]** \$17,000. (Energy and Water Development and Related Agencies Appropriations Act, 2019.)

Program and Financing (in millions of dollars)

Identification code 089-0313-0-1-053	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0010 Federal Salaries and Expenses	422	423	435
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	24	13	.....
1021 Recoveries of prior year unpaid obligations	3	.....	.....
1050 Unobligated balance (total)	27	13	.....
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	408	410	435
1900 Budget authority (total)	408	410	435
1930 Total budgetary resources available	435	423	435
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	65	70	80
3010 New obligations, unexpired accounts	422	423	435
3020 Outlays (gross)	-413	-413	-431
3040 Recoveries of prior year unpaid obligations, unexpired	-3	.....	.....
3041 Recoveries of prior year unpaid obligations, expired	-1	.....	.....
3050 Unpaid obligations, end of year	70	80	84
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	65	70	80
3200 Obligated balance, end of year	70	80	84
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	408	410	435
Outlays, gross:			
4010 Outlays from new discretionary authority	337	338	359
4011 Outlays from discretionary balances	76	75	72
4020 Outlays, gross (total)	413	413	431
4180 Budget authority, net (total)	408	410	435
4190 Outlays, net (total)	413	413	431

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	2018 actual	2019 est.	2020 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	228	228	236
11.3 Other than full-time permanent	3	3	3
11.5 Other personnel compensation	8	8	8
11.9 Total personnel compensation	239	239	247
12.1 Civilian personnel benefits	72	72	73
21.0 Travel and transportation of persons	15	15	15

23.3	Communications, utilities, and miscellaneous charges	3	3	3
25.1	Advisory and assistance services	30	30	31
25.2	Other services from non-Federal sources	6	6	6
25.3	Other goods and services from Federal sources	34	35	36
25.4	Operation and maintenance of facilities	18	18	19
25.6	Medical care	2	2	2
26.0	Supplies and materials	3	3	3
99.9	Total new obligations, unexpired accounts	422	423	435

Employment Summary

Identification code 089-0313-0-1-053	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	1,608	1,690	1,753

NAVAL REACTORS

[(INCLUDING TRANSFER OF FUNDS)]

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, **[\$1,788,618,000]** \$1,648,396,000, to remain available until expended **[**, of which, \$85,500,000 shall be transferred to "Department of Energy—Energy Programs—Nuclear Energy", for the Advanced Test Reactor¹]; *Provided*, That of such amount, **[\$48,709,000]** \$50,500,000 shall be available until September 30, **[2020]** 2021, for program direction. (Energy and Water Development and Related Agencies Appropriations Act, 2019.)

Program and Financing (in millions of dollars)

Identification code 089-0314-0-1-053	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0010 Naval reactors development	388	429	531
0020 Program direction	48	51	50
0030 S8G prototype refueling	250	250	155
0040 Naval reactors operations and infrastructure	466	528	554
0050 Construction	225	324	283
0060 COLUMBIA-class reactor systems development	157	138	75
0900 Total new obligations, unexpired accounts	1,534	1,720	1,648
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	4	17	.....
1021 Recoveries of prior year unpaid obligations	13	.....	.....
1050 Unobligated balance (total)	17	17	.....
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	1,620	1,789	1,648
1120 Appropriations transferred to other acct [089-0319]	-86	-86	.....
1160 Appropriation, discretionary (total)	1,534	1,703	1,648
1930 Total budgetary resources available	1,551	1,720	1,648
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	17	.....	.....
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	628	784	934
3010 New obligations, unexpired accounts	1,534	1,720	1,648
3020 Outlays (gross)	-1,365	-1,570	-1,597
3040 Recoveries of prior year unpaid obligations, unexpired	-13	.....	.....
3050 Unpaid obligations, end of year	784	934	985
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	628	784	934
3200 Obligated balance, end of year	784	934	985
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	1,534	1,703	1,648
Outlays, gross:			
4010 Outlays from new discretionary authority	823	1,448	1,065
4011 Outlays from discretionary balances	542	122	532

NAVAL REACTORS—Continued
Program and Financing—Continued

Identification code 089-0314-0-1-053	2018 actual	2019 est.	2020 est.
4020 Outlays, gross (total)	1,365	1,570	1,597
4180 Budget authority, net (total)	1,534	1,703	1,648
4190 Outlays, net (total)	1,365	1,570	1,597

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 about 45 percent of the Navy's major 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	2018 actual	2019 est.	2020 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	31	34	34
11.3 Other than full-time permanent	1	1	1
11.5 Other personnel compensation	1	1	1
11.9 Total personnel compensation	33	36	36
12.1 Civilian personnel benefits	10	12	12
21.0 Travel and transportation of persons	1	2	2
25.1 Advisory and assistance services	1	1	1
25.2 Other services from non-Federal sources	7	7	6
25.3 Other goods and services from Federal sources	4	5	5
25.4 Operation and maintenance of facilities	1,219	1,352	1,287
31.0 Equipment	11	14	13
32.0 Land and structures	247	290	285
41.0 Grants, subsidies, and contributions	1	1	1
99.9 Total new obligations, unexpired accounts	1,534	1,720	1,648

Employment Summary

Identification code 089-0314-0-1-053	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	231	246	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, and the purchase of not to exceed one ambulance for replacement only, **[\$11,100,000,000]** \$12,408,603,000, to remain available until expended: *Provided*, That of such amount, **[\$102,022,000]** \$107,660,000 shall be available until September 30, **[2020]** 2021, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Program and Financing (in millions of dollars)

Identification code 089-0240-0-1-053	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0020 Directed stockpile work	4,063	4,681	5,426
0021 Science	476	484	587
0022 Engineering	183	190	234
0023 Inertial confinement fusion ignition and high yield	545	547	481
0024 Advanced simulation and computing	752	719	840
0027 Secure transportation asset	294	293	317
0028 Advanced manufacturing development	86	82	137

0030 Infrastructure and Operations	3,335	3,125	3,208
0031 Information technology and cybersecurity	186	237	309
0032 Defense nuclear security	750	715	778
0033 Legacy contractor pensions	232	162	91
0034 Site stewardship	1		
0300 Subtotal, Weapons Activities	10,903	11,235	12,408
0799 Total direct obligations	10,903	11,235	12,408
0810 Weapons Activities (Reimbursable)	1,766	1,781	1,797
0900 Total new obligations, unexpired accounts	12,669	13,016	14,205

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	119	157	
1021 Recoveries of prior year unpaid obligations	336		
1050 Unobligated balance (total)	455	157	
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	10,642	11,100	12,409
Spending authority from offsetting collections, discretionary:			
1700 Collected	1,629	1,759	1,796
1701 Change in uncollected payments, Federal sources	100		
1750 Spending auth from offsetting collections, disc (total)	1,729	1,759	1,796
1900 Budget authority (total)	12,371	12,859	14,205
1930 Total budgetary resources available	12,826	13,016	14,205
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	157		

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	7,711	9,016	9,307
3010 New obligations, unexpired accounts	12,669	13,016	14,205
3020 Outlays (gross)	-11,028	-12,725	-13,876
3040 Recoveries of prior year unpaid obligations, unexpired	-336		
3050 Unpaid obligations, end of year	9,016	9,307	9,636
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-2,235	-2,335	-2,335
3070 Change in uncollected pymts, Fed sources, unexpired	-100		
3090 Uncollected pymts, Fed sources, end of year	-2,335	-2,335	-2,335
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	5,476	6,681	6,972
3200 Obligated balance, end of year	6,681	6,972	7,301

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	12,371	12,859	14,205
Outlays, gross:			
4010 Outlays from new discretionary authority	5,342	6,354	7,053
4011 Outlays from discretionary balances	5,686	6,371	6,823
4020 Outlays, gross (total)	11,028	12,725	13,876
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-1,533	-1,659	-1,694
4033 Non-Federal sources	-96	-100	-102
4040 Offsets against gross budget authority and outlays (total)	-1,629	-1,759	-1,796
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	-100		
4060 Additional offsets against budget authority only (total)	-100		
4070 Budget authority, net (discretionary)	10,642	11,100	12,409
4080 Outlays, net (discretionary)	9,399	10,966	12,080
4180 Budget authority, net (total)	10,642	11,100	12,409
4190 Outlays, net (total)	9,399	10,966	12,080

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 ensures sustainment of nuclear material processing capabilities and funds the stabilization, consolidation, disposition, tracking, and accounting of nuclear materials.

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

Infrastructure and Operations.—Provides the 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, nuclear weapons, and materials from a full spectrum of threats, ranging from minor security incidents to acts of terrorism. Provides funding for key security program areas at all NNSA facilities.

Secure Transportation Asset.—Provides for the safe, secure transport of nuclear weapons, weapon components, and special nuclear materials to meet mission requirements. The Program Direction subprogram provides for the secure transportation workforce, including the Federal agents.

Information Technology and Cybersecurity.—The program is responsible for information sharing and information safeguarding to support the mission of NNSA. The program provides information technology (IT) and cybersecurity solutions, including continuous monitoring, cloud-based technologies, and enterprise security technologies (i.e., identity, credential, and access management) to help meet security challenges.

Object Classification (in millions of dollars)

Identification code 089-0240-0-1-053	2018 actual	2019 est.	2020 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	44	46	48
11.5 Other personnel compensation	11	11	11
11.9 Total personnel compensation	55	57	59
12.1 Civilian personnel benefits	24	24	25
21.0 Travel and transportation of persons	5	5	5
23.1 Rental payments to GSA	35	35	35
23.3 Communications, utilities, and miscellaneous charges	32	32	32
25.1 Advisory and assistance services	392	392	392
25.2 Other services from non-Federal sources	438	438	611
25.3 Other goods and services from Federal sources	19	19	19
25.4 Operation and maintenance of facilities	8,489	8,819	9,816
25.5 Research and development contracts	125	125	125
25.6 Medical care	3	3	3
26.0 Supplies and materials	5	5	5
31.0 Equipment	275	275	275
32.0 Land and structures	950	950	950
41.0 Grants, subsidies, and contributions	56	56	56
99.0 Direct obligations	10,903	11,235	12,408
99.0 Reimbursable obligations	1,766	1,781	1,797
99.9 Total new obligations, unexpired accounts	12,669	13,016	14,205

Employment Summary

Identification code 089-0240-0-1-053	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	491	564	590

DEFENSE NUCLEAR NONPROLIFERATION

[(INCLUDING RESCISSION 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, and the purchase of not to exceed three aircraft, **[\$1,949,000,000] \$1,993,302,000**, to remain available until expended **]: Provided**, That of such amount, \$25,000,000 shall be made available for design activities supporting the dilute and dispose strategy for plutonium disposition: **Provided further**, That none of the funds made available under this heading shall be made available for the construction activities or acquisition of equipment for the Surplus Plutonium Disposition Project: **Provided further**, That of the unobligated balances from prior year appropriations available under this heading, \$19,000,000 is hereby rescinded: **Provided further**, That no amounts may be rescinded from amounts that were designated by the Congress as an emergency requirement pursuant to the Concurrent Resolution on the Budget or the Balanced Budget and Emergency Deficit Control Act of 1985 **]. (Energy and Water Development and Related Agencies Appropriations Act, 2019.)**

Program and Financing (in millions of dollars)

Identification code 089-0309-0-1-053	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0010 Defense nuclear nonproliferation research and development	555	579	495
0040 International materials protection and cooperation	6	40	.....
0050 Fissile materials disposition	1	.....	.....
0071 Global material security	433	407	342
0072 Material management and minimization	256	369	334
0073 Nonproliferation and arms control	136	130	137
0074 Nonproliferation construction	290	226	299
0075 Nuclear counterterrorism and incident response	291	319	372
0080 Global threat reduction initiative	4	.....	.....
0085 Legacy contractor pensions	41	29	14
0100 Subtotal, obligations by program activity	2,013	2,099	1,993
0799 Total direct obligations	2,013	2,099	1,993
0801 Global material security	12	.....	.....
0899 Total reimbursable obligations	12	.....	.....
0900 Total new obligations, unexpired accounts	2,025	2,099	1,993
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	65	169	.....
1021 Recoveries of prior year unpaid obligations	128	.....	.....
1050 Unobligated balance (total)	193	169	.....
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	2,048	1,949	1,993
1120 Appropriations transferred to other accts [089-0222]	-10	.....	.....
1131 Unobligated balance of appropriations permanently reduced	-49	-19	.....
1160 Appropriation, discretionary (total)	1,989	1,930	1,993
Spending authority from offsetting collections, discretionary:			
1700 Collected	12	.....	.....
1900 Budget authority (total)	2,001	1,930	1,993
1930 Total budgetary resources available	2,194	2,099	1,993
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	169	.....	.....
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	1,527	1,524	1,691
3010 New obligations, unexpired accounts	2,025	2,099	1,993
3020 Outlays (gross)	-1,900	-1,932	-1,946
3040 Recoveries of prior year unpaid obligations, unexpired	-128	.....	.....

DEFENSE NUCLEAR NONPROLIFERATION—Continued
Program and Financing—Continued

Identification code 089-0309-0-1-053	2018 actual	2019 est.	2020 est.
3050 Unpaid obligations, end of year	1,524	1,691	1,738
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	1,527	1,524	1,691
3200 Obligated balance, end of year	1,524	1,691	1,738
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	2,001	1,930	1,993
Outlays, gross:			
4010 Outlays from new discretionary authority	868	965	996
4011 Outlays from discretionary balances	1,032	967	950
4020 Outlays, gross (total)	1,900	1,932	1,946
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4034 Offsetting governmental collections	-12		
4180 Budget authority, net (total)	1,989	1,930	1,993
4190 Outlays, net (total)	1,888	1,932	1,946

Programs funded within the Defense Nuclear Nonproliferation (DNN) appropriation help keep America safe by preventing adversaries from acquiring nuclear weapons or weapons-usable materials, technology, and expertise; countering efforts to acquire such weapons or materials; and responding to nuclear or radiological accidents and incidents domestically and abroad.

The Defense Nuclear Nonproliferation (DNN) and the Nuclear Counterterrorism and Incident Response (NCTIR) programs have a primary role in the U.S. approach to reducing nuclear security risks. 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; and ensure a technically trained response both domestically and worldwide to nuclear and radiological incidents.

The major elements of the appropriation account include the following:

Material Management and Minimization (M³).—M³ programs minimize and, when possible, eliminate weapons-usable nuclear material around the world to achieve permanent threat reduction.

Global Material Security (GMS).—GMS programs prevent terrorists and other actors from obtaining nuclear and radiological material to use in an improvised nuclear device or a radiological dispersal device by working with partner countries to improve the security of vulnerable materials and facilities and to improve partners' capacities to deter, detect, and investigate illicit trafficking of these materials. GMS works extensively with and through multilateral partners such as the International Atomic Energy Agency and Interpol.

Nonproliferation and Arms Control (NPAC).—NPAC supports activities to prevent the proliferation 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, conduct technology demonstrations, develop prototypes, and produce and deliver sensors for integration into operational systems.

Nonproliferation Construction.—Nonproliferation Construction consolidates construction costs for DNN projects. The budget supports the continuation of termination activities for the Mixed Oxide Fuel Fabrication project and transition to the dilute and dispose strategy to fulfill the United States' commitment to dispose of 34 metric tons of surplus U.S. weapon-grade plutonium. The request supports the continuation of preliminary design for the Surplus Plutonium Disposition (SPD) project, as well as long-lead procurements.

Nuclear Counterterrorism and Incident Response (NCTIR).—The NCTIR Program executes the DOE/NNSA's Comprehensive Emergency Management System program that administers implementation and support of emergency management for all DOE/NNSA offices and sites, and manages the DOE/NNSA Consolidated Emergency Operations Center, Emergency Communications Network, Emergency Management Policy, Training, National Exercises Program, and Continuity Program activities. NCTIR also applies the unique technical expertise from NNSA's nuclear security enterprise to prepare for, prevent, mitigate, and respond to a nuclear or radiological incident domestically or abroad, providing technical advice to interagency and international partners and state and local organizations in support of nuclear counterproliferation, nuclear counterterrorism, nuclear incident response, and nuclear forensics.

Object Classification (in millions of dollars)

Identification code 089-0309-0-1-053	2018 actual	2019 est.	2020 est.
Direct obligations:			
25.1 Advisory and assistance services	183	191	181
25.2 Other services from non-Federal sources	101	104	100
25.3 Other goods and services from Federal sources	5	5	5
25.4 Operation and maintenance of facilities	1,374	1,442	1,361
31.0 Equipment	41	42	41
32.0 Land and structures	291	298	288
41.0 Grants, subsidies, and contributions	17	17	17
99.0 Direct obligations	2,012	2,099	1,993
99.0 Reimbursable obligations	12		
99.5 Adjustment for rounding	1		
99.9 Total new obligations, unexpired accounts	2,025	2,099	1,993

ENVIRONMENTAL AND OTHER DEFENSE ACTIVITIES

Federal Funds

DEFENSE ENVIRONMENTAL CLEANUP

(INCLUDING [RESCISSION] CANCELLATION OF FUNDS)

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, [and the purchase of not to exceed one passenger minivan for replacement only, \$6,028,600,000] \$5,522,063,000, to remain available until expended: *Provided*, That of such amount, [\$298,500,000] \$278,908,000 shall be available until September 30, [2020] 2021, for program direction: *Provided further*, That of the unobligated balances from prior year appropriations available under this heading, [\$4,600,000] \$15,562,000 is hereby [rescinded] cancelled: *Provided further*, That no amounts may be [rescinded] cancelled from amounts that were designated by the Congress as an emergency requirement pursuant to the Concurrent Resolution on the Budget or the Balanced Budget and Emergency Deficit Control Act of 1985. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Program and Financing (in millions of dollars)

Identification code 089-0251-0-1-053	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 Closure Sites	7	5	5
0002 Hanford Site	867	865	629
0003 River Protection - Tank Farm	719	772	677
0004 River Protection - Waste Treatment Plant	748	745	715

0005	River Protection - LAWPS	56	56	.....
0006	Idaho	424	433	337
0007	NNSA Sites	298	309	388
0008	Oak Ridge	350	410	293
0009	Savannah River	1,299	1,381	1,462
0010	Waste Isolation Pilot Plant	377	397	391
0011	Program Support	30	13	13
0012	Safeguards & Security	300	304	318
0013	Technology Development & Demonstration	34	25	.....
0014	Program Direction	288	299	279
0020	SPRU	5	15	15
0900	Total new obligations, unexpired accounts	5,802	6,029	5,522
Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	36	269	276
1021	Recoveries of prior year unpaid obligations	42	12	12
1033	Recoveries of prior year paid obligations	6	.....	.....
1050	Unobligated balance (total)	84	281	288
Budget authority:				
Appropriations, discretionary:				
1100	Appropriation	5,988	6,029	5,522
1120	Appropriations transferred to other accts [089-0222]	-1	.....	.....
1131	Unobligated balance of appropriations permanently reduced .....	.....	-5	-15
1160	Appropriation, discretionary (total)	5,987	6,024	5,507
1930	Total budgetary resources available	6,071	6,305	5,795
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	269	276	273
Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	2,218	2,659	2,707
3010	New obligations, unexpired accounts	5,802	6,029	5,522
3020	Outlays (gross)	-5,318	-5,969	-6,108
3040	Recoveries of prior year unpaid obligations, unexpired	-42	-12	-12
3041	Recoveries of prior year unpaid obligations, expired	-1	.....	.....
3050	Unpaid obligations, end of year	2,659	2,707	2,109
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	2,218	2,659	2,707
3200	Obligated balance, end of year	2,659	2,707	2,109
Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	5,987	6,024	5,507
Outlays, gross:				
4010	Outlays from new discretionary authority	3,420	4,217	3,850
4011	Outlays from discretionary balances	1,898	1,752	2,258
4020	Outlays, gross (total)	5,318	5,969	6,108
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4033	Non-Federal sources	-6	.....	.....
4040	Offsets against gross budget authority and outlays (total)	-6	.....	.....
Additional offsets against gross budget authority only:				
4053	Recoveries of prior year paid obligations, unexpired accounts	6	.....	.....
4060	Additional offsets against budget authority only (total)	6	.....	.....
4070	Budget authority, net (discretionary)	5,987	6,024	5,507
4080	Outlays, net (discretionary)	5,312	5,969	6,108
4180	Budget authority, net (total)	5,987	6,024	5,507
4190	Outlays, net (total)	5,312	5,969	6,108

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.

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 approximately 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 of 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. Lawrence Livermore National Laboratory includes funds to support the deactivation and decommissioning (D&D) of specific high-risk excess facilities to be transferred to the Environmental Management program.

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 testing and cold commissioning 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.

DEFENSE ENVIRONMENTAL CLEANUP—Continued

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.

Object Classification (in millions of dollars)

Identification code 089-0251-0-1-053	2018 actual	2019 est.	2020 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	154	160	146
11.3 Other than full-time permanent	2	2	2
11.5 Other personnel compensation	3	3	3
11.9 Total personnel compensation	159	165	151
12.1 Civilian personnel benefits	52	54	49
21.0 Travel and transportation of persons	6	6	6
23.1 Rental payments to GSA	16	17	15
23.2 Rental payments to others	2	2	2
23.3 Communications, utilities, and miscellaneous charges	20	21	19
25.1 Advisory and assistance services	726	754	689
25.2 Other services from non-Federal sources	462	480	438
25.3 Other goods and services from Federal sources	56	58	53
25.4 Operation and maintenance of facilities	3,225	3,351	3,076
25.5 Research and development contracts	6	6	6
25.6 Medical care	18	19	17
26.0 Supplies and materials	1	1	1
31.0 Equipment	99	103	94
32.0 Land and structures	888	923	843
41.0 Grants, subsidies, and contributions	66	69	63
99.9 Total new obligations, unexpired accounts	5,802	6,029	5,522

Employment Summary

Identification code 089-0251-0-1-053	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	1,273	1,350	1,350

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, and purchase of not more than one passenger motor vehicle, [\$860,292,000] \$1,035,339,000, to remain available until expended: *Provided*, That of such amount, [\$295,432,000] \$333,298,000 shall be available until September 30, [2020] 2021, for program direction: *Provided further*, That the unexpended balances of prior appropriations provided for the Formerly Utilized Sites Remedial Action Program in this Act or any previous Energy and Water Development Appropriations Act may be transferred to and merged with this appropriation account, and thereafter may be accounted for as one fund for the same time period as originally enacted. (Energy and Water Development and Related Agencies Appropriations Act, 2019.)

Program and Financing (in millions of dollars)

Identification code 089-0243-0-1-999	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0008 Environment, Health, Safety, and Security Mission Support	192	203	212
0009 Independent Enterprise Assessments	76	77	81
0015 Specialized security activities	253	266	255
0020 Legacy management	153	159	303
0030 Defense related administrative support	146	152	179
0060 Hearings and Appeals	4	4	5
0100 Subtotal, Direct program activities	824	861	1,035
0799 Total direct obligations	824	861	1,035
0810 Other Defense Activities (Reimbursable)	1,826	1,826	1,826

0819 Reimbursable program activities, subtotal	1,826	1,826	1,826
0900 Total new obligations, unexpired accounts	2,650	2,687	2,861

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	34	50	2
1011 Unobligated balance transfer from other acct [047-0616]	6	6	7
1021 Recoveries of prior year unpaid obligations	45	44	.....
1050 Unobligated balance (total)	79	100	9
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	840	860	1,035
1121 Appropriations transferred from Technology Modernization Fund [047-0616]	2	.....	.....
1160 Appropriation, discretionary (total)	842	860	1,035
Spending authority from offsetting collections, discretionary:			
1700 Collected	1,580	1,729	1,817
1701 Change in uncollected payments, Federal sources	199	.....	.....
1750 Spending auth from offsetting collections, disc (total)	1,779	1,729	1,817
1900 Budget authority (total)	2,621	2,589	2,852
1930 Total budgetary resources available	2,700	2,689	2,861
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	50	2	.....

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	1,483	1,782	1,945
3010 New obligations, unexpired accounts	2,650	2,687	2,861
3020 Outlays (gross)	-2,306	-2,480	-2,633
3040 Recoveries of prior year unpaid obligations, unexpired	-45	-44	.....
3050 Unpaid obligations, end of year	1,782	1,945	2,173
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-1,167	-1,366	-1,366
3070 Change in uncollected pymts, Fed sources, unexpired	-199	.....	.....
3090 Uncollected pymts, Fed sources, end of year	-1,366	-1,366	-1,366
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	316	416	579
3200 Obligated balance, end of year	416	579	807

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	2,621	2,589	2,852
Outlays, gross:			
4010 Outlays from new discretionary authority	1,111	1,337	1,503
4011 Outlays from discretionary balances	1,195	1,143	1,130
4020 Outlays, gross (total)	2,306	2,480	2,633
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-1,510	-1,659	-1,747
4033 Non-Federal sources	-70	-70	-70
4040 Offsets against gross budget authority and outlays (total)	-1,580	-1,729	-1,817
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	-199	.....	.....
4070 Budget authority, net (discretionary)	842	860	1,035
4080 Outlays, net (discretionary)	726	751	816
4180 Budget authority, net (total)	842	860	1,035
4190 Outlays, net (total)	726	751	816

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 pro-

grams; 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, cybersecurity, 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. In 2020, the requested funding supports implementation of Program Management Improvement Accountability Act requirements within the Department.

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. In 2020, the requested funding supports the inclusion of the Formerly Utilized Sites Remedial Action Program, that had been funded by the U.S. Army Corps of Engineers in prior years.

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.

Defense-Related Administrative Support.—Obligations are included for defense-related administrative support that serves to offset costs that are attributable to the defense-related programs within the Department of Energy that utilize the department-wide services funded by the Departmental Administration account. These include accounting and information technology department-wide services.

Object Classification (in millions of dollars)

Identification code 089-0243-0-1-999	2018 actual	2019 est.	2020 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	98	111	113
11.3 Other than full-time permanent	2	2	2
11.5 Other personnel compensation	3	3	3
11.8 Special personal services payments	1	1	1
11.9 Total personnel compensation	104	117	119
12.1 Civilian personnel benefits	32	34	36
13.0 Benefits for former personnel	7	7	9
21.0 Travel and transportation of persons	6	6	8
23.1 Rental payments to GSA	4	4	4
23.2 Rental payments to others	4	4	4
23.3 Communications, utilities, and miscellaneous charges	14	14	14
25.1 Advisory and assistance services	281	290	329
25.2 Other services from non-Federal sources	69	73	176
25.3 Other goods and services from Federal sources	35	35	40
25.4 Operation and maintenance of facilities	192	201	215
25.7 Operation and maintenance of equipment	2	2	3
26.0 Supplies and materials	1	1	2
31.0 Equipment	12	12	15
32.0 Land and structures	5	5	5
41.0 Grants, subsidies, and contributions	56	56	56
99.0 Direct obligations	824	861	1,035
99.0 Reimbursable obligations	1,826	1,826	1,826
99.9 Total new obligations, unexpired accounts	2,650	2,687	2,861

Employment Summary

Identification code 089-0243-0-1-999	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	816	977	1,017

2001 Reimbursable civilian full-time equivalent employment	1	1	1
--	---	---	---

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, \$26,000,000, to remain available until expended.

Program and Financing (in millions of dollars)

Identification code 089-0244-0-1-053	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 Defense Nuclear Waste Disposal (Direct)	1	.....	26
0900 Total new obligations, unexpired accounts (object class 25.1)	1	.....	26
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	1	1	1
1021 Recoveries of prior year unpaid obligations	1	.....	.....
1050 Unobligated balance (total)	2	1	1
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....	.....	.....	26
1930 Total budgetary resources available	2	1	27
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	11	6	.....
3010 New obligations, unexpired accounts	1	.....	26
3020 Outlays (gross)	-5	-6	-10
3040 Recoveries of prior year unpaid obligations, unexpired	-1	.....	.....
3050 Unpaid obligations, end of year	6	.....	16
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	11	6	.....
3200 Obligated balance, end of year	6	.....	16
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross .....	.....	.....	26
Outlays, gross:			
4010 Outlays from new discretionary authority .....	.....	.....	10
4011 Outlays from discretionary balances	5	6	.....
4020 Outlays, gross (total)	5	6	10
4180 Budget authority, net (total) .....	.....	.....	26
4190 Outlays, net (total)	5	6	10

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.

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 any facility or for plant or facility acquisition, construction, or expansion, and purchase of not more than [16] 33 passenger motor vehicles including one bus, [and one airplane for replacement only, \$6,585,000,000] \$5,545,972,000, to remain available until expended: *Provided*, That of such amount, [\$183,000,000] \$183,000,000 shall be available until September 30, [2020] 2021, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

SCIENCE—Continued

Program and Financing (in millions of dollars)

Identification code 089-0222-0-1-251	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 Basic Energy Sciences	2,031	2,166	1,858
0002 Advanced Scientific Computing Research	795	936	921
0003 Biological and Environmental Research	654	705	494
0004 High Energy Physics	884	980	768
0005 Nuclear Physics	667	690	625
0006 Fusion Energy Sciences	522	564	403
0007 Science Laboratories Infrastructure	257	234	163
0008 Science Program Direction	180	183	183
0009 Workforce Development for Teachers and Scientists	20	23	20
0010 Safeguards and Security	105	106	111
0011 Small Business Innovation Research	238	11	.....
0012 Small Business Technology Transfer	32	6	.....
0799 Total direct obligations	6,385	6,604	5,546
0801 Science (Reimbursable)	586	541	520
0900 Total new obligations, unexpired accounts	6,971	7,145	6,066
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	19	40	21
1011 Unobligated balance transfer from other acct [089-0321]	1	.....	.....
1021 Recoveries of prior year unpaid obligations	57	.....	.....
1033 Recoveries of prior year paid obligations	2	.....	.....
1050 Unobligated balance (total)	79	40	21
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	6,260	6,585	5,546
1121 Appropriations transferred from other acct [089-0319]	23	.....	.....
1121 Appropriations transferred from other acct [089-0309]	10	.....	.....
1121 Appropriations transferred from other acct [089-0213]	17	.....	.....
1121 Appropriations transferred from other acct [089-0251]	1	.....	.....
1121 Appropriations transferred from other acct [089-0318]	6	.....	.....
1121 Appropriations transferred from other acct [089-0321]	58	.....	.....
1160 Appropriation, discretionary (total)	6,375	6,585	5,546
Spending authority from offsetting collections, discretionary:			
1700 Collected	540	541	520
1701 Change in uncollected payments, Federal sources	17	.....	.....
1750 Spending auth from offsetting collections, disc (total)	557	541	520
1900 Budget authority (total)	6,932	7,126	6,066
1930 Total budgetary resources available	7,011	7,166	6,087
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	40	21	21
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	5,080	6,140	6,410
3010 New obligations, unexpired accounts	6,971	7,145	6,066
3020 Outlays (gross)	-5,854	-6,875	-6,722
3040 Recoveries of prior year unpaid obligations, unexpired	-57	.....	.....
3050 Unpaid obligations, end of year	6,140	6,410	5,754
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-442	-459	-459
3070 Change in uncollected pymts, Fed sources, unexpired	-17	.....	.....
3090 Uncollected pymts, Fed sources, end of year	-459	-459	-459
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	4,638	5,681	5,951
3200 Obligated balance, end of year	5,681	5,951	5,295
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	6,932	7,126	6,066
Outlays, gross:			
4010 Outlays from new discretionary authority	1,922	2,872	2,483
4011 Outlays from discretionary balances	3,932	4,003	4,239
4020 Outlays, gross (total)	5,854	6,875	6,722
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-337	-320	-300
4033 Non-Federal sources	-205	-221	-220
4040 Offsets against gross budget authority and outlays (total)	-542	-541	-520
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	-17	.....	.....
4053 Recoveries of prior year paid obligations, unexpired accounts	2	.....	.....

4060 Additional offsets against budget authority only (total)	-15	.....	.....
4070 Budget authority, net (discretionary)	6,375	6,585	5,546
4080 Outlays, net (discretionary)	5,312	6,334	6,202
4180 Budget authority, net (total)	6,375	6,585	5,546
4190 Outlays, net (total)	5,312	6,334	6,202

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 has a long history of making fundamental contributions to applied mathematics and computer science associated with strategic computing and a similar set of contributions is foreseen for machine learning (ML) and artificial intelligence (AI) in the science domain and related investments in advanced architectures and hardware. ASCR's proposed activities are in line with the Nation's Research and Development (R&D) priority for American Leadership in AI, Quantum Information Sciences (QIS), and Strategic Computing. Within the context of this coordinated federal strategy, the DOE Office of Science (SC) and the DOE National Nuclear Security Administration (NNSA) continue to partner on the Department's Exascale Computing Initiative (ECI) to overcome key exascale challenges in parallelism, energy efficiency, and reliability, leading to deployment of a diverse set of exascale systems in the calendar year 2021–2022 timeframe. The ECI's goal for an exascale-capable system is a five-fold increase in sustained performance over the Summit HPC system at Oak Ridge National Laboratory, with applications that address next-generation science, engineering, and data problems. The ECI focuses on delivering advanced simulation through an exascale-capable computing program, emphasizing sustained performance in science and national security mission applications and increased convergence between exascale and large-data analytic computing.

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 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. DOE envisions a future in which the cross-cutting field of QIS increasingly drives these scientific frontiers and innovations toward realizing the full potential of quantum-based applications, from computing, to communication, to sensing. This will require precise control at the atomic and molecular levels for the understanding, design, prediction, synthesis, fabrication, and integration of quantum systems. In support of the National Quantum Initiative, SC QIS Centers, coupled with a robust core research portfolio stewarded by the individual SC programs including BES, will create the ecosystem across universities, national labs, and industry that is needed to foster these developments.

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 approaches include genome sequencing, proteomics, metabolomics, structural biology, high-resolution imaging and characterization, and integration of information into computational models that can be iteratively tested and validated. This 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 scientific analysis and modeling of the sensitivity and uncertainty of earth system predictions to atmospheric, cryospheric, oceanic, and biogeochemical processes. The Subsurface Biogeochemistry Research activity will focus on watershed scale hydro-biogeochemical modeling. Investments will continue to support the E3SM (Energy Exascale Earth System Model) capability, tailored to DOE requirements for a variety of scenarios applied to spatial scales as small as 10 kilometers. The DOE Joint Genome Institute (JGI) will continue to be an essential component for DOE systems biology efforts, providing high quality genome sequence data and analysis techniques for a wide variety of plants and microbial communities. The JGI will continue to implement its strategic plan to incorporate new capabilities to sequence DNA and also to interpret, manipulate, and synthesize DNA in support of sustainable, renewable bioenergy and bioproducts research, and environmental research.

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. Plasma science is wide-ranging, since 99% of the visible universe is composed of plasmas of various types. High-temperature fusion plasmas at hundreds of millions of degrees occur in national security applications albeit for very short times. The same fusion plasmas may be exploited in the laboratory in controlled fashion to become the basis for a future clean nuclear power source, which could provide domestic energy independence and security.

The FES program has three elements: 1) Burning Plasma Science: Foundations — The behavior of magnetically confined fusion plasmas is experimentally explored on DIII-D National Fusion Facility and the National Spherical Torus Experiment-Upgrade, which are national SC user facilities. Fusion theory and simulation activities predict and interpret the

complex behavior of plasmas as self-organized systems. Several FES Scientific Discovery through Advanced Computing centers are supported in partnership with ASCR; 2) Burning Plasma Science: Long Pulse U.S. scientists take advantage of international partnerships to conduct research on superconducting tokamaks and stellarators with long-duration capabilities. Research is performed to develop novel materials that can withstand the extreme fusion environment; 3) Discovery Plasma Science: Research areas include plasma astrophysics, high-energy-density laboratory plasmas, low-temperature plasmas, and innovative measurement techniques. Investments in transformational technologies such as machine learning, QIS, microelectronics, and high-performance strategic computing will accelerate progress in several mission areas. Finally, the unique scientific challenges and rigor of fusion and plasma physics research lead to the development of a well-trained Science Technology Engineering and Mathematics-focused workforce, which will contribute to maintaining and advancing U.S. competitiveness and world-leadership in key areas of future technological and economic importance, as well as national security.

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 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) how novel forms of bulk, strongly interacting matter behave,

SCIENCE—Continued

such as the quark-gluon plasma that formed in the early universe; and 3) the structure of nuclei; how protons and neutrons combine to form atomic nuclei and how these nuclei have arisen during the 13.8 billion years since the birth of the cosmos. NP provides ~95 percent of all nuclear science federal research funding. Highly trained university and national laboratory scientists are supported to conceive, plan, execute, and interpret transformative experiments in the U.S. and in international collaborations. NP also maintains and operates three national scientific user facilities that accelerate particles to nearly the speed of light, producing short-lived forms of matter for investigation. The Facility for Rare Isotope Beams is being constructed at Michigan State University to provide advanced world-leading capabilities for science, national security applications, and isotopes. Low energy, precision nuclear experiments, many enabled by new quantum sensors, are used to search for a deeper understanding of nuclear interactions. Also within NP, the DOE Isotope Program supports high-priority research on the development of cutting-edge approaches for producing isotopes critical to the nation in basic research and applications, including ground breaking research on the production of alpha emitting isotopes in sufficient quantity to enable clinical trials for cancer therapy. Mission readiness is provided for the production of radioactive and stable isotopes that are in short supply for research and a wide array of applications. Stable and radioactive isotopes are vital to the missions of many Federal agencies including the National Institutes of Health, the National Institute of Standards and Technology, the Department of Agriculture, Department of Homeland Security, NNSA, and DOE SC programs. NP continues to work in close collaboration with all federal organizations to develop strategic plans for isotope production and to establish effective communication to better forecast isotope needs and leverage resources.

Science Laboratories Infrastructure .—The Science Laboratories Infrastructure (SLI) program supports scientific and technological innovation at the 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. The SLI program continues to focus on improving infrastructure across the SC national laboratory complex. The FY 2020 Budget includes funding for five new construction starts and six on-going construction projects.

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, and graduate thesis research 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 discoveries 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 extramural grants and contracts supporting about 22,000 researchers located at over 300 institutions and the 17 DOE national laboratories, spanning all fifty states and the District of Columbia and 27 scientific user facilities serving nearly 33,000 users per year, 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	2018 actual	2019 est.	2020 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	98	98	98
11.3 Other than full-time permanent	2	2	2
11.5 Other personnel compensation	2	2	2
11.8 Special personal services payments	1	1	1
11.9 Total personnel compensation	103	103	103
12.1 Civilian personnel benefits	32	32	32
13.0 Benefits for former personnel	1	1	1
21.0 Travel and transportation of persons	3	3	3
23.1 Rental payments to GSA	1	1	1
23.2 Rental payments to others	1	1	1
23.3 Communications, utilities, and miscellaneous charges	3	3	3
25.1 Advisory and assistance services	25	25	25
25.2 Other services from non-Federal sources	36	36	36
25.3 Other goods and services from Federal sources	21	21	21
25.4 Operation and maintenance of facilities	3,567	3,786	2,937
25.5 Research and development contracts	12	12	12
26.0 Supplies and materials	2	2	2
31.0 Equipment	195	195	195
32.0 Land and structures	1,164	1,164	1,064
41.0 Grants, subsidies, and contributions	1,219	1,219	1,110
99.0 Direct obligations	6,385	6,604	5,546
99.0 Reimbursable obligations	586	541	520
99.9 Total new obligations, unexpired accounts	6,971	7,145	6,066

Employment Summary

Identification code 089-0222-0-1-251	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	798	810	797

ADVANCED RESEARCH PROJECTS AGENCY—ENERGY

(INCLUDING CANCELLATION OF FUNDS)

【For Department of Energy expenses necessary in carrying out the activities authorized by section 5012 of the America COMPETES Act (Public Law 110-69), \$366,000,000, to remain available until expended: *Provided*, That of such amount, \$31,250,000 shall be available until September 30, 2020, for program direction.】 *Of the unobligated balances from prior year appropriations available under this heading, \$287,000,000 is hereby permanently cancelled: Provided, That no amounts may be cancelled from amounts that were designated by the Congress as an emergency or disaster relief requirement pursuant to the concurrent resolution on the budget or the Balanced Budget and Emergency Deficit Control Act of 1985. (Energy and Water Development and Related Agencies Appropriations Act, 2019.)*

Program and Financing (in millions of dollars)

Identification code 089-0337-0-1-270	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 ARPA-E Projects	155	352	.....
0002 Program Direction	30	31	22
0799 Total direct obligations	185	383	22

0801	Advanced Research Projects Agency - Energy (Reimbursable)	1	1	
0900	Total new obligations, unexpired accounts	186	384	22
Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	256	450	433
1021	Recoveries of prior year unpaid obligations	26		
1050	Unobligated balance (total)	282	450	433
Budget authority:				
Appropriations, discretionary:				
1100	Appropriation	353	366	
1131	Unobligated balance of appropriations permanently reduced			-287
1160	Appropriation, discretionary (total)	353	366	-287
Spending authority from offsetting collections, discretionary:				
1701	Change in uncollected payments, Federal sources	1	1	1
1900	Budget authority (total)	354	367	-286
1930	Total budgetary resources available	636	817	147
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	450	433	125
Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	501	409	497
3010	New obligations, unexpired accounts	186	384	22
3020	Outlays (gross)	-252	-296	-347
3040	Recoveries of prior year unpaid obligations, unexpired	-26		
3050	Unpaid obligations, end of year	409	497	172
Uncollected payments:				
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-1	-1	-2
3070	Change in uncollected pymts, Fed sources, unexpired	-1	-1	-1
3071	Change in uncollected pymts, Fed sources, expired	1		
3090	Uncollected pymts, Fed sources, end of year	-1	-2	-3
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	500	408	495
3200	Obligated balance, end of year	408	495	169
Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	354	367	-286
Outlays, gross:				
4010	Outlays from new discretionary authority	22	110	-287
4011	Outlays from discretionary balances	230	186	634
4020	Outlays, gross (total)	252	296	347
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources	-1	-1	-1
Additional offsets against gross budget authority only:				
4050	Change in uncollected pymts, Fed sources, unexpired	-1	-1	-1
4052	Offsetting collections credited to expired accounts	1	1	1
4070	Budget authority, net (discretionary)	353	366	-287
4080	Outlays, net (discretionary)	251	295	346
4180	Budget authority, net (total)	353	366	-287
4190	Outlays, net (total)	251	295	346

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 requests no additional appropriation and requests the cancellation of \$287,000,000 in unobligated balances. ARPA-E will utilize the remainder of its unobligated balances to execute the multi-year termination of the program, with all operations ceasing by FY 2022.

Object Classification (in millions of dollars)

Identification code 089-0337-0-1-270	2018 actual	2019 est.	2020 est.	
Direct obligations:				
Personnel compensation:				
11.1	Full-time permanent	2	4	4
11.3	Other than full-time permanent	5	5	2
11.9	Total personnel compensation	7	9	6
12.1	Civilian personnel benefits	2	4	4
25.1	Advisory and assistance services	9	19	6
25.2	Other services from non-Federal sources	13	26	2
25.3	Other goods and services from Federal sources	4	8	2
25.4	Operation and maintenance of facilities	17	34	
25.5	Research and development contracts	132	281	

31.0	Equipment	1	2	2
99.0	Direct obligations	185	383	22
99.0	Reimbursable obligations	1	1	
99.9	Total new obligations, unexpired accounts	186	384	22

Employment Summary

Identification code 089-0337-0-1-270	2018 actual	2019 est.	2020 est.	
1001	Direct civilian full-time equivalent employment	48	60	48

ENERGY SUPPLY AND CONSERVATION

Program and Financing (in millions of dollars)

Identification code 089-0224-0-1-999	2018 actual	2019 est.	2020 est.	
Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	6	6	6
1033	Recoveries of prior year paid obligations	1		
1050	Unobligated balance (total)	7	6	6
Budget authority:				
Spending authority from offsetting collections, discretionary:				
1701	Change in uncollected payments, Federal sources	-1		
1930	Total budgetary resources available	6	6	6
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	6	6	6
Change in obligated balance:				
Uncollected payments:				
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-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:				
4000	Budget authority, gross	-1		
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		
4053	Recoveries of prior year paid obligations, unexpired accounts	1		
4060	Additional offsets against budget authority only (total)	2		
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, **[\$1,326,090,000,] \$824,000,000**, to remain available until expended: *Provided*, That of such amount, **[\$80,000,000] \$64,350,000** shall be available until September 30, **[2020] 2021**, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Program and Financing (in millions of dollars)

Identification code 089-0319-0-1-999	2018 actual	2019 est.	2020 est.	
Obligations by program activity:				
0010	Naval Reactors Development	86	86	
0032	Reactor Concepts RD&D	207	324	215
0041	Fuel Cycle R&D	256	264	90
0042	Integrated University Program		5	

NUCLEAR ENERGY—Continued
Program and Financing—Continued

Identification code 089-0319-0-1-999	2018 actual	2019 est.	2020 est.
0043 Nuclear Energy Enabling Technologies R&D	137	153	98
0091 Research and Development programs, subtotal	686	832	403
0301 Radiological Facilities Management	29	29	9
0401 Idaho Facilities Management	294	318	209
0450 Idaho National Laboratory safeguards and security	133	146	138
0451 International Nuclear Safety	4		
0491 Infrastructure programs, subtotal	431	464	347
0501 Small Modular Reactor Licensing Technical Support Program	10		
0502 Supercritical Transformational Electric Power Generation	5	5	
0551 Program Direction	81	80	64
0552 International Nuclear Energy Cooperation	3	3	
0591 Other direct program activities, subtotal	99	88	64
0799 Total direct obligations	1,245	1,413	823
0801 Nuclear Energy (Reimbursable)	143	143	138
0900 Total new obligations, unexpired accounts	1,388	1,556	961
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	41	82	58
1011 Unobligated balance transfer from other acct [072-0306]	4		
1021 Recoveries of prior year unpaid obligations	17		
1050 Unobligated balance (total)	62	82	58
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	1,205	1,326	824
1120 Appropriations transferred to other accts [089-0222]	-23		
1121 Appropriations transferred from other acct [089-0314]	86	86	
1160 Appropriation, discretionary (total)	1,268	1,412	824
Spending authority from offsetting collections, discretionary:			
1700 Collected	133	120	120
1701 Change in uncollected payments, Federal sources	7		
1750 Spending auth from offsetting collections, disc (total)	140	120	120
1900 Budget authority (total)	1,408	1,532	944
1930 Total budgetary resources available	1,470	1,614	1,002
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	82	58	41
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	812	1,035	1,003
3010 New obligations, unexpired accounts	1,388	1,556	961
3020 Outlays (gross)	-1,148	-1,588	-1,341
3040 Recoveries of prior year unpaid obligations, unexpired	-17		
3050 Unpaid obligations, end of year	1,035	1,003	623
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-72	-79	-79
3070 Change in uncollected pymts, Fed sources, unexpired	-7		
3090 Uncollected pymts, Fed sources, end of year	-79	-79	-79
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	740	956	924
3200 Obligated balance, end of year	956	924	544
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	1,408	1,532	944
Outlays, gross:			
4010 Outlays from new discretionary authority	522	825	533
4011 Outlays from discretionary balances	626	763	808
4020 Outlays, gross (total)	1,148	1,588	1,341
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-108	-120	-120
4033 Non-Federal sources	-25		
4040 Offsets against gross budget authority and outlays (total)	-133	-120	-120
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	-7		
4070 Budget authority, net (discretionary)	1,268	1,412	824
4080 Outlays, net (discretionary)	1,015	1,468	1,221
4180 Budget authority, net (total)	1,268	1,412	824
4190 Outlays, net (total)	1,015	1,468	1,221

The Office of Nuclear Energy (NE) funds a broad range of research and development (R&D) activities and supports Federal nuclear energy R&D infrastructure. The FY 2020 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 conducts R&D on new and advanced reactor designs and technologies, including small modular reactors, and 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 mitigate 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.

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	2018 actual	2019 est.	2020 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	38	40	25
11.5 Other personnel compensation	1	2	1
11.9 Total personnel compensation	39	42	26
12.1 Civilian personnel benefits	13	25	9
21.0 Travel and transportation of persons	2	10	2
25.1 Advisory and assistance services	11	20	8
25.1 Other Contractual Services	2	5	2
25.2 Other services from non-Federal sources	158	175	110
25.3 Other goods and services from Federal sources	10	20	5
25.4 Operation and maintenance of facilities	911	969	616
25.7 Operation and maintenance of equipment	2	5	2
26.0 Supplies and materials	1	2	1
31.0 Equipment	20	30	11
32.0 Land and structures	24	35	13
41.0 Grants, subsidies, and contributions	52	75	20
99.0 Direct obligations	1,245	1,413	825
99.0 Reimbursable obligations	143	143	136
99.9 Total new obligations, unexpired accounts	1,388	1,556	961

Employment Summary

Identification code 089-0319-0-1-999	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	304	291	256

2001 Reimbursable civilian full-time equivalent employment 2

ELECTRICITY [DELIVERY]

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for electricity delivery 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, **[\$156,000,000]** \$182,500,000, to remain available until expended: Provided, That of such amount, **[\$17,000,000]** \$19,600,000 shall be available until September 30, **[2020]** 2021, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Program and Financing (in millions of dollars)

Identification code 089-0318-0-1-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0011 Transmission reliability and resiliency	37	45	70
0012 Resilient distribution systems	37	43	39
0013 Cybersecurity for Energy Delivery Systems	91	.....	.....
0014 Energy Storage	39	46	49
0015 Transformer Resilience and Advanced Components	1	13	11
0020 Infrastructure security and energy restoration	16	.....	.....
0030 Transmission permitting and technical assistance	8	7	17
0040 Program Direction	28	23	23
0799 Total direct obligations	257	177	209
0801 Reimbursable work	9	3	3
0809 Reimbursable program activities, subtotal	9	3	3
0900 Total new obligations, unexpired accounts	266	180	212
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	27	41	23
1021 Recoveries of prior year unpaid obligations	5	.....	.....
1050 Unobligated balance (total)	32	41	23
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	261	156	183
1120 Appropriations transferred to other accts [089-0222]	-6	.....	.....
1160 Appropriation, discretionary (total)	255	156	183
Spending authority from offsetting collections, discretionary:			
1700 Collected	7	3	3
1701 Change in uncollected payments, Federal sources	13	3	3
1750 Spending auth from offsetting collections, disc (total)	20	6	6
1900 Budget authority (total)	275	162	189
1930 Total budgetary resources available	307	203	212
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	41	23	.....
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	285	352	316
3010 New obligations, unexpired accounts	266	180	212
3020 Outlays (gross)	-194	-216	-226
3040 Recoveries of prior year unpaid obligations, unexpired	-5	.....	.....
3050 Unpaid obligations, end of year	352	316	302
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-5	-18	-21
3070 Change in uncollected pymts, Fed sources, unexpired	-13	-3	-3
3090 Uncollected pymts, Fed sources, end of year	-18	-21	-24
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	280	334	295
3200 Obligated balance, end of year	334	295	278
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	275	162	189
Outlays, gross:			
4010 Outlays from new discretionary authority	38	68	79
4011 Outlays from discretionary balances	156	148	147
4020 Outlays, gross (total)	194	216	226

Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-7	-3	-3
4040 Offsets against gross budget authority and outlays (total)	-7	-3	-3
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	-13	-3	-3
4070 Budget authority, net (discretionary)	255	156	183
4080 Outlays, net (discretionary)	187	213	223
4180 Budget authority, net (total)	255	156	183
4190 Outlays, net (total)	187	213	223

The mission of the Office of Electricity (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 and Resilience (TRR).—The TRR program helps improve the reliability and resilience of the U.S. electric grid through early stage and foundational research and development (R&D) focused on measurement and control of the electricity system, as well as model development and validation for assessing risks across integrated energy systems.

Resilient Distribution Systems (RDS).—The RDS program focuses on addressing the challenges facing the 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, resilience, outage recovery, and operational efficiency, building upon previous and ongoing grid modernization efforts.

Energy Storage.—The Energy Storage program, including the Department-wide Advanced Energy Storage Initiative, helps ensure the stability, reliability, and resilience of electricity infrastructure by 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 into the grid infrastructure.

Transformer Resilience and Advanced Components (TRAC).—The TRAC program supports modernization, hardening, and resilience of the grid by addressing challenges facing transformers and other critical grid hardware components that carry and control electricity from where it is generated to where it is used. Research in advanced materials, components, and devices will provide the fundamental physical capabilities and enhancements required to accommodate a rapidly changing power system, ensure all-hazards resilience to a more complex threat environment, and encourage the adoption of new technologies and approaches.

Transmission Permitting & Technical Assistance (TPTA).—The TPTA program provides electricity policy technical assistance to Federal, State, territorial, regional and tribal entities to help them develop and improve programs, policies, and laws that facilitate the development of reliable, resilient and affordable electricity infrastructure. The program also implements a number of legal authorities, such as coordination of transmission permitting by Federal agencies, permitting of cross-border transmission facilities, and supporting actions by the Secretary of Energy during electricity emergencies.

Program Direction.—Program Direction provides for the costs associated with the Federal workforce and contractor services that support OE's mission. 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	2018 actual	2019 est.	2020 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	12	6	9
11.3 Other than full-time permanent	1	1	1
11.9 Total personnel compensation	13	7	10
12.1 Civilian personnel benefits	6	6	6
21.0 Travel and transportation of persons	1	1	1
25.1 Advisory and assistance services	27	27	27

ELECTRICITY—Continued
Object Classification—Continued

Identification code 089-0318-0-1-271	2018 actual	2019 est.	2020 est.
25.2 Other services from non-Federal sources	4	4	4
25.3 Other goods and services from Federal sources	3	3	3
25.4 Operation and maintenance of facilities	140	68	39
25.5 Research and development contracts	58	56	89
32.0 Land and structures	5	5	30
99.0 Direct obligations	257	177	209
99.0 Reimbursable obligations	9	3	3
99.9 Total new obligations, unexpired accounts	266	180	212

Employment Summary

Identification code 089-0318-0-1-271	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	61	64	74
2001 Reimbursable civilian full-time equivalent employment	28	10	28

CYBERSECURITY, ENERGY SECURITY, AND EMERGENCY RESPONSE

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for energy sector cybersecurity, energy security, and emergency response 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]** \$156,500,000, to remain available until expended: *Provided*, That of such amount, \$11,500,000 shall be available until September 30, **[2020]** 2021, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Program and Financing (in millions of dollars)

Identification code 089-2250-0-1-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0010 Cybersecurity for energy delivery systems		89	75
0020 Infrastructure security and energy restoration		19	70
0030 Program direction		12	12
0900 Total new obligations, unexpired accounts		120	157
Budgetary resources:			
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation		120	157
1930 Total budgetary resources available		120	157
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1			72
3010 New obligations, unexpired accounts		120	157
3020 Outlays (gross)		-48	-99
3050 Unpaid obligations, end of year		72	130
Memorandum (non-add) entries:			
3100 Obligated balance, start of year			72
3200 Obligated balance, end of year		72	130
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross		120	157
Outlays, gross:			
4010 Outlays from new discretionary authority		48	63
4011 Outlays from discretionary balances			36
4020 Outlays, gross (total)		48	99
4180 Budget authority, net (total)		120	157
4190 Outlays, net (total)		48	99

The Office of Cybersecurity, Energy Security, and Emergency Response (CESER) leads the Department's efforts to secure U.S. energy infrastructure against all hazards, reduce the risks of and impacts from cyber events and other disruptive events, and assists with restoration activities. Prior to FY

2019, CESER activities were funded under the Office of Electricity Delivery and Energy Reliability, now known as the Office of Electricity. Programs include:

Cybersecurity for Energy Delivery System (CEDS).—The CEDS program seeks to enhance the reliability and resilience of the Nation's energy infrastructure through near- and long-term activities to strengthen energy sector cybersecurity across the Nation. Working closely with the energy sector and our government partners, CEDS focuses on enhancing the speed and effectiveness of threat and vulnerability sharing and accelerating R&D to mitigate cyber incidents in today's systems and to develop next-generation resilient energy delivery systems while developing analyses to quantify the resulting relative risk reduction.

Infrastructure Security and Energy Restoration (ISER).—The ISER program coordinates a national effort to secure the U.S. energy infrastructure against all hazards, reduce impacts from disruptive events, and assist industry with restoration activities. ISER delivers a range of capabilities including energy sector emergency response and recovery (including emergency response of a cyber nature); near-real-time situational awareness and information sharing about the status of the energy systems to improve risk management; analysis of evolving threats and hazards to energy infrastructure; and technical assistance that incorporates exercises in order to strengthen Federal, regional, State, tribal, and territorial abilities to work together to prepare for and mitigate the effects of an energy sector emergency.

Program Direction.—Program Direction provides for the costs associated with the Federal workforce and contractor services that support CESER's mission. These costs include salaries, benefits, travel, training, building occupancy, IT systems, and other related expenses.

Object Classification (in millions of dollars)

Identification code 089-2250-0-1-271	2018 actual	2019 est.	2020 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent		4	4
11.9 Total personnel compensation		4	4
12.1 Civilian personnel benefits		5	5
21.0 Travel and transportation of persons		1	1
25.1 Advisory and assistance services		21	29
25.2 Other services from non-Federal sources		3	4
25.3 Other goods and services from Federal sources		2	3
25.4 Operation and maintenance of facilities		34	45
25.5 Research and development contracts		46	61
32.0 Land and structures		4	5
99.9 Total new obligations, unexpired accounts		120	157

Employment Summary

Identification code 089-2250-0-1-271	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment		34	36

ENERGY EFFICIENCY AND RENEWABLE ENERGY

(INCLUDING USE OF PRIOR YEAR BALANCES)

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, **[\$2,379,000,000]** \$696,000,000, to remain available until expended, of which \$353,000,000 shall be derived from prior year unobligated balances previously appropriated under this heading: *Provided*, That of **[such amount]** the amount made available under this heading in this Act, **[\$162,500,000]** \$122,000,000 shall be available until September 30, **[2020]** 2021, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Program and Financing (in millions of dollars)

Identification code 089-0321-0-1-270	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 Vehicle Technologies	356	398	73
0002 Bioenergy Technologies	289	261	40
0003 Hydrogen & Fuel Cell Technologies	114	139	44
0091 Sustainable Transportation, subtotal	759	798	157
0101 Solar Energy	249	286	67
0102 Wind Energy	94	106	24
0103 Water Power	66	121	45
0104 Geothermal Technologies	39	97	28
0191 Renewable Electricity, subtotal	448	610	164
0201 Advanced Manufacturing	266	370	81
0202 Building Technologies	173	254	57
0203 Weatherization & Intergovernmental Activities	301	361	.....
0204 Federal Energy Management Program	31	35	8
0291 Energy Efficiency, subtotal	771	1,020	146
0301 Program Direction & Support	162	194	107
0302 Strategic Programs	13	16	122
0303 Facilities & Infrastructure	96	112	.....
0391 EERE Corporate Support, subtotal	271	322	229
0799 Total direct obligations	2,249	2,750	696
0810 Energy Efficiency and Renewable Energy (Reimbursable)	153	153	128
0900 Total new obligations, unexpired accounts	2,402	2,903	824
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	574	666	415
1010 Unobligated balance transfer to other accts [089-0222]	-1	.....	.....
1021 Recoveries of prior year unpaid obligations	83	120	.....
1050 Unobligated balance (total)	656	786	415
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	2,322	2,379	343
1120 Appropriations transferred to other accts [089-0222]	-58	.....	.....
1160 Appropriation, discretionary (total)	2,264	2,379	343
Spending authority from offsetting collections, discretionary:			
1700 Collected	150	153	153
1701 Change in uncollected payments, Federal sources	-2	.....	.....
1750 Spending auth from offsetting collections, disc (total)	148	153	153
1900 Budget authority (total)	2,412	2,532	496
1930 Total budgetary resources available	3,068	3,318	911
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	666	415	87
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	2,632	3,077	3,591
3010 New obligations, unexpired accounts	2,402	2,903	824
3020 Outlays (gross)	-1,872	-2,269	-1,881
3040 Recoveries of prior year unpaid obligations, unexpired	-83	-120	.....
3041 Recoveries of prior year unpaid obligations, expired	-2	.....	.....
3050 Unpaid obligations, end of year	3,077	3,591	2,534
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-73	-70	-70
3070 Change in uncollected pymts, Fed sources, unexpired	2	.....	.....
3071 Change in uncollected pymts, Fed sources, expired	1	.....	.....
3090 Uncollected pymts, Fed sources, end of year	-70	-70	-70
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	2,559	3,007	3,521
3200 Obligated balance, end of year	3,007	3,521	2,464
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	2,412	2,532	496
Outlays, gross:			
4010 Outlays from new discretionary authority	331	797	249
4011 Outlays from discretionary balances	1,541	1,472	1,632
4020 Outlays, gross (total)	1,872	2,269	1,881
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-70	-104	-76
4033 Non-Federal sources	-81	-105	-77
4040 Offsets against gross budget authority and outlays (total) ...	-151	-209	-153

Identification code	2018 actual	2019 est.	2020 est.
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	2	.....	.....
4052 Offsetting collections credited to expired accounts	1	56	.....
4060 Additional offsets against budget authority only (total)	3	56	.....
4070 Budget authority, net (discretionary)	2,264	2,379	343
4080 Outlays, net (discretionary)	1,721	2,060	1,728
4180 Budget authority, net (total)	2,264	2,379	343
4190 Outlays, net (total)	1,721	2,060	1,728

The Office of Energy Efficiency and Renewable Energy (EERE) invests in research and development (R&D) as part of the Department of Energy's (DOE) broad portfolio approach to address our Nation's energy and environmental challenges. EERE works closely with the National Laboratories, and with many of America's best innovators and businesses, to support high-impact, early-stage applied R&D in sustainable transportation, renewable power, and energy efficiency, relying upon the private sector to fund later-stage research, development, and commercialization of energy technologies. EERE's investment portfolio is strongly positioned to support American energy independence and domestic job-growth in the near to mid-term, while maintaining proper stewardship of taxpayer dollars.

Sustainable Transportation.—Conducts early-stage R&D through program offices focused on vehicle technologies, bioenergy, and hydrogen and fuel cell technologies to support industry development of 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 support industry development of affordable and reliable, renewable electricity options that improve the resilience 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 supports industry improvement to 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	2018 actual	2019 est.	2020 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	73	76	57
11.3 Other than full-time permanent	2	2	1
11.5 Other personnel compensation	1	1	1
11.9 Total personnel compensation	76	79	59
12.1 Civilian personnel benefits	24	25	18
21.0 Travel and transportation of persons	3	3	2
23.3 Communications, utilities, and miscellaneous charges	3	3	2
25.1 Advisory and assistance services	109	128	53
25.2 Other services from non-Federal sources	10	12	4
25.3 Other goods and services from Federal sources	29	35	27
25.4 Operation and maintenance of facilities	1,223	1,580	454
25.5 Research and development contracts	115	132	64
31.0 Equipment	10	12	13
41.0 Grants, subsidies, and contributions	647	741	.....
99.0 Direct obligations	2,249	2,750	696
99.0 Reimbursable obligations	153	153	128
99.9 Total new obligations, unexpired accounts	2,402	2,903	824

ENERGY EFFICIENCY AND RENEWABLE ENERGY—Continued

Employment Summary

Identification code 089-0321-0-1-270	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	604	625	461

OFFICE OF INDIAN ENERGY POLICY AND PROGRAMS

For necessary expenses for Indian Energy activities in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), **[\$18,000,000]** \$8,000,000, to remain available until expended: *Provided*, That, of the amount appropriated under this heading, **[\$4,800,000]** \$3,521,000 shall be available until September 30, **[2020]** 2021, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Program and Financing (in millions of dollars)

Identification code 089-0342-0-1-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0010 Direct program activity		14	12
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1			4
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation		18	8
1930 Total budgetary resources available		18	12
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year		4	
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1			7
3010 New obligations, unexpired accounts		14	12
3020 Outlays (gross)		-7	-10
3050 Unpaid obligations, end of year		7	9
Memorandum (non-add) entries:			
3100 Obligated balance, start of year			7
3200 Obligated balance, end of year		7	9
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross		18	8
Outlays, gross:			
4010 Outlays from new discretionary authority		7	3
4011 Outlays from discretionary balances			7
4020 Outlays, gross (total)		7	10
4180 Budget authority, net (total)		18	8
4190 Outlays, net (total)		7	10

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.

Object Classification (in millions of dollars)

Identification code 089-0342-0-1-271	2018 actual	2019 est.	2020 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent		1	1
11.9 Total personnel compensation		1	1
12.1 Civilian personnel benefits		1	1
21.0 Travel and transportation of persons		1	1
25.1 Advisory and assistance services		2	1
26.0 Supplies and materials		1	1
41.0 Grants, subsidies, and contributions		8	7
99.9 Total new obligations, unexpired accounts		14	12

Employment Summary

Identification code 089-0342-0-1-271	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment		7	7

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, **[\$310,000,000]** \$247,480,000, to remain available until expended. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Program and Financing (in millions of dollars)

Identification code 089-0315-0-1-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0002 Fast Flux Test Facility	2	2	2
0003 Gaseous Diffusion Plants	106	101	103
0004 Small Sites	108	132	67
0005 West Valley Demonstration Project	75	75	75
0799 Total direct obligations	291	310	247
0801 Non-defense Environmental Cleanup (Reimbursable)	34	29	29
0900 Total new obligations, unexpired accounts	325	339	276
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1		13	13
1021 Recoveries of prior year unpaid obligations	7		
1050 Unobligated balance (total)	7	13	13
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	298	310	247
Spending authority from offsetting collections, discretionary:			
1700 Collected	34	29	29
1701 Change in uncollected payments, Federal sources	-1		
1750 Spending auth from offsetting collections, disc (total)	33	29	29
1900 Budget authority (total)	331	339	276
1930 Total budgetary resources available	338	352	289
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	13	13	13
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	127	154	161
3010 New obligations, unexpired accounts	325	339	276
3020 Outlays (gross)	-291	-332	-333
3040 Recoveries of prior year unpaid obligations, unexpired	-7		
3050 Unpaid obligations, end of year	154	161	104
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-1		
3070 Change in uncollected pymts, Fed sources, unexpired	1		
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	126	154	161
3200 Obligated balance, end of year	154	161	104
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	331	339	276
Outlays, gross:			
4010 Outlays from new discretionary authority	197	246	202
4011 Outlays from discretionary balances	94	86	131
4020 Outlays, gross (total)	291	332	333
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-1		
4033 Non-Federal sources	-33	-29	-29
4040 Offsets against gross budget authority and outlays (total)	-34	-29	-29
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	1		

4060	Additional offsets against budget authority only (total)	1		
4070	Budget authority, net (discretionary)	298	310	247
4080	Outlays, net (discretionary)	257	303	304
4180	Budget authority, net (total)	298	310	247
4190	Outlays, net (total)	257	303	304

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.

Object Classification (in millions of dollars)

Identification code 089-0315-0-1-271	2018 actual	2019 est.	2020 est.
Direct obligations:			
25.2 Other services from non-Federal sources	21	22	18
25.3 Other goods and services from Federal sources	1	1	1
25.4 Operation and maintenance of facilities	259	276	219
32.0 Land and structures	2	2	2
41.0 Grants, subsidies, and contributions	8	9	7
99.0 Direct obligations	291	310	247
99.0 Reimbursable obligations	34	29	29
99.9 Total new obligations, unexpired accounts	325	339	276

FOSSIL ENERGY RESEARCH AND DEVELOPMENT

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), **[\$740,000,000]** \$562,000,000, to remain available until expended: *Provided*, That of such amount **[\$61,070,000]** \$61,045,000 shall be available until September 30, **[2020]** 2021, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Program and Financing (in millions of dollars)

Identification code 089-0213-0-1-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0002 Carbon Capture	129	101	
0003 Carbon Storage	99	86	
0004 Advanced Energy Systems	127	129	220
0005 Cross-Cutting Research	51	56	60
0012 Program Direction - Management	58	60	61

0013	Program Direction - NETL R&D	140		
0014	Plant and Capital Equipment	1		
0016	Environmental Restoration	1		
0017	Special Recruitment Program	1	1	1
0020	Natural gas technologies	43	51	11
0021	Unconventional FE Technologies	50	46	19
0022	STEP (Supercritical CO2)	23	22	
0024	NETL Research and Operations		50	40
0025	NETL Infrastructure		45	43
0027	Carbon Capture, Utilization and Storage		39	69
0028	NETL Coal R&D		54	38
0799	Total direct obligations	723	740	562
0801	Fossil Energy Research and Development (Reimbursable)	1		1
0900	Total new obligations, unexpired accounts	724	740	563

Budgetary resources:

Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	243	245	247
1021	Recoveries of prior year unpaid obligations	15		
1050	Unobligated balance (total)	258	245	247
Budget authority:				
Appropriations, discretionary:				
1100	Appropriation	727	740	562
1120	Appropriations transferred to other accts [089-0222]	-17		
1160	Appropriation, discretionary (total)	710	740	562
Spending authority from offsetting collections, discretionary:				
1700	Collected	1	2	2
1900	Budget authority (total)	711	742	564
1930	Total budgetary resources available	969	987	811
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	245	247	248

Change in obligated balance:

Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	734	905	951
3010	New obligations, unexpired accounts	724	740	563
3020	Outlays (gross)	-537	-694	-736
3040	Recoveries of prior year unpaid obligations, unexpired	-15		
3041	Recoveries of prior year unpaid obligations, expired	-1		
3050	Unpaid obligations, end of year	905	951	778
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	733	904	950
3200	Obligated balance, end of year	904	950	777

Budget authority and outlays, net:

Discretionary:				
4000	Budget authority, gross	711	742	564
Outlays, gross:				
4010	Outlays from new discretionary authority	137	297	226
4011	Outlays from discretionary balances	400	397	510
4020	Outlays, gross (total)	537	694	736
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources	-1		
4033	Non-Federal sources		-2	-2
4040	Offsets against gross budget authority and outlays (total)	-1	-2	-2
4070	Budget authority, net (discretionary)	710	740	562
4080	Outlays, net (discretionary)	536	692	734
4180	Budget authority, net (total)	710	740	562
4190	Outlays, net (total)	536	692	734

The Fossil Energy Research and Development (FER&D) program conducts research that supports the Nation's ability to increase the use of 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 and the utilization of coal and CO2 for the production of critical materials and

FOSSIL ENERGY RESEARCH AND DEVELOPMENT—Continued

products; 3) early-stage R&D on transformational CO2 capture technologies 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. Program Direction provides for the Headquarters and NETL workforce responsible for the oversight and administration of FER&D.

Object Classification (in millions of dollars)

Identification code 089-0213-0-1-271	2018 actual	2019 est.	2020 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	61	62	62
11.3 Other than full-time permanent	1	1	1
11.5 Other personnel compensation	1	1	1
11.9 Total personnel compensation	63	64	64
12.1 Civilian personnel benefits	21	21	21
21.0 Travel and transportation of persons	3	3	3
23.3 Communications, utilities, and miscellaneous charges	18	18	10
25.1 Advisory and assistance services	141	148	100
25.2 Other services from non-Federal sources	12	12	10
25.3 Other goods and services from Federal sources	10	10	8
25.4 Operation and maintenance of facilities	82	84	70
25.5 Research and development contracts	344	352	252
25.7 Operation and maintenance of equipment	4	4	4
26.0 Supplies and materials	2	1	1
31.0 Equipment	10	10	8
32.0 Land and structures	12	12	10
41.0 Grants, subsidies, and contributions	1	1	1
99.0 Direct obligations	723	740	562
99.0 Reimbursable obligations	1	.....	1
99.9 Total new obligations, unexpired accounts	724	740	563

Employment Summary

Identification code 089-0213-0-1-271	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	517	631	666

NAVAL PETROLEUM AND OIL SHALE RESERVES

For Department of Energy expenses necessary to carry out naval petroleum and oil shale reserve activities, **[\$10,000,000] \$14,000,000**, 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. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Program and Financing (in millions of dollars)

Identification code 089-0219-0-1-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 Production and Operations	18	16	12
0002 Naval Petroleum and Oil Shale Reserves Program Direction	1	2	2
0900 Total new obligations, unexpired accounts	19	18	14
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	22	8	.....

Budget authority:

Appropriations, discretionary:			
1100 Appropriation	5	10	14
1900 Budget authority (total)	5	10	14
1930 Total budgetary resources available	27	18	14
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	8	.....	.....

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	13	21	16
3010 New obligations, unexpired accounts	19	18	14
3020 Outlays (gross)	-11	-23	-24
3050 Unpaid obligations, end of year	21	16	6
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	13	21	16
3200 Obligated balance, end of year	21	16	6

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	5	10	14
Outlays, gross:			
4010 Outlays from new discretionary authority .....	.....	6	9
4011 Outlays from discretionary balances	11	17	15
4020 Outlays, gross (total)	11	23	24
4180 Budget authority, net (total)	5	10	14
4190 Outlays, net (total)	11	23	24

This account funds environmental activities at Naval Petroleum Reserve 1 (NPR- 1) in California (Elk Hills) and Naval Petroleum Reserve 3 (NPR-3) in Wyoming (Teapot Dome). Following the sale of the Government's interests in 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 2020, funding will continue ongoing activities to attain release from the remaining environmental findings related to the sale of NPR-1. On January 30, 2015, the Department finalized the sale of the Teapot Dome Oilfield. The Department continues to 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	2018 actual	2019 est.	2020 est.
Direct obligations:			
12.1 Civilian personnel benefits .....	.....	.....	1
25.2 Other services from non-Federal sources	2	2	1
25.4 Operation and maintenance of facilities	17	16	12
99.9 Total new obligations, unexpired accounts	19	18	14

Employment Summary

Identification code 089-0219-0-1-271	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	2	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.), **[\$235,000,000] \$174,000,000**, to remain available until expended.

Provided, That, 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 draw down and sell not to exceed \$300,000,000 of crude oil from the Strategic Petroleum Reserve in fiscal year 2019: *Provided further*, That the proceeds from such drawdown and sale shall be deposited into the "Energy Security and Infrastructure Modernization

Fund" during fiscal year 2019: *Provided further*, That such amounts shall be made available and shall remain available until expended for necessary expenses to carry out the Life Extension II project for the Strategic Petroleum Reserve. **】** (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

25.2	Other services from non-Federal sources	27	27	20
25.4	Operation and maintenance of facilities	169	174	118
32.0	Land and structures	11	11	7
99.9	Total new obligations, unexpired accounts	230	235	176

Program and Financing (in millions of dollars)

Identification code 089-0218-0-1-274	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 SPR Management	23	26	25
0002 SPR Storage Facilities Development	207	209	151
0900 Total new obligations, unexpired accounts	230	235	176
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	7	39	39
1021 Recoveries of prior year unpaid obligations	1		
1050 Unobligated balance (total)	8	39	39
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	261	235	174
1930 Total budgetary resources available	269	274	213
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	39	39	37
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	134	163	136
3010 New obligations, unexpired accounts	230	235	176
3020 Outlays (gross)	-200	-262	-202
3040 Recoveries of prior year unpaid obligations, unexpired	-1		
3050 Unpaid obligations, end of year	163	136	110
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	134	163	136
3200 Obligated balance, end of year	163	136	110
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	261	235	174
Outlays, gross:			
4010 Outlays from new discretionary authority	85	131	96
4011 Outlays from discretionary balances	115	131	106
4020 Outlays, gross (total)	200	262	202
4180 Budget authority, net (total)	261	235	174
4190 Outlays, net (total)	200	262	202

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 commits the United States to support the International Energy Agency through its coordinated energy emergency response plans, and provides a deterrent against energy supply disruptions. The FY 2020 Budget will support the SPR's operational readiness and drawdown capabilities of 4.21 MB/d. The program will perform cavern wellbore testing and remediation activities to ensure the availability of the SPR's crude oil inventory. Consistent with past budget requests, the Budget proposes to disestablish the Northeast Gasoline Supply Reserve (NGSR) by allowing current commercial storage contracts to expire and selling the refined product currently held in the reserve. The NGSR is very costly to maintain, has not been used for its intended purpose, and is not a practical solution for a severe supply interruption, as, for example, the reserve would only be able to meet one day's worth of gasoline demand in the Northeast States.

Object Classification (in millions of dollars)

Identification code 089-0218-0-1-274	2018 actual	2019 est.	2020 est.
Direct obligations:			
11.1 Personnel compensation: Full-time permanent	12	12	18
12.1 Civilian personnel benefits	4	4	6
21.0 Travel and transportation of persons	1	1	1
23.1 Rental payments to GSA	1	1	1
23.2 Rental payments to others	3	3	3
23.3 Communications, utilities, and miscellaneous charges	1	1	1
25.1 Advisory and assistance services	1	1	1

Employment Summary

Identification code 089-0218-0-1-274	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	111	126	126
2001 Reimbursable civilian full-time equivalent employment	2		

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 (Public Law 114-255), \$10,000,000, to remain available until expended. **】** *Notwithstanding sections 161 and 167 of the Energy Policy and Conservation Act (42 U.S.C. 6241, 6247), the Secretary of Energy shall draw down and sell one million barrels of refined petroleum product from the Strategic Petroleum Reserve and, notwithstanding 31 U.S.C. 3302, \$27,000,000 of proceeds from such sale shall be deposited in the SPR Petroleum Account and shall remain available until expended: Provided, That any proceeds in excess of \$27,000,000 collected from such sale shall be deposited into the general fund of the Treasury during fiscal year 2020: Provided further, That upon the completion of such sale, the Secretary shall carry out the closure of the Northeast Gasoline Supply Reserve. (Energy and Water Development and Related Agencies Appropriations Act, 2019.)*

Program and Financing (in millions of dollars)

Identification code 089-0233-0-1-274	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 SPR Petroleum Account	12	10	10
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	14	10	10
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	8	10	
Spending authority from offsetting collections, discretionary:			
1700 Collected			27
1900 Budget authority (total)	8	10	27
1930 Total budgetary resources available	22	20	37
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	10	10	27
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	40	25	8
3010 New obligations, unexpired accounts	12	10	10
3020 Outlays (gross)	-27	-27	-8
3050 Unpaid obligations, end of year	25	8	10
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	40	25	8
3200 Obligated balance, end of year	25	8	10
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	8	10	27
Outlays, gross:			
4010 Outlays from new discretionary authority		3	5
4011 Outlays from discretionary balances	7		3
4020 Outlays, gross (total)	7	3	8
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4034 Offsetting governmental collections:			-27
Mandatory:			
Outlays, gross:			
4101 Outlays from mandatory balances	20	24	
4180 Budget authority, net (total)	8	10	
4190 Outlays, net (total)	27	27	-19

SPR PETROLEUM ACCOUNT—Continued

The SPR Petroleum Account funds activities related to the acquisition, transportation, and injection of petroleum products into the Strategic Petroleum Reserve (SPR), as well as costs related to the drawdown, sale, and delivery of petroleum products from the Reserve. The FY 2020 Budget proposes to deposit into the SPR Petroleum Account up to \$27 million in proceeds from the sale of the Northeast Gasoline Supply Reserve's one-million barrels of gasoline blendstock. Subsequently, the Budget requests no operational funding for the NGSR in the SPR account, as it allows existing commercial storage contracts to expire. The retained proceeds from the sale will be used to fund logistical costs associated with the drawdown, sale, and delivery of SPR crude oil, to include operations related to legislatively-mandated, multi-year sales of SPR crude oil. Proceeds in excess of the \$27 million will contribute to deficit reduction.

Object Classification (in millions of dollars)

Identification code 089-0233-0-1-274	2018 actual	2019 est.	2020 est.
Direct obligations:			
25.1 Other Contractual Services	1	1	1
25.2 Other services from non-Federal sources	2	2	2
25.4 Operation and maintenance of facilities	9	7	7
99.9 Total new obligations, unexpired accounts	12	10	10

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 draw down and sell not to exceed \$450,000,000 of crude oil from the Strategic Petroleum Reserve in fiscal year 2020: Provided, That the proceeds from such drawdown and sale shall be deposited into the "Energy Security and Infrastructure Modernization Fund" during fiscal year 2020: Provided further, That such amounts shall be made available and shall remain available until expended for necessary expenses to carry out the Life Extension II project for the Strategic Petroleum Reserve.

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5615-0-2-274	2018 actual	2019 est.	2020 est.
0100 Balance, start of year			
Receipts:			
Current law:			
1130 Proceeds from Sale of Oil, Energy Security and Infrastructure Modernization Fund	348	300	450
2000 Total: Balances and receipts	348	300	450
Appropriations:			
Current law:			
2101 Energy Security and Infrastructure Modernization Fund	-348	-300	-450
5099 Balance, end of year			

Program and Financing (in millions of dollars)

Identification code 089-5615-0-2-274	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0010 Energy security and infrastructure modernization	455	352	450
0900 Total new obligations, unexpired accounts (object class 25.4)	455	352	450
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	159	52	
Budget authority:			
Appropriations, discretionary:			
1101 Appropriation (special or trust fund)	348	300	450
1900 Budget authority (total)	348	300	450
1930 Total budgetary resources available	507	352	450
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	52		
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	163	559	575
3010 New obligations, unexpired accounts	455	352	450

3020 Outlays (gross)	-59	-336	-369
3050 Unpaid obligations, end of year	559	575	656
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	163	559	575
3200 Obligated balance, end of year	559	575	656
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	348	300	450
Outlays, gross:			
4010 Outlays from new discretionary authority		75	112
4011 Outlays from discretionary balances	59	261	257
4020 Outlays, gross (total)	59	336	369
4180 Budget authority, net (total)	348	300	450
4190 Outlays, net (total)	59	336	369

The Energy Security and Infrastructure Modernization Fund was established in Section 404 of the Bipartisan Budget Act of 2015 to finance modernization of the Strategic Petroleum Reserve (SPR). Revenue raised through sales of SPR crude oil will support Life Extension 2 project investments needed to ensure the SPR can maintain its operational readiness capability, meet its mission requirements, and operate in an environmentally responsible manner. This FY 2020 budget increment concludes the four-year (2017-2020) financing structure of multi-year oil sales that support an effective modernization program for the SPR.

ENERGY INFORMATION ADMINISTRATION

For Department of Energy expenses necessary in carrying out the activities of the Energy Information Administration, **【\$125,000,000】 \$118,000,000**, to remain available until expended. (Energy and Water Development and Related Agencies Appropriations Act, 2019.)

Program and Financing (in millions of dollars)

Identification code 089-0216-0-1-276	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 Obligations by Program Activity	126	125	118
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	1	3	3
1021 Recoveries of prior year unpaid obligations	3		
1050 Unobligated balance (total)	4	3	3
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	125	125	118
1930 Total budgetary resources available	129	128	121
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	3	3	3
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	40	43	47
3010 New obligations, unexpired accounts	126	125	118
3020 Outlays (gross)	-120	-121	-121
3040 Recoveries of prior year unpaid obligations, unexpired	-3		
3050 Unpaid obligations, end of year	43	47	44
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	40	43	47
3200 Obligated balance, end of year	43	47	44
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	125	125	118
Outlays, gross:			
4010 Outlays from new discretionary authority	89	88	83
4011 Outlays from discretionary balances	31	33	38
4020 Outlays, gross (total)	120	121	121
4180 Budget authority, net (total)	125	125	118
4190 Outlays, net (total)	120	121	121

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 2020 Budget Request enables EIA to continue core statistical and analysis activities that produce reports critical to the nation and to invest in planned cybersecurity initiatives.

Object Classification (in millions of dollars)

Identification code 089-0216-0-1-276	2018 actual	2019 est.	2020 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	40	40	40
11.5 Other personnel compensation	1		
11.9 Total personnel compensation	41	40	40
12.1 Civilian personnel benefits	12	12	12
23.3 Communications, utilities, and miscellaneous charges	4	4	4
25.1 Advisory and assistance services	51	51	47
25.3 Purchases of goods and services from Government accounts	15	15	12
25.4 Operation and maintenance of facilities	1	1	1
26.0 Pamphlets, Documents, Subscriptions and Publications	2	2	2
99.9 Total new obligations, unexpired accounts	126	125	118

Employment Summary

Identification code 089-0216-0-1-276	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	324	370	359

FEDERAL ENERGY REGULATORY COMMISSION

SALARIES AND EXPENSES

For expenses necessary for 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, **[\$369,900,000] \$382,000,000**, to remain available until expended: *Provided*, That notwithstanding any other provision of law, not to exceed **[\$369,900,000] \$382,000,000** of revenues from fees and annual charges, and other services and collections in fiscal year **[2019] 2020** 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 **[2019] 2020** so as to result in a final fiscal year **[2019] 2020** appropriation from the general fund estimated at not more than \$0. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Program and Financing (in millions of dollars)

Identification code 089-0212-0-1-276	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0801 Ensure Just and Reasonable Rates, Terms & Conditions	171	184	179
0802 Promote Safe, Reliable, Secure & Efficient Infrastructure	128	141	134
0803 Mission Support through Organizational Excellence	70	74	74
0900 Total new obligations, unexpired accounts	369	399	387
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	32	34	5
1021 Recoveries of prior year unpaid obligations	3		
1050 Unobligated balance (total)	35	34	5
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected	368	370	382
1930 Total budgetary resources available	403	404	387
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	34	5	

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	70	95	80
3010 New obligations, unexpired accounts	369	399	387
3020 Outlays (gross)	-341	-414	-390
3040 Recoveries of prior year unpaid obligations, unexpired	-3		
3050 Unpaid obligations, end of year	95	80	77
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	70	95	80
3200 Obligated balance, end of year	95	80	77

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	368	370	382
Outlays, gross:			
4010 Outlays from new discretionary authority	266	333	344
4011 Outlays from discretionary balances	75	81	46
4020 Outlays, gross (total)	341	414	390
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4034 Offsetting governmental collections	-368	-370	-382
4180 Budget authority, net (total)			
4190 Outlays, net (total)	-27	44	8

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 economically efficient, safe, reliable, and secure energy services at a reasonable cost through appropriate regulatory and market means, and collaborative efforts. 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 natural gas in interstate commerce, as well as for transportation of oil by pipeline in interstate commerce, 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. The Commission carries out this responsibility by issuing orders and establishing rules and policies that continually balance two important interests: protecting energy consumers against excessive rates, and providing an opportunity for regulated entities to recover their costs and earn a reasonable return on their investments. 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. 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. 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 sales of electric energy. The Commission also reviews proposed mergers and other transactions in the electric industry to ensure that these proposals will not harm the public interest.

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

FEDERAL ENERGY REGULATORY COMMISSION—Continued

often 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, and Secure Infrastructure.—The Commission plays an important role in the development of energy infrastructure that operates 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. With the rising demand for natural gas and hydropower comes increased infrastructure construction, making it all the more important that FERC oversee the private sector development of safe, reliable, and secure infrastructure in a way that fosters economic and environmental benefits for the nation. The Commission reviews applications to construct, operate, or modify natural gas and hydropower infrastructure by ensuring that facilities are constructed and operated in compliance with the conditions of FERC orders. The Commission must respond to energy infrastructure applications with timely and well-reasoned decisions that balance a range of factors such as competing interests, legal requirements, and environmental impacts. 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.

The Commission also has an important role in ensuring that energy infrastructure, once authorized, continues to operate safely and reliably. FERC conducts timely safety reviews and inspections with rigorous requirements, thereby advancing the safety of non-federal hydropower projects and LNG facilities throughout their entire life cycle. The Commission relies on physical inspections for detecting and preventing potential catastrophic structural failures. In regards to jurisdictional LNG facilities, the Commission conducts construction and operational inspections to ensure that the facilities are constructed and operated in accordance with the conditions of Commission Orders, including safety measures and plans. Inspections at both types of facilities protect the public against the risks associated with incidents at the facilities.

The Commission also oversees the development and review of mandatory reliability and security standards for the bulk-power system, as well as compliance with these standards. 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 cyber security and physical protection of the Nation's electric transmission grid. 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, FERC provides leadership, expertise, and assistance in identifying, communicating and developing comprehensive solutions to cyber and physical security risks to energy infrastructure. This is achieved through collaboration with private sector energy industry entities and in coordination with government agencies to research, identify, and share information on threats and vulnerabilities, and to promote voluntary best practices that exceed but are complementary to mandatory regulations thereby improving resilience. The Commission engages with the owners and operators of key critical infrastructure facilities to identify and share threat information, analyze system vulnerabilities, and assist with effective mitigation.

Mission Support through Organizational Excellence.—The public interest is best served when the Commission operates in an efficient, responsive and transparent manner. The Commission pursues this goal by maintaining processes and providing services in accordance with governing statutes,

authoritative guidance, and prevailing best practices. These processes and services help prioritize resource allocations, make prudent investments that yield returns that directly benefit the agency's mission and use Commission resources in an efficient manner. The Commission also provides services, tools, and resources to equip employees to drive success and accomplish the agency's mission. The Commission thus makes continued investments in its human capital, information technology (IT) resources, and physical infrastructure. The Commission allocates 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 its staff to retirement. The Commission also will maintain disciplined information technology planning and governance and pursue a number of 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 multi-year renovation effort within its headquarters building which commenced in FY 2018 and will conclude in FY 2021. The renovation project will enable the agency to realize significant space savings. The FY 2020 request includes approximately \$22.9 million to continue the modernization effort.

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.

Object Classification (in millions of dollars)

Identification code 089-0212-0-1-276	2018 actual	2019 est.	2020 est.
Reimbursable obligations:			
Personnel compensation:			
11.1 Full-time permanent	174	179	182
11.3 Other than full-time permanent	4	6	6
11.5 Other personnel compensation	3	3	3
Total personnel compensation	181	188	191
12.1 Civilian personnel benefits	59	62	63
21.0 Travel and transportation of persons	3	3	3
23.1 Rental payments to GSA	33	35	32
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	10	17	10
25.2 Other services from non-Federal sources	12	15	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	34	35	34
26.0 Supplies and materials	4	4	5
31.0 Equipment	4	21	10
32.0 Land and structures	18	9	16
99.0 Reimbursable obligations	367	398	387
99.5 Adjustment for rounding	2	1	.....
99.9 Total new obligations, unexpired accounts	369	399	387

Employment Summary

Identification code 089-0212-0-1-276	2018 actual	2019 est.	2020 est.
2001 Reimbursable civilian full-time equivalent employment	1,428	1,465	1,465

CLEAN COAL TECHNOLOGY

Program and Financing (in millions of dollars)

Identification code 089-0235-0-1-271	2018 actual	2019 est.	2020 est.
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	2	2	2
1930 Total budgetary resources available	2	2	2
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	2	2	2
4180 Budget authority, net (total)			
4190 Outlays, net (total)			

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	2018 actual	2019 est.	2020 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	6	6	
3020 Outlays (gross)		-6	
3050 Unpaid obligations, end of year	6		
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	6	6	
3200 Obligated balance, end of year	6		
Budget authority and outlays, net:			
Mandatory:			
Outlays, gross:			
4101 Outlays from mandatory balances		6	
4180 Budget authority, net (total)			
4190 Outlays, net (total)		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	2018 actual	2019 est.	2020 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%)	5	5	5
2000 Total: Balances and receipts	5	5	5
Appropriations:			
Current law:			
2101 Payments to States under Federal Power Act	-5	-5	-5
5099 Balance, end of year			

Program and Financing (in millions of dollars)

Identification code 089-5105-0-2-806	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 Payments to States under Federal Power Act (Direct)	5	5	5
0900 Total new obligations, unexpired accounts (object class 41.0)	5	5	5
Budgetary resources:			
Budget authority:			
Appropriations, mandatory:			
1201 Appropriation (special or trust fund)	5	5	5
1930 Total budgetary resources available	5	5	5
Change in obligated balance:			
Unpaid obligations:			
3010 New obligations, unexpired accounts	5	5	5
3020 Outlays (gross)	-5	-5	-5
Budget authority and outlays, net:			
Mandatory:			
4090 Budget authority, gross	5	5	5
Outlays, gross:			
4100 Outlays from new mandatory authority	5	5	5
4180 Budget authority, net (total)	5	5	5
4190 Outlays, net (total)	5	5	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.), \$10,000,000, to remain available until expended. Notwithstanding section 183 of the Energy Policy and Conservation Act (42 U.S.C. 6250b), the Secretary of Energy shall draw down and sell all barrels of petroleum distillate from the Northeast Home Heating Oil Reserve during fiscal year 2020: Provided, That notwithstanding section 184 of the Energy Policy and Conservation Act (42 U.S.C. 6250c), all proceeds collected from such sale shall be deposited into the general fund of the Treasury during fiscal year 2020: Provided further, That upon the completion of such sale, the Secretary shall carry out the closure of the Northeast Home Heating Oil Reserve. (Energy and Water Development and Related Agencies Appropriations Act, 2019.)

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5369-0-2-274	2018 actual	2019 est.	2020 est.
0100 Balance, start of year	1	1	1
Receipts:			
Current law:			
1130 Sale of Northeast Home Heating Oil Reserve			82
2000 Total: Balances and receipts	1	1	83
5099 Balance, end of year	1	1	83

Program and Financing (in millions of dollars)

Identification code 089-5369-0-2-274	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 NEHHOR	10	10	
0900 Total new obligations, unexpired accounts (object class 25.2)	10	10	
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	4	1	1
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	7	10	
1930 Total budgetary resources available	11	11	1
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	1	1	1

NORTHEAST HOME HEATING OIL RESERVE—Continued
Program and Financing—Continued

Identification code 089-5369-0-2-274	2018 actual	2019 est.	2020 est.
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	5	6	8
3010 New obligations, unexpired accounts	10	10	.....
3020 Outlays (gross)	-9	-8	-4
3050 Unpaid obligations, end of year	6	8	4
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	5	6	8
3200 Obligated balance, end of year	6	8	4
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	7	10	.....
Outlays, gross:			
4010 Outlays from new discretionary authority .....	.....	8	.....
4011 Outlays from discretionary balances	9	.....	4
4020 Outlays, gross (total)	9	8	4
4180 Budget authority, net (total)	7	10	.....
4190 Outlays, net (total)	9	8	4

The Northeast Home Heating Oil Reserve (NEHHOR) was established to provide an emergency supply of home heating oil for the Northeast States during times of inventory shortages and significant threats to immediate supply. However, the NEHHOR has not been used for its intended purpose since it was established and the Administration does not believe the reserve is a prudent ongoing use of taxpayer resources. For this reason, the Budget proposes to disestablish the NEHHOR by allowing the current commercial storage contracts to expire in March 2020 and, relatedly, no FY 2020 appropriation is requested. Prior to the contractual expiration, the Budget proposes to sell the one million barrels of ultra-low sulfur distillate currently held in the reserve, with proceeds from the sale intended for deficit reduction.

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 "NWPA"), 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 NWPA: 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 NWPA, to conduct appropriate activities and participate in licensing activities under Section 116(c) of the NWPA: 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 NWPA, 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 NWPA: 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 NWPA: 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 NWPA 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 NWPA, 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	2018 actual	2019 est.	2020 est.
0100 Balance, start of year	37,228	38,763	40,464
Receipts:			
Current law:			
1130 Nuclear Waste Disposal Fund .....	.....	145	376
1140 Earnings on Investments, Nuclear Waste Disposal Fund	1,539	1,560	1,628
1199 Total current law receipts	1,539	1,705	2,004
1999 Total receipts	1,539	1,705	2,004
2000 Total: Balances and receipts	38,767	40,468	42,468
Appropriations:			
Current law:			
2101 Nuclear Waste Disposal .....	.....	.....	-90
2101 Salaries and Expenses .....	.....	.....	-39
2101 Salaries and Expenses	-4	-4	-4
2199 Total current law appropriations	-4	-4	-133
2999 Total appropriations	-4	-4	-133
5099 Balance, end of year	38,763	40,464	42,335

Program and Financing (in millions of dollars)

Identification code 089-5227-0-2-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 Repository	2	.....	90
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	9	7	7
Budget authority:			
Appropriations, discretionary:			
1101 Appropriation (special or trust fund) .....	.....	.....	90
1930 Total budgetary resources available	9	7	97
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	7	7	7
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	7	6	1
3010 New obligations, unexpired accounts	2	.....	90
3020 Outlays (gross)	-3	-5	-36
3050 Unpaid obligations, end of year	6	1	55
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	7	6	1
3200 Obligated balance, end of year	6	1	55
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	3	5	.....
4020 Outlays, gross (total)	3	5	36
4180 Budget authority, net (total) .....	.....	.....	90
4190 Outlays, net (total)	3	5	36
Memorandum (non-add) entries:			
5000 Total investments, SOY: Federal securities: Par value	53,013	53,449	55,149
5001 Total investments, EOY: Federal securities: Par value	53,449	55,149	56,687

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 2020 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 2020 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 storage capability.

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 and 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	2018 actual	2019 est.	2020 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent			88
11.9 Total personnel compensation			88
25.1 Advisory and assistance services	1		1
25.2 Other services from non-Federal sources	1		1
99.9 Total new obligations, unexpired accounts	2		90

Employment Summary

Identification code 089-5227-0-2-271	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment			90

URANIUM SUPPLY AND ENRICHMENT ACTIVITIES

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5226-0-2-271	2018 actual	2019 est.	2020 est.
0100 Balance, start of year	861		
2000 Total: Balances and receipts	861		
Appropriations:			
Current law:			
2101 Uranium Enrichment Decontamination and Decommissioning Fund	-861		
5099 Balance, end of year			

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. In the 2019 Budget, the Administration proposed and Congress enacted the transfer of amounts remaining in this account to the UED&D Fund due to higher-than-expected cleanup costs. Funding transferred is 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, **[\$841,129,000] \$715,112,000**, to be derived from the Uranium Enrichment Decontamination and Decommissioning Fund, to remain available until expended, of which **[\$11,000,000] \$21,035,000** shall be available in accordance with title X, subtitle A, of the Energy Policy Act of 1992 **[**, including for the purchase of not to exceed one ambulance for replacement only**]**. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5231-0-2-271	2018 actual	2019 est.	2020 est.
0100 Balance, start of year	2,119	2,191	1,405
Receipts:			
Current law:			
1140 Earnings on Investments, Decontamination and Decommissioning Fund	51	55	58
2000 Total: Balances and receipts	2,170	2,246	1,463
Appropriations:			
Current law:			
2101 Uranium Enrichment Decontamination and Decommissioning Fund	-840	-841	-715
2134 Uranium Enrichment Decontamination and Decommissioning Fund	861		
2199 Total current law appropriations	21	-841	-715
2999 Total appropriations	21	-841	-715
5099 Balance, end of year	2,191	1,405	748

Program and Financing (in millions of dollars)

Identification code 089-5231-0-2-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 Oak Ridge	197	195	109
0002 Paducah	206	206	207
0003 Portsmouth	384	408	356
0004 Pension and Community and Regulatory Support	21	21	22
0005 Title X Uranium/Thorium Reimbursement Program	36	11	21
0900 Total new obligations, unexpired accounts	844	841	715

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	12	13	13
1021 Recoveries of prior year unpaid obligations	5		
1050 Unobligated balance (total)	17	13	13
Budget authority:			
Appropriations, discretionary:			
1101 Appropriation (special or trust fund)	840	841	715
1101 Appropriation (special or trust fund)	861		
1134 Appropriations precluded from obligation	-861		
1160 Appropriation, discretionary (total)	840	841	715
Spending authority from offsetting collections, discretionary:			
1711 Spending authority from offsetting collections transferred from other accounts [486-4054]			1,695
1725 Spending authority from offsetting collections precluded from obligation (limitation on obligations)			-1,695
1900 Budget authority (total)	840	841	715
1930 Total budgetary resources available	857	854	728
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	13	13	13

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	242	263	239
3010 New obligations, unexpired accounts	844	841	715
3020 Outlays (gross)	-818	-865	-752
3040 Recoveries of prior year unpaid obligations, unexpired	-5		
3050 Unpaid obligations, end of year	263	239	202
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	242	263	239
3200 Obligated balance, end of year	263	239	202

URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING FUND—Continued

Program and Financing—Continued

Identification code 089-5231-0-2-271	2018 actual	2019 est.	2020 est.
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	840	841	715
Outlays, gross:			
4010 Outlays from new discretionary authority	641	589	500
4011 Outlays from discretionary balances	177	276	252
4020 Outlays, gross (total)	818	865	752
4180 Budget authority, net (total)	840	841	715
4190 Outlays, net (total)	818	865	752
Memorandum (non-add) entries:			
5000 Total investments, SOY: Federal securities: Par value	2,340	2,468	1,682
5001 Total investments, EOY: Federal securities: Par value	2,468	1,682	2,720

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	2018 actual	2019 est.	2020 est.
Direct obligations:			
25.1 Advisory and assistance services	4	4	3
25.2 Other services from non-Federal sources	43	43	36
25.4 Operation and maintenance of facilities	755	752	640
32.0 Land and structures	41	41	35
41.0 Grants, subsidies, and contributions	1	1	1
99.9 Total new obligations, unexpired accounts	844	841	715

URANIUM SALES AND REMEDIATION

Program and Financing (in millions of dollars)

Identification code 089-5530-0-2-271	2018 actual	2019 est.	2020 est.
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1		2	2
1021 Recoveries of prior year unpaid obligations	2		
1050 Unobligated balance (total)	2	2	2
1930 Total budgetary resources available	2	2	2
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	2		
3040 Recoveries of prior year unpaid obligations, unexpired	-2		
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	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	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0801 Isotope Production and Distribution Reimbursable program	113	112	112
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	19	20	20
1021 Recoveries of prior year unpaid obligations	2		
1050 Unobligated balance (total)	21	20	20
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected	112	112	112
1930 Total budgetary resources available	133	132	132
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	20	20	20
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	54	84	4
3010 New obligations, unexpired accounts	113	112	112
3020 Outlays (gross)	-81	-192	-112
3040 Recoveries of prior year unpaid obligations, unexpired	-2		
3050 Unpaid obligations, end of year	84	4	4
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	54	84	4
3200 Obligated balance, end of year	84	4	4

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	112	112	112
Outlays, gross:			
4010 Outlays from new discretionary authority	22	112	112
4011 Outlays from discretionary balances	59	80	
4020 Outlays, gross (total)	81	192	112
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-41	-41	-41
4033 Non-Federal sources	-71	-71	-71
4040 Offsets against gross budget authority and outlays (total)	-112	-112	-112
4080 Outlays, net (discretionary)	-31	80	
4180 Budget authority, net (total)			
4190 Outlays, net (total)	-31	80	

Object Classification (in millions of dollars)

Identification code 089-4180-0-3-271	2018 actual	2019 est.	2020 est.
Reimbursable obligations:			
25.2 Other services from non-Federal sources	6	6	6
25.4 Operation and maintenance of facilities	79	78	78
31.0 Equipment	24	24	24
32.0 Land and structures	1	1	1
41.0 Grants, subsidies, and contributions	3	3	3
99.9 Total new obligations, unexpired accounts	113	112	112

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING LOAN PROGRAM

(INCLUDING CANCELLATION OF FUNDS)

【For Department of Energy administrative expenses necessary in carrying out the Advanced Technology Vehicles Manufacturing Loan Program, \$5,000,000, to remain available until September 30, 2020.】 *The unobligated balances available from amounts appropriated for the costs of direct loans in section 129 of the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009 (Public Law 110-329) are hereby permanently cancelled. (Energy and Water Development and Related Agencies Appropriations Act, 2019.)*

Program and Financing (in millions of dollars)

Identification code 089-0322-0-1-272	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
Credit program obligations:			
0706 Interest on reestimates of direct loan subsidy	103		
0709 Administrative expenses	4	5	5
0900 Total new obligations, unexpired accounts	107	5	5
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	4,337	4,338	4,338
1001 Discretionary unobligated balance brought fwd, Oct 1	4,337	4,338	
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	5	5	
1131 Unobligated balance of appropriations permanently reduced			-4,333
1160 Appropriation, discretionary (total)	5	5	-4,333
Appropriations, mandatory:			
1200 Appropriation	103		
1900 Budget authority (total)	108	5	-4,333
1930 Total budgetary resources available	4,445	4,343	5
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	4,338	4,338	
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	3	2	1
3010 New obligations, unexpired accounts	107	5	5
3020 Outlays (gross)	-108	-6	-1
3050 Unpaid obligations, end of year	2	1	5
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	3	2	1
3200 Obligated balance, end of year	2	1	5
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	5	5	-4,333
Outlays, gross:			
4010 Outlays from new discretionary authority		5	
4011 Outlays from discretionary balances	5	1	1
4020 Outlays, gross (total)	5	6	1
Mandatory:			
4090 Budget authority, gross	103		
Outlays, gross:			
4100 Outlays from new mandatory authority	103		
4180 Budget authority, net (total)	108	5	-4,333
4190 Outlays, net (total)	108	6	1

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

Identification code 089-0322-0-1-272	2018 actual	2019 est.	2020 est.
Direct loan reestimates:			
135001 Direct Auto Loans	29	-22	
Administrative expense data:			
3510 Budget authority	5	5	
3580 Outlays from balances	5	6	1

Section 136 of the Energy Independence and Security Act of 2007 established a direct loan program with a loan authority up to \$25 billion to support the development of advanced technology vehicles and associated components in the United States, known as the Advanced Technology Vehicles Manufacturing (ATVM) Loan Program. The Consolidated Security, Disaster, Assistance, and Continuing Appropriation Act of 2009, enacted on September 30, 2008, appropriated \$7.5 billion in emergency designated budget authority for credit subsidy. The ATVM Loan Program 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.

The 2020 Budget eliminates the ATVM Loan Program and proposes to cancel \$4.3 billion in remaining emergency designated, appropriated, credit subsidy. LPO will utilize unobligated non-emergency designated

balances carried forward to cover loan-portfolio monitoring and administrative expenses. In FY 2020, LPO will stop originating loans for the ATVM Loan Program but will continue to monitor the existing portfolio.

Object Classification (in millions of dollars)

Identification code 089-0322-0-1-272	2018 actual	2019 est.	2020 est.
Direct obligations:			
11.1 Personnel compensation: Full-time permanent	1	1	1
25.1 Advisory and assistance services	2		
25.3 Other goods and services from Federal sources	1	4	4
41.0 Grants, subsidies, and contributions	103		
99.9 Total new obligations, unexpired accounts	107	5	5

Employment Summary

Identification code 089-0322-0-1-272	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	9	12	12

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING DIRECT LOAN FINANCING ACCOUNT

Program and Financing (in millions of dollars)

Identification code 089-4579-0-3-272	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
Credit program obligations:			
0715 Interest paid to FFB	60	46	32
0742 Downward reestimates paid to receipt accounts	74	18	
0743 Interest on downward reestimates		5	
0900 Total new obligations, unexpired accounts	134	69	32
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	100	89	35
1023 Unobligated balances applied to repay debt	-82	-76	-28
1050 Unobligated balance (total)	18	13	7
Financing authority:			
Spending authority from offsetting collections, mandatory:			
1800 Collected	756	606	593
1825 Spending authority from offsetting collections applied to repay debt	-551	-515	-563
1850 Spending auth from offsetting collections, mand (total)	205	91	30
1900 Budget authority (total)	205	91	30
1930 Total budgetary resources available	223	104	37
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	89	35	5
Change in obligated balance:			
Unpaid obligations:			
3010 New obligations, unexpired accounts	134	69	32
3020 Outlays (gross)	-134	-69	-32
Financing authority and disbursements, net:			
Mandatory:			
4090 Budget authority, gross	205	91	30
Financing disbursements:			
4110 Outlays, gross (total)	134	69	32
Offsets against gross financing authority and disbursements:			
Offsetting collections (collected) from:			
4120 Upward Reestimate	-103		
4122 Interest on uninvested funds	-3	-2	-1
4123 Non-Federal sources (interest)	-59	-43	-30
4123 Non-Federal sources (principal)	-591	-561	-562
4130 Offsets against gross budget authority and outlays (total)	-756	-606	-593
4160 Budget authority, net (mandatory)	-551	-515	-563
4170 Outlays, net (mandatory)	-622	-537	-561
4180 Budget authority, net (total)	-551	-515	-563
4190 Outlays, net (total)	-622	-537	-561

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING DIRECT LOAN FINANCING
ACCOUNT—Continued

Status of Direct Loans (in millions of dollars)

Identification code 089-4579-0-3-272	2018 actual	2019 est.	2020 est.
Position with respect to appropriations act limitation on obligations:			
1121 Limitation available from carry-forward	17,719	17,719	17,719
1143 Unobligated limitation carried forward (PL. 110-329) (-)	-17,719	-17,719	-17,719
Cumulative balance of direct loans outstanding:			
1210 Outstanding, start of year	2,800	2,209	1,648
1251 Repayments: Repayments and prepayments	-591	-561	-562
1290 Outstanding, end of year	2,209	1,648	1,086

Balance Sheet (in millions of dollars)

Identification code 089-4579-0-3-272	2017 actual	2018 actual
ASSETS:		
Federal assets:		
1101 Fund balances with Treasury	100	89
Investments in U.S. securities:		
1106 Receivables, net	111	.....
Net value of assets related to post-1991 direct loans receivable:		
1401 Direct loans receivable, gross	2,800	2,209
1402 Interest receivable	3	2
1405 Allowance for subsidy cost (-)	-90	-69
1499 Net present value of assets related to direct loans	2,713	2,142
1999 Total assets	2,924	2,231
LIABILITIES:		
Federal liabilities:		
2101 Accounts payable .....	.....	.....
2103 Debt	2,842	2,209
2105 Other	82	22
2999 Total liabilities	2,924	2,231
NET POSITION:		
3300 Cumulative results of operations .....	.....	.....
4999 Total upward reestimate subsidy BA [89-0322]	2,924	2,231

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 of the Title 17 Innovative Technology Loan Guarantee Program, as authorized, **[\$33,000,000]** \$3,000,000 is appropriated **[.]** from fees collected in prior years pursuant to section 1702(h) of the Energy Policy Act of 2005 which are not otherwise appropriated, to remain available until September 30, **[2020]** 2021: *Provided further*, That if the amount in the previous proviso is not available from such fees, an amount for such purposes is also appropriated from the general fund so as to result in a total amount appropriated for such purposes of no more than **[up to \$33,000,000]** \$3,000,000: *Provided further*, That **[of]** fees collected **[in fiscal year 2019]** pursuant to such section 1702(h) **[of the Energy Policy Act of 2005]** for fiscal year 2020 shall be credited as offsetting collections under this heading and shall not be available until appropriated: **[used for necessary administrative expenses in this appropriation and shall remain available until September 30, 2020: Provided further, That to the extent that fees collected in fiscal year 2019 exceed \$33,000,000, those excess amounts shall be credited as offsetting collections under this heading and available in future fiscal years only to the extent provided in advance in appropriations Acts: *Provided further*, That the sum herein appropriated from the general fund shall be reduced (1) as such fees are received during fiscal year 2019 (estimated at \$15,000,000) and (2) to the extent that any remaining general fund appropriations can be derived from fees collected in previous fiscal years that are not otherwise appropriated, so as to result in a final fiscal year 2019 appropriation from the general fund estimated at \$0: *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 loan guarantee commitments, as defined in the Federal Credit Reform Act of 1990 (2 U.S.C. 661a), made by October 1, 2019, is hereby permanently cancelled: *Provided further*, That the unobligated balances from prior year appropriations Acts, including amounts available under this heading in the American Recovery and Reinvestment Act of 2009 (Public Law 111-5), for the cost to guarantee loans are hereby permanently cancelled. (Energy and Water Development and Related Agencies Appropriations Act, 2019.)

Program and Financing (in millions of dollars)

Identification code 089-0208-0-1-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
Credit program obligations:			
0706 Interest on reestimates of direct loan subsidy	1	12	.....
0709 Administrative expenses	26	26	26
0900 Total new obligations, unexpired accounts	27	38	26

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	666	715	716
1001 Discretionary unobligated balance brought fwd, Oct 1	1	715	.....
1021 Recoveries of prior year unpaid obligations	42	.....	.....
1050 Unobligated balance (total)	708	715	716
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	9	11	.....
1131 Unobligated balance of appropriations permanently reduced .....	.....	.....	-161
1131 Unobligated balance of appropriations permanently reduced [Recovery Act Emergency Balances] .....	.....	.....	-523
1160 Appropriation, discretionary (total)	9	11	-684
Appropriations, mandatory:			
1200 Appropriation	1	12	.....
Spending authority from offsetting collections, discretionary:			
1700 Collected	2	20	3
1702 Offsetting collections (previously unavailable)	24	2	.....
1725 Spending authority from offsetting collections precluded from obligation (limitation on obligations)	-2	.....	.....
1750 Spending auth from offsetting collections, disc (total)	24	22	3
1900 Budget authority (total)	34	45	-681
1930 Total budgetary resources available	742	760	35
Memorandum (non-add) entries:			
1940 Unobligated balance expiring .....	.....	-6	-9
1941 Unexpired unobligated balance, end of year	715	716	.....

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	56	18	20
3010 New obligations, unexpired accounts	27	38	26
3020 Outlays (gross)	-23	-36	-36
3040 Recoveries of prior year unpaid obligations, unexpired	-42	.....	.....
3050 Unpaid obligations, end of year	18	20	10
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	56	18	20
3200 Obligated balance, end of year	18	20	10

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	33	33	-681
Outlays, gross:			
4011 Outlays from discretionary balances	22	24	36
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4033 Non-Federal sources	-2	-20	-3
4040 Offsets against gross budget authority and outlays (total)	-2	-20	-3
Mandatory:			
4090 Budget authority, gross	1	12	.....
Outlays, gross:			
4100 Outlays from new mandatory authority	1	12	.....
4180 Budget authority, net (total)	32	25	-684
4190 Outlays, net (total)	21	16	33

Memorandum (non-add) entries:

5090 Unexpired unavailable balance, SOY: Offsetting collections	24	2	.....
5092 Unexpired unavailable balance, EOY: Offsetting collections	2	.....	.....

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

Identification code 089-0208-0-1-271	2018 actual	2019 est.	2020 est.
Direct loan levels supportable by subsidy budget authority:			
115001 Section 1703 FFB Loans (Self Pay)		3,703	
115999 Total direct loan levels		3,703	
Direct loan subsidy (in percent):			
132001 Section 1703 FFB Loans (Self Pay)		-2.69	
132999 Weighted average subsidy rate		-2.69	
Direct loan subsidy budget authority:			
133001 Section 1703 FFB Loans (Self Pay)		-100	
133999 Total subsidy budget authority		-100	
Direct loan subsidy outlays:			
134001 Section 1703 FFB Loans (Self Pay)		-107	-15
134999 Total subsidy outlays		-107	-15
Direct loan reestimates:			
135001 Section 1703 FFB Loans (Self Pay)		-52	-91
135002 Section 1705 FFB Loans		-196	-138
135999 Total direct loan reestimates		-248	-229
Guaranteed loan reestimates:			
235002 Section 1705 Loan Guarantees		-9	-22
235999 Total guaranteed loan reestimates		-9	-22

The Title 17 Innovative Technology Loan Guarantee Program (Title 17), as authorized by the Energy Policy Act of 2005 (the Act) 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 Title 17 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. The FY 2020 Budget maintains current Administration policy to eliminate this program, while maintaining portfolio monitoring capabilities.

The FY 2020 Budget proposes to permanently cancel the approximate \$161 million in remaining credit subsidy and all authority to guarantee loans appropriated in prior appropriations acts. In addition to \$3,000,000 in appropriation offset by an estimated \$3,000,000 in fee collections, LPO will utilize unobligated balances carried forward to cover loan portfolio monitoring and administrative expenses. In FY 2020, LPO will stop originating loans for the Title 17 Loan Guarantee Program but will continue to monitor the existing portfolio.

The American Reinvestment and Recovery Act of 2009 (Public Law 111-5) amended the program's authorizing statute and provided \$2.5 billion in emergency designated 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 the expiration of the authority, DOE provided loan guarantees to 28 projects totaling over \$16 billion in loan volume. Four projects withdrew prior to disbursement of any funds. The FY 2020 Budget proposes to cancel all remaining unobligated, emergency designated, credit subsidy appropriated by the American Reinvestment and Recovery Act of 2009 (Public Law 111-5).

Object Classification (in millions of dollars)

Identification code 089-0208-0-1-271	2018 actual	2019 est.	2020 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent	11	11	11
11.9 Total personnel compensation	11	11	11
12.1 Civilian personnel benefits	4	4	4

25.1	Advisory and assistance services	6	6	6
25.3	Other goods and services from Federal sources	3	3	3
25.4	Operation and maintenance of facilities	1	1	1
25.7	Operation and maintenance of equipment	1	1	1
41.0	Grants, subsidies, and contributions	1	12	
99.0	Direct obligations	27	38	26
99.9	Total new obligations, unexpired accounts	27	38	26

Employment Summary

Identification code 089-0208-0-1-271	2018 actual	2019 est.	2020 est.	
1001	Direct civilian full-time equivalent employment	82	79	77

TITLE 17 INNOVATIVE TECHNOLOGY DIRECT LOAN FINANCING ACCOUNT

Program and Financing (in millions of dollars)

Identification code 089-4455-0-3-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
Credit program obligations:			
0710	Direct loan obligations	3,703	
0713	Payment of interest to Treasury	13	20
0715	Interest paid to FFB	310	391
0740	Negative subsidy obligations		100
0742	Downward reestimates paid to receipt accounts	216	205
0743	Interest on downward reestimates	33	35
0900	Total new obligations, unexpired accounts	572	4,454

Budgetary resources:			
Unobligated balance:			
1000	Unobligated balance brought forward, Oct 1	1,034	863
1021	Recoveries of prior year unpaid obligations	143	
1023	Unobligated balances applied to repay debt	-256	-132
1024	Unobligated balance of borrowing authority withdrawn	-143	
1050	Unobligated balance (total)	778	731
Financing authority:			
Borrowing authority, mandatory:			
1400	Borrowing authority	149	3,998
Spending authority from offsetting collections, mandatory:			
1800	Collected	648	532
1801	Change in uncollected payments, Federal sources	-44	
1825	Spending authority from offsetting collections applied to repay debt	-96	-82
1850	Spending auth from offsetting collections, mand (total)	508	450
1900	Budget authority (total)	657	4,448
1930	Total budgetary resources available	1,435	5,179
Memorandum (non-add) entries:			
1941	Unexpired unobligated balance, end of year	863	725

Change in obligated balance:			
Unpaid obligations:			
3000	Unpaid obligations, brought forward, Oct 1	2,770	2,626
3010	New obligations, unexpired accounts	572	4,454
3020	Outlays (gross)	-573	-3,924
3040	Recoveries of prior year unpaid obligations, unexpired	-143	
3050	Unpaid obligations, end of year	2,626	3,156
Uncollected payments:			
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-44	
3070	Change in uncollected pymts, Fed sources, unexpired	44	
Memorandum (non-add) entries:			
3100	Obligated balance, start of year	2,726	2,626
3200	Obligated balance, end of year	2,626	3,156

Financing authority and disbursements, net:			
Mandatory:			
4090	Budget authority, gross	657	4,448
Financing disbursements:			
4110	Outlays, gross (total)	573	3,924
Offsets against gross financing authority and disbursements:			
Offsetting collections (collected) from:			
4120	Payment from program account	-1	
4120	Interest on reestimate		-12
4122	Interest on uninvested funds	-26	-66
4123	Interest payments	-293	-282
4123	Principal payments	-328	-172
4130	Offsets against gross budget authority and outlays (total)	-648	-532

TITLE 17 INNOVATIVE TECHNOLOGY DIRECT LOAN FINANCING ACCOUNT—Continued
Program and Financing—Continued

Identification code 089-4455-0-3-271	2018 actual	2019 est.	2020 est.
Additional offsets against financing authority only (total):			
4140 Change in uncollected pymts, Fed sources, unexpired	44		
4160 Budget authority, net (mandatory)	53	3,916	-201
4170 Outlays, net (mandatory)	-75	3,392	-61
4180 Budget authority, net (total)	53	3,916	-201
4190 Outlays, net (total)	-75	3,392	-61

Status of Direct Loans (in millions of dollars)

Identification code 089-4455-0-3-271	2018 actual	2019 est.	2020 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	-22,422	
1150 Total direct loan obligations		3,703	
Cumulative balance of direct loans outstanding:			
1210 Outstanding, start of year	11,649	11,384	14,475
1231 Disbursements: Direct loan disbursements		3,165	266
1251 Repayments: Repayments and prepayments	-328	-172	-251
1261 Adjustments: Capitalized interest	63	98	
1264 Other adjustments, net (+ or -) [Payment of capitalized interest]			-32
1290 Outstanding, end of year	11,384	14,475	14,458

Balance Sheet (in millions of dollars)

Identification code 089-4455-0-3-271	2017 actual	2018 actual
ASSETS:		
Federal assets:		
1101 Fund balances with Treasury	990	861
Investments in U.S. securities:		
1106 Receivables, net	8	23
Net value of assets related to post-1991 direct loans receivable:		
1401 Direct loans receivable, gross	11,649	11,384
1402 Interest receivable	67	67
1405 Allowance for subsidy cost (-)	-739	-475
1499 Net present value of assets related to direct loans	10,977	10,976
1999 Total assets	11,975	11,860
LIABILITIES:		
Federal liabilities:		
2103 Debt	11,784	11,581
2105 Other	191	279
2999 Total liabilities	11,975	11,860
4999 Total liabilities and net position	11,975	11,860

TRIBAL ENERGY LOAN GUARANTEE PROGRAM

(INCLUDING CANCELLATION OF FUNDS)

【For Department of Energy administrative expenses necessary in carrying out the Tribal Energy Loan Guarantee Program, \$1,000,000, to remain available until September 30, 2020.】 *Of the unobligated balances available under this heading for the cost of loan guarantees, \$8,500,000 are hereby permanently cancelled. (Energy and Water Development and Related Agencies Appropriations Act, 2019.)*

Program and Financing (in millions of dollars)

Identification code 089-0350-0-1-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
Credit program obligations:			
0709 Administrative expenses	1	1	
0900 Total new obligations, unexpired accounts (object class 99.5)	1	1	
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	9	9	9

Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	1	1	
1131 Unobligated balance of appropriations permanently reduced			-9
1160 Appropriation, discretionary (total)	1	1	-9
1930 Total budgetary resources available	10	10	
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	9	9	

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1			1
3010 New obligations, unexpired accounts	1	1	
3020 Outlays (gross)	-1		
3050 Unpaid obligations, end of year		1	1
Memorandum (non-add) entries:			
3100 Obligated balance, start of year			1
3200 Obligated balance, end of year		1	1

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	1	1	-9
Outlays, gross:			
4011 Outlays from discretionary balances	1		
4180 Budget authority, net (total)	1	1	-9
4190 Outlays, net (total)	1		

Section 2602 of the Energy Policy Act of 1992, as amended by the Energy Policy Act of 2005, authorized a loan guarantee program at the Department of Energy to support energy development by Indian tribes.

The FY 2020 Budget eliminates the Tribal Energy Loan Guarantee Program (TELGP) and proposes to cancel the \$8,500,000 appropriated for credit subsidy. The Loan Program Office will utilize unobligated balances carried forward from prior-year appropriations to cover administrative expenses. In FY 2020, LPO will stop originating loans for TELGP but will continue to monitor any loans that may close by October 1, 2019.

Employment Summary

Identification code 089-0350-0-1-271	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment		5	

TITLE 17 INNOVATIVE TECHNOLOGY GUARANTEED LOAN FINANCING ACCOUNT

Program and Financing (in millions of dollars)

Identification code 089-4577-0-3-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
Credit program obligations:			
0711 Default claim payments on principal		16	11
0712 Default claim payments on interest		4	4
0742 Downward reestimates paid to receipt accounts	8	18	
0743 Interest on downward reestimates	1	5	
0900 Total new obligations, unexpired accounts	9	43	15
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	152	147	109
Financing authority:			
Borrowing authority, mandatory:			
1400 Borrowing authority		2	3
Spending authority from offsetting collections, mandatory:			
1800 Collected	4	3	12
1825 Spending authority from offsetting collections applied to repay debt			-4
1850 Spending auth from offsetting collections, mand (total)	4	3	8
1900 Budget authority (total)	4	5	11
1930 Total budgetary resources available	156	152	120
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	147	109	105
Change in obligated balance:			
Unpaid obligations:			
3010 New obligations, unexpired accounts	9	43	15

3020	Outlays (gross)	-9	-43	-15
	Uncollected payments:			
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-9	-9	-9
3090	Uncollected pymts, Fed sources, end of year	-9	-9	-9
	Memorandum (non-add) entries:			
3100	Obligated balance, start of year	-9	-9	-9
3200	Obligated balance, end of year	-9	-9	-9
Financing authority and disbursements, net:				
	Mandatory:			
4090	Budget authority, gross	4	5	11
	Financing disbursements:			
4110	Outlays, gross (total)	9	43	15
	Offsets against gross financing authority and disbursements:			
	Offsetting collections (collected) from:			
4122	Interest on uninvested funds	-4	-3	-3
4123	Principal payments			-7
4123	Interest Payments			-2
4130	Offsets against gross budget authority and outlays (total)	-4	-3	-12
4160	Budget authority, net (mandatory)		2	-1
4170	Outlays, net (mandatory)	5	40	3
4180	Budget authority, net (total)		2	-1
4190	Outlays, net (total)	5	40	3

Status of Guaranteed Loans (in millions of dollars)

Identification code 089-4577-0-3-271	2018 actual	2019 est.	2020 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	2,770	2,649	2,528
2231	Disbursements of new guaranteed loans			
2251	Repayments and prepayments	-121	-105	-133
2261	Adjustments: Terminations for default that result in loans receivable		-16	-11
2290	Outstanding, end of year	2,649	2,528	2,384
Memorandum:				
2299	Guaranteed amount of guaranteed loans outstanding, end of year	2,119	2,022	1,907
Addendum:				
Cumulative balance of defaulted guaranteed loans that result in loans receivable:				
2310	Outstanding, start of year			20
2331	Disbursements for guaranteed loan claims		16	11
2351	Repayments of loans receivable			-9
2364	Other adjustments, net		4	4
2390	Outstanding, end of year		20	26

Balance Sheet (in millions of dollars)

Identification code 089-4577-0-3-271	2017 actual	2018 actual	
ASSETS:			
Federal assets:			
1101	Fund balances with Treasury	142	138
	Investments in U.S. 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	142	138
LIABILITIES:			
Federal liabilities:			
2101	Accounts payable		
2105	Other	8	22
2204	Non-Federal liabilities: Liabilities for loan guarantees	134	116
2999	Total liabilities	142	138
NET POSITION:			
3300	Cumulative results of operations		
4999	Total liabilities and net position	142	138

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.

OPERATION AND MAINTENANCE, SOUTHEASTERN POWER ADMINISTRATION

For expenses necessary for operation and maintenance of power transmission facilities and for 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 area, **[\$6,500,000] \$6,597,000**, 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 **[\$6,500,000] \$6,597,000** 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 **[2019] 2020** appropriation estimated at not more than \$0: *Provided further*, That notwithstanding 31 U.S.C. 3302, up to **[\$55,000,000] \$65,715,000** collected by the Southeastern 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). (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Program and Financing (in millions of dollars)

Identification code 089-0302-0-1-271	2018 actual	2019 est.	2020 est.	
Obligations by program activity:				
0801	Purchase Power and Wheeling	55	55	66
0802	Annual Expenses and other costs repaid in one year	7	7	7
0900	Total new obligations, unexpired accounts	62	62	73
Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	20	14	14
Budget authority:				
Spending authority from offsetting collections, discretionary:				
1700	Collected	56	62	73
1900	Budget authority (total)	56	62	73
1930	Total budgetary resources available	76	76	87
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	14	14	14
Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	8	6	2
3010	New obligations, unexpired accounts	62	62	73
3020	Outlays (gross)	-64	-66	-72
3050	Unpaid obligations, end of year	6	2	3
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	8	6	2
3200	Obligated balance, end of year	6	2	3
Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	56	62	73
Outlays, gross:				
4010	Outlays from new discretionary authority	36	60	70
4011	Outlays from discretionary balances	28	6	2
4020	Outlays, gross (total)	64	66	72

OPERATION AND MAINTENANCE, SOUTHEASTERN POWER ADMINISTRATION—Continued
Program and Financing—Continued

Identification code 089-0302-0-1-271	2018 actual	2019 est.	2020 est.
Offsets against gross budget authority and outlays: Offsetting collections (collected) from:			
4033 Non-Federal sources	-56	-62	-73
4040 Offsets against gross budget authority and outlays (total)	-56	-62	-73
4180 Budget authority, net (total)			
4190 Outlays, net (total)	8	4	-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 \$66 million in 2020.

DISCRETIONARY PURCHASE POWER AND WHEELING, SOUTHEASTERN POWER ADMINISTRATION

	(in millions of dollars)				
	2016 Actual	2017 Actual	2018 Actual	2019 Estimate	2020 Estimate
Limitation to collect, ('up to' ceiling in appropriations language)	67	61	51	55	66
Actual collections	67	61	50	55	66
PPW Unobligated balance brought forward, Oct 1	5	21	17	12	12
Spending authority from offsetting collections	67	61	50	55	66
Obligations incurred	-51	-65	-55	-55	-66
PPW Unobligated balance, end of year	21	17	12	12	12

Reimbursable Program.—The Consolidated Appropriations Act, 2008 (P.L. 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	2018 actual	2019 est.	2020 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	55	55	66
25.2 Other services from non-Federal sources	2	2	2
99.0 Reimbursable obligations	62	62	73
99.9 Total new obligations, unexpired accounts	62	62	73

Employment Summary

Identification code 089-0302-0-1-271	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	40	44	44

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 2018 to finance power purchases associated with heightened demand and cost spikes due to severe cold weather. 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 expenses necessary for operation and maintenance of power transmission facilities and for 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, [\$45,802,000] \$47,775,000, 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 [\$35,402,000] \$37,375,000 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 [2019] 2020 appropriation estimated at not more than \$10,400,000: *Provided further*, That notwithstanding 31 U.S.C. 3302, up to [\$50,000,000] \$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). (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Program and Financing (in millions of dollars)

Identification code 089-0303-0-1-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 Systems operation and maintenance	3	2	2
0003 Construction	5	5	5
0004 Program direction	3	3	3
0200 Direct program subtotal	11	10	10
0799 Total direct obligations	11	10	10
0801 Annual expenses	33	35	37
0805 Purchase power and wheeling	56	50	83
0810 Other reimbursable activities	11	51	51
0899 Total reimbursable obligations	100	136	171
0900 Total new obligations, unexpired accounts	111	146	181

Budgetary resources:
Unobligated balance:

1000 Unobligated balance brought forward, Oct 1	99	69	70
---	----	----	----

Budget authority:				
Appropriations, discretionary:				
1100	Appropriation	11	11	10
Spending authority from offsetting collections, discretionary:				
1700	Collected	70	136	171
1900	Budget authority (total)	81	147	181
1930	Total budgetary resources available	180	216	251
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	69	70	70
Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	86	126	111
3010	New obligations, unexpired accounts	111	146	181
3020	Outlays (gross)	-71	-161	-195
3050	Unpaid obligations, end of year	126	111	97
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	86	126	111
3200	Obligated balance, end of year	126	111	97
Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	81	147	181
Outlays, gross:				
4010	Outlays from new discretionary authority	17	143	177
4011	Outlays from discretionary balances	54	18	18
4020	Outlays, gross (total)	71	161	195
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources	-6	-6	
4033	Non-Federal sources	-70	-130	-165
4040	Offsets against gross budget authority and outlays (total)	-70	-136	-171
4070	Budget authority, net (discretionary)	11	11	10
4080	Outlays, net (discretionary)	1	25	24
4180	Budget authority, net (total)	11	11	10
4190	Outlays, net (total)	1	25	24

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 makes modifications and constructs additions to existing facilities.

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, those that perform cyber and physical security roles, and those that administratively support these functions.

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. Southwestern has implemented a Purchase Power and Wheeling (PPW) risk mitigation strategy to ensure

continuous operations during periods of significant drought. The strategy was developed consistent with existing authorities, and with the participation and support of Southwestern's power customers. Under this approach, Southwestern retains receipts from the recovery of purchase power and wheeling expenses within the 'up to' amount specified by Congress. The receipts retained are available until expended and are available only for PPW expenses. As of the end of FY 2018, Southwestern's PPW reserve balance was \$69 million. Customers will provide other power resources and/or purchases for the remainder of their firm loads.

DISCRETIONARY PURCHASE POWER AND WHEELING, SOUTHWESTERN POWER ADMINISTRATION

	(in millions of dollars)				
	2016 Actual	2017 Actual	2018 Actual	2019 Estimate ¹	2020 Estimate ¹
Limitation to collect, ('up to' ceiling in appropriations language)	63	73	40	50	83
Actual collections	13	17	40	50	83
PPW Unobligated balance brought forward, Oct 1	72	83	85	69	69
Spending authority from offsetting collections	13	17	40	50	83
Obligations incurred	-2	-15	-56	-50	-83
PPW Unobligated balance, end of year	83	85	69	69	69

¹ The FY 2019 and FY 2020 Estimates assume spending authority from offsetting collections equals the 'up to' ceiling and that obligations incurred are the same amount as the spending authority. Actual spending authority from offsetting collections and actual obligations will be dependent upon variability in market prices for PPW and hydrological conditions in Southwestern's region, which vary significantly, are largely unpredictable, and can change quickly.

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	2018 actual	2019 est.	2020 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent	2	2	2
11.9 Total personnel compensation	2	2	2
12.1 Civilian personnel benefits	1	1	1
21.0 Travel and transportation of persons	1	1	
25.2 Other services from non-Federal sources	7	5	6
31.0 Equipment	1	1	1
99.0 Direct obligations	11	10	10
99.0 Reimbursable obligations	100	136	171
99.9 Total new obligations, unexpired accounts	111	146	181

Employment Summary

Identification code 089-0303-0-1-271	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	10	10	10
2001 Reimbursable civilian full-time equivalent employment	165	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	2018 actual	2019 est.	2020 est.
4180 Budget authority, net (total)			
4190 Outlays, net (total)			

CONTINUING FUND, SOUTHWESTERN POWER ADMINISTRATION—Continued
Program and Financing—Continued

Identification code 089-5649-0-2-271	2018 actual	2019 est.	2020 est.
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 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, **[\$265,142,000]** \$262,959,000, including official reception and representation expenses in an amount not to exceed \$1,500, to remain available until expended, of which **[\$265,142,000]** \$262,959,000 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 **[\$175,770,000]** \$173,587,000 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 **[2019]** 2020 appropriation estimated at not more than \$89,372,000, of which \$89,372,000 is derived from the Reclamation Fund: *Provided further*, That notwithstanding 31 U.S.C. 3302, up to **[\$225,442,000]** \$258,881,000 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): *Provided further*, That of the unobligated balances from prior year appropriations available under this heading, \$176,000 is hereby permanently cancelled. (Energy and Water Development and Related Agencies Appropriations Act, 2019.)

Program and Financing (in millions of dollars)

Identification code 089-5068-0-2-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 Systems operation and maintenance	39	50	39
0004 Program direction	44	47	45
0005 Spectrum relocation	1		
0091 Direct Program by Activities - Subtotal (1 level)	84	97	84
0100 Total operating expenses	84	97	84
0101 Capital investment	12	6	6
0799 Total direct obligations	96	103	90
0802 Purchase Power and Wheeling	166	225	258
0803 Annual Expenses	167	176	178
0804 Other Reimbursable	283	599	745
0809 Reimbursable program activities, subtotal	616	1,000	1,181
0899 Total reimbursable obligations	616	1,000	1,181
0900 Total new obligations, unexpired accounts	712	1,103	1,271

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	570	562	548
1021 Recoveries of prior year unpaid obligations	1		
1050 Unobligated balance (total)	571	562	548
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	2		
1101 Appropriation (special or trust fund)	91	89	89
1160 Appropriation, discretionary (total)	93	89	89
Spending authority from offsetting collections, discretionary:			
1700 Collected	614	1,000	1,176
1701 Change in uncollected payments, Federal sources	-4		
1750 Spending auth from offsetting collections, disc (total)	610	1,000	1,176
1900 Budget authority (total)	703	1,089	1,265
1930 Total budgetary resources available	1,274	1,651	1,813
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	562	548	542

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	277	301	474
3010 New obligations, unexpired accounts	712	1,103	1,271
3020 Outlays (gross)	-687	-930	-887
3040 Recoveries of prior year unpaid obligations, unexpired	-1		
3050 Unpaid obligations, end of year	301	474	858
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-36	-32	-32
3070 Change in uncollected pymts, Fed sources, unexpired	4		
3090 Uncollected pymts, Fed sources, end of year	-32	-32	-32
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	241	269	442
3200 Obligated balance, end of year	269	442	826

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	703	1,089	1,265
Outlays, gross:			
4010 Outlays from new discretionary authority	182	340	393
4011 Outlays from discretionary balances	505	590	494
4020 Outlays, gross (total)	687	930	887
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-161	-221	-202
4033 Non-Federal sources	-453	-779	-974
4040 Offsets against gross budget authority and outlays (total)	-614	-1,000	-1,176
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	4		
4070 Budget authority, net (discretionary)	93	89	89
4080 Outlays, net (discretionary)	73	-70	-289
4180 Budget authority, net (total)	93	89	89
4190 Outlays, net (total)	73	-70	-289

Memorandum (non-add) entries:

5080 Outstanding debt, SOY	-11,263	-11,263	-11,263
5081 Outstanding debt, EOY	-11,263	-11,263	-11,263

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 nearly 700 wholesale customers, including DOE's National Labs, more than two dozen U.S. Department of Defense installations, municipalities, cooperatives, irrigation districts, public utility districts, other 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.

WAPA has implemented a Purchase Power and Wheeling (PPW) risk mitigation strategy to ensure continuous operations during periods of significant drought. The strategy was developed consistent with existing authorities, and with the participation and support of WAPA power customers. Under this approach, WAPA retains receipts from the recovery of purchase power and wheeling expenses within the 'up to' amount specified by Congress. The receipts retained are available until expended, and are available only for purchase power and wheeling expenses. As of the end of FY 2018, WAPA's PPW reserve balance was \$282 million.

DISCRETIONARY PURCHASE POWER AND WHEELING, WESTERN AREA POWER ADMINISTRATION¹

	(in millions of dollars)				
	2016 Actual	2017 Actual	2018 Actual	2019 Estimate	2020 Estimate
Limitation to collect, ('up to' ceiling in appropriations language)	353	367	209	225	259
Actual collections	163	209	209	225	259
PPW Unobligated balance brought forward, Oct 1	145	190	239	282	282
Spending authority from offsetting collections	163	209	209	225	259
Obligations incurred	-118	-160	-166	-225	-259
PPW Unobligated balance, end of year	190	239	282	282	282

¹Excludes alternative financing for PPW

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 interconnected 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's reimbursable authority and partnerships were demonstrated following the severe hurricane damage in the U.S. Virgin Islands and Puerto Rico. WAPA responded to the urgent need to restore the energy infrastructure and access to power in the U.S. Virgin Islands and supported the U.S. Army Corps of Engineers' emergency power restoration efforts in Puerto Rico. WAPA also supported responses to natural disasters in Hawaii (volcanic eruption), Guam (typhoon) and California (wild fires).

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	2018 actual	2019 est.	2020 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	19	23	20
11.5 Other personnel compensation	4	3	2
11.9 Total personnel compensation	23	26	22
12.1 Civilian personnel benefits	7	7	6
21.0 Travel and transportation of persons	2	2	2
22.0 Transportation of things	1		
23.1 Rental payments to GSA		2	1
23.3 Communications, utilities, and miscellaneous charges		2	2
25.1 Advisory and assistance services	7	8	8
25.2 Other services from non-Federal sources	17	6	6
25.7 Operation and maintenance of equipment		1	1
26.0 Supplies and materials	2	2	2
31.0 Equipment	12	26	21
32.0 Land and structures	25	21	19
99.0 Direct obligations	96	103	90
99.0 Reimbursable obligations	616	1,000	1,181
99.9 Total new obligations, unexpired accounts	712	1,103	1,271

Employment Summary

Identification code 089-5068-0-2-271	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	166	161	178
2001 Reimbursable civilian full-time equivalent employment	1,000	1,049	1,032

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 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	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0102 Transmission Infrastructure Program Projects		1,025	550
0811 Western Area Power Administration, Borrowing Authority, Recovery (Reimbursable)	7	48	52
0900 Total new obligations, unexpired accounts	7	1,073	602
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	12	12	19
1001 Discretionary unobligated balance brought fwd, Oct 1	6	6	
Budget authority:			
Borrowing authority, mandatory:			
1400 Borrowing authority		1,025	550
Spending authority from offsetting collections, discretionary:			
1700 Collected	3	43	47
Spending authority from offsetting collections, mandatory:			
1800 Collected	4	12	30
1825 Spending authority from offsetting collections applied to repay debt			-25
1850 Spending auth from offsetting collections, mand (total)	4	12	5
1900 Budget authority (total)	7	1,080	602
1930 Total budgetary resources available	19	1,092	621
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	12	19	19

WESTERN AREA POWER ADMINISTRATION, BORROWING AUTHORITY, RECOVERY ACT—Continued
Program and Financing—Continued

Identification code 089-4404-0-3-271	2018 actual	2019 est.	2020 est.
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	25	25	707
3010 New obligations, unexpired accounts	7	1,073	602
3020 Outlays (gross)	-7	-391	-608
3050 Unpaid obligations, end of year	25	707	701
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	25	25	707
3200 Obligated balance, end of year	25	707	701
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	3	43	47
Outlays, gross:			
4010 Outlays from new discretionary authority	1	43	47
4011 Outlays from discretionary balances	3	5	.....
4020 Outlays, gross (total)	4	48	47
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-3	-3	-3
4033 Non-Federal sources .....	.....	-40	-44
4040 Offsets against gross budget authority and outlays (total)	-3	-43	-47
4080 Outlays, net (discretionary)	1	5	.....
Mandatory:			
4090 Budget authority, gross	4	1,037	555
Outlays, gross:			
4100 Outlays from new mandatory authority .....	.....	322	105
4101 Outlays from mandatory balances	3	21	456
4110 Outlays, gross (total)	3	343	561
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4123 Non-Federal sources	-4	-12	-30
4180 Budget authority, net (total) .....	.....	1,025	525
4190 Outlays, net (total) .....	.....	336	531

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

	2018 actual	2019 est.	2020 est.
Enacted/requested:			
Budget Authority	1,025	525
Outlays	336	531
Legislative proposal, subject to PAYGO:			
Budget Authority	-550
Outlays	-550
Total:			
Budget Authority	1,025	-25
Outlays	336	-19

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	2018 actual	2019 est.	2020 est.
25.1 Direct obligations: Advisory and assistance services .....	.....	1,025	550
99.0 Direct obligations .....	.....	1,025	550
Reimbursable obligations:			
11.1 Personnel compensation: Full-time permanent	1	2	2
25.1 Advisory and assistance services .....	.....	7	6
25.2 Other services from non-Federal sources	3	4	3

43.0 Interest and dividends	3	35	41
99.0 Reimbursable obligations	7	48	52
99.9 Total new obligations, unexpired accounts	7	1,073	602

Employment Summary

Identification code 089-4404-0-3-271	2018 actual	2019 est.	2020 est.
2001 Reimbursable civilian full-time equivalent employment	7	18	15

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	2018 actual	2019 est.	2020 est.
Budgetary resources:			
Budget authority:			
Borrowing authority, mandatory:			
1400 Borrowing authority	-550
1900 Budget authority (total)	-550
1930 Total budgetary resources available	-550
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	-550
Change in obligated balance:			
Unpaid obligations:			
3020 Outlays (gross)	550
3050 Unpaid obligations, end of year	550
Memorandum (non-add) entries:			
3200 Obligated balance, end of year	550
Budget authority and outlays, net:			
Mandatory:			
4090 Budget authority, gross	-550
Outlays, gross:			
4100 Outlays from new mandatory authority	-100
4101 Outlays from mandatory balances	-450
4110 Outlays, gross (total)	-550
4180 Budget authority, net (total)	-550
4190 Outlays, net (total)	-550

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	2018 actual	2019 est.	2020 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 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.

FALCON AND AMISTAD OPERATING AND MAINTENANCE FUND

For operation, maintenance, and emergency costs for the hydroelectric facilities at the Falcon and Amistad Dams, **[\$1,568,000]** \$3,160,000, 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 **[\$1,340,000]** \$2,932,000 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 **[2019]** 2020 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 **[2019]** 2020, the Administrator of the Western Area Power Administration may accept up to **[\$372,000]** \$1,187,000 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. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5178-0-2-271	2018 actual	2019 est.	2020 est.
0100 Balance, start of year	9	9	11
Receipts:			
Current law:			
1130 Falcon and Amistad Operating and Maintenance Fund			
Receipts		2	2
2000 Total: Balances and receipts	9	11	13
5099 Balance, end of year	9	11	13

Program and Financing (in millions of dollars)

Identification code 089-5178-0-2-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0801 Reimbursable program activity - Annual expenses	1	4	4
0802 Reimbursable program activity - Alternative Financing			1
0900 Total new obligations, unexpired accounts (object class 25.3)	1	4	5
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1		3	1
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Offsetting collections	4	2	4
1930 Total budgetary resources available	4	5	5
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	3	1	
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	9	6	4
3010 New obligations, unexpired accounts	1	4	5
3020 Outlays (gross)	-4	-6	-7
3050 Unpaid obligations, end of year	6	4	2
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	9	6	4
3200 Obligated balance, end of year	6	4	2
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	4	2	4

Outlays, gross:			
4010 Outlays from new discretionary authority		1	3
4011 Outlays from discretionary balances	4	5	4
4020 Outlays, gross (total)	4	6	7
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4033 Non-Federal sources	-4	-2	-4
4180 Budget authority, net (total)			
4190 Outlays, net (total)		4	3

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. The budget also provides authority to use customer advances. The contributed customer funds will finance the capital replacement requirements of the projects.

COLORADO RIVER BASINS POWER MARKETING FUND, WESTERN AREA POWER ADMINISTRATION

Program and Financing (in millions of dollars)

Identification code 089-4452-0-3-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0801 Program direction	61	63	67
0802 Equipment, Contracts and Related Expenses	76	157	153
0900 Total new obligations, unexpired accounts	137	220	220
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	124	139	139
1021 Recoveries of prior year unpaid obligations	1		
1050 Unobligated balance (total)	125	139	139
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected	151	243	241
1720 Capital transfer of spending authority from offsetting collections to general fund		-23	-21
1750 Spending auth from offsetting collections, disc (total)	151	220	220
1930 Total budgetary resources available	276	359	359
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	139	139	139
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	43	41	62
3010 New obligations, unexpired accounts	137	220	220
3020 Outlays (gross)	-138	-199	-227
3040 Recoveries of prior year unpaid obligations, unexpired	-1		
3050 Unpaid obligations, end of year	41	62	55
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	42	40	61
3200 Obligated balance, end of year	40	61	54
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	151	220	220
Outlays, gross:			
4010 Outlays from new discretionary authority	55	49	49
4011 Outlays from discretionary balances	83	150	178
4020 Outlays, gross (total)	138	199	227
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-5	-5	-5

COLORADO RIVER BASINS POWER MARKETING FUND, WESTERN AREA POWER ADMINISTRATION—Continued

Program and Financing—Continued

Identification code 089-4452-0-3-271	2018 actual	2019 est.	2020 est.
4033 Non-Federal sources	-146	-238	-236
4040 Offsets against gross budget authority and outlays (total)	-151	-243	-241
4070 Budget authority, net (discretionary)		-23	-21
4080 Outlays, net (discretionary)	-13	-44	-14
4180 Budget authority, net (total)		-23	-21
4190 Outlays, net (total)	-13	-44	-14

Western Area Power Administration's (WAPA) operation and maintenance (O&M) and power marketing expenses for the Colorado River Storage Project, the Seedskadee Project, the Dolores Project, the Olmsted Replacement 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.

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.

Olmsted Replacement Project.—This project includes WAPA's expenses for power marketing of hydroelectric power from the Olmsted Power Plant in Northern Utah.

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	2018 actual	2019 est.	2020 est.
Reimbursable obligations:			
Personnel compensation:			
11.1 Full-time permanent	29	30	33
11.5 Other personnel compensation	3	3	3
11.9 Total personnel compensation	32	33	36
12.1 Civilian personnel benefits	11	11	11
20.0 Travel and transportation of persons	2	2	2
22.0 Transportation of things	1	1	1
23.1 Rental payments to GSA	1	2	2
25.1 Advisory and assistance services	7	7	8
25.2 Other services from non-Federal sources	24	120	110
25.3 Other goods and services from Federal sources		7	8
25.7 Operation and maintenance of equipment	46	1	1
26.0 Supplies and materials	2	4	3
31.0 Equipment	4	7	6
32.0 Land and structures	7	20	26

43.0 Interest and dividends		5	6
99.9 Total new obligations, unexpired accounts	137	220	220

Employment Summary

Identification code 089-4452-0-3-271	2018 actual	2019 est.	2020 est.
2001 Reimbursable civilian full-time equivalent employment	273	293	296

BONNEVILLE POWER ADMINISTRATION FUND

Expenditures from the Bonneville Power Administration Fund, established pursuant to Public Law 93-454, are approved for the *Steigerwald Floodplain Restoration Project and, in addition, for official reception and representation expenses in an amount not to exceed \$5,000: Provided, That during fiscal year [2019] 2020, no new direct loan obligations may be made. (Energy and Water Development and Related Agencies Appropriations Act, 2019.)*

Program and Financing (in millions of dollars)

Identification code 089-4045-0-3-271	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0801 Power business line	1,365	1,099	962
0802 Residential exchange	241	318	257
0803 Bureau of Reclamation	153	163	165
0804 Corp of Engineers	245	256	256
0805 Colville settlement	20	23	23
0806 U.S. Fish & Wildlife	31	33	32
0807 Planning council	11	12	12
0808 Fish and Wildlife	247	276	276
0809 Reimbursable program activities, subtotal	2,313	2,180	1,983
0811 Transmission business line	463	513	492
0812 Conservation and energy efficiency	163	165	158
0813 Interest	225	246	196
0814 Pension and health benefits	40	31	38
0819 Reimbursable program activities, subtotal	891	955	884
0821 Power business line	199	265	238
0822 Transmission services	254	489	479
0824 Fish and Wildlife	31	44	47
0825 Capital Equipment	15	27	22
0826 Projects funded in advance	157	41	86
0829 Reimbursable program activities, subtotal	656	866	872
0900 Total new obligations, unexpired accounts	3,860	4,001	3,739

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	13	12	417
1020 Adjustment of unobligated bal brought forward, Oct 1		5	
1023 Unobligated balances applied to repay debt			-406
1050 Unobligated balance (total)	13	17	11
Budget authority:			
Borrowing authority, mandatory:			
1400 Borrowing authority	809	825	787
Contract authority, mandatory:			
1600 Contract authority	2,604		
Spending authority from offsetting collections, mandatory:			
1800 Collected	3,654	3,985	3,907
1801 Change in uncollected payments, Federal sources	24		
1802 Offsetting collections (previously unavailable)	10	10	
1823 New and/or unobligated balance of spending authority from offsetting collections temporarily reduced	-10	-10	
1825 Spending authority from offsetting collections applied to repay debt	-287	-409	-408
1826 Spending authority from offsetting collections applied to liquidate contract authority	-2,945		
1850 Spending auth from offsetting collections, mand (total)	446	3,576	3,499
1900 Budget authority (total)	3,859	4,401	4,286
1930 Total budgetary resources available	3,872	4,418	4,297
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	12	417	558

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	3,501	3,462	3,461
3010 New obligations, unexpired accounts	3,860	4,001	3,739
3020 Outlays (gross)	-3,899	-4,002	-3,740

3050	Unpaid obligations, end of year	3,462	3,461	3,460
	Uncollected payments:			
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-342	-366	-366
3070	Change in uncollected pymts, Fed sources, unexpired	-24		
3090	Uncollected pymts, Fed sources, end of year	-366	-366	-366
	Memorandum (non-add) entries:			
3100	Obligated balance, start of year	3,159	3,096	3,095
3200	Obligated balance, end of year	3,096	3,095	3,094
Budget authority and outlays, net:				
Mandatory:				
4090	Budget authority, gross	3,859	4,401	4,286
	Outlays, gross:			
4100	Outlays from new mandatory authority	3,855	3,902	3,640
4101	Outlays from mandatory balances	44	100	100
4110	Outlays, gross (total)	3,899	4,002	3,740
	Offsets against gross budget authority and outlays:			
	Offsetting collections (collected) from:			
4120	Federal sources	-63	-90	-90
4121	Interest on Federal securities	-5		
4123	Non-Federal sources	-3,586	-3,895	-3,817
4130	Offsets against gross budget authority and outlays (total)	-3,654	-3,985	-3,907
	Additional offsets against gross budget authority only:			
4140	Change in uncollected pymts, Fed sources, unexpired	-24		
4160	Budget authority, net (mandatory)	181	416	379
4170	Outlays, net (mandatory)	245	17	-167
4180	Budget authority, net (total)	181	416	379
4190	Outlays, net (total)	245	17	-167
Memorandum (non-add) entries:				
5000	Total investments, SOY: Federal securities: Par value	205	455	455
5001	Total investments, EOY: Federal securities: Par value	455	455	455
5052	Obligated balance, SOY: Contract authority	2,945	2,604	2,604
5053	Obligated balance, EOY: Contract authority	2,604	2,604	2,604
5090	Unexpired unavailable balance, SOY: Offsetting collections	10	10	10
5092	Unexpired unavailable balance, EOY: Offsetting collections	10	10	10

Status of Direct Loans (in millions of dollars)

Identification code 089-4045-0-3-271	2018 actual	2019 est.	2020 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 2020.

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 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, 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 2020 capital obligations are estimated to be \$786.5 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

BONNEVILLE POWER ADMINISTRATION FUND—Continued

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 2018, BPA had outstanding bonds with the U.S. Treasury of \$5,531 million. At the end of 2018, BPA also had \$7,709.7 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 2018, BPA made payments to the Treasury of \$862 million and also expects to make payments of \$776 million in 2019 and \$702 million in 2020. The 2020 payment is expected to be distributed as follows: interest on bonds and appropriations (\$232 million), amortization (\$408 million), and other (\$62 million). BPA also received credits totaling approximately \$93 million applied against its Treasury payments in 2018 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 2020, no new direct loan obligations may be made.

Operating Results.—Total revenues are forecast at approximately \$3.9 billion in 2020.

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	2017 actual	2018 actual
ASSETS:		
Federal assets:		
1101 Fund balances with Treasury	87	90
Investments in U.S. securities:		
1106 Receivables, net	205	454
1206 Non-Federal assets: Receivables, net	341	366
1601 Direct loans, gross		
1605 Accounts receivable from foreclosed property		
1699 Value of assets related to direct loans		
Other Federal assets:		
1802 Inventories and related properties	112	109
1803 Property, plant and equipment, net	7,152	7,295
1901 Other assets	14,744	14,064
1999 Total assets	22,641	22,378
LIABILITIES:		
Federal liabilities:		
2102 Interest payable	118	94
2103 Debt	7,811	8,040
Non-Federal liabilities:		
2201 Accounts payable	377	367

2203 Debt	6,093	5,533
2207 Other	8,242	8,344
2999 Total liabilities	22,641	22,378
NET POSITION:		
3300 Cumulative results of operations		
4999 Total liabilities and net position	22,641	22,378

Object Classification (in millions of dollars)

Identification code 089-4045-0-3-271	2018 actual	2019 est.	2020 est.
Reimbursable obligations:			
11.1 Personnel compensation: Full-time permanent	326	379	355
12.1 Civilian personnel benefits	115	134	125
21.0 Travel and transportation of persons	4	5	5
22.0 Transportation of things	4	4	4
23.1 Rental payments to GSA	1	1	1
23.2 Rental payments to others	21	25	23
23.3 Communications, utilities, and miscellaneous charges	7	8	8
25.1 Advisory and assistance services	73	85	79
25.2 Other services from non-Federal sources	2,811	2,782	2,602
25.5 Research and development contracts	7	6	2
26.0 Supplies and materials	29	34	32
31.0 Equipment	140	163	152
32.0 Land and structures	87	102	95
41.0 Grants, subsidies, and contributions	30	35	33
43.0 Interest and dividends	205	238	223
99.9 Total new obligations, unexpired accounts	3,860	4,001	3,739

Employment Summary

Identification code 089-4045-0-3-271	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	2,793	3,000	3,000

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.), **[\$261,858,000]** \$210,923,000, to remain available until September 30, **[2020]** 2021, 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]** \$93,378,000 in fiscal year **[2019]** 2020 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 **[2019]** 2020 appropriation from the general fund estimated at not more than **[\$165,858,000]** \$117,545,000. (*Energy and Water Development and Related Agencies Appropriations Act, 2019.*)

Program and Financing (in millions of dollars)

Identification code 089-0228-0-1-276	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0003 Office of the Secretary	5	5	5
0004 Office of Congressional and Intergovernmental Affairs	5	4	6
0005 Office of Public Affairs	4	5	6
0006 General Counsel	35	39	33
0007 Office of Policy		12	8
0008 Economic Impact and Diversity	8	14	9

0009	Chief Financial Officer	21	43	32
0011	Human Capital Management	23	30	24
0012	Indian Energy Policy	4	.....	.....
0013	Energy Policy and Systems Analysis	13	.....	.....
0014	International Affairs	21	26	.....
0015	Office of Small and Disadvantaged Business Utilization	3	4	4
0018	Management	53	61	54
0020	Project Management Oversight and Assessment	14	16	14
0025	Office of Technology Transitions	6	10	9
0045	Strategic partnership projects	31	40	40
0799	Total direct obligations	246	309	244
0900	Total new obligations, unexpired accounts	246	309	244
Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	62	107	60
1021	Recoveries of prior year unpaid obligations	2	.....	.....
1050	Unobligated balance (total)	64	107	60
Budget authority:				
Appropriations, discretionary:				
1100	Appropriation	203	166	118
Spending authority from offsetting collections, discretionary:				
1700	Collected	83	96	93
1701	Change in uncollected payments, Federal sources	3	.....	.....
1750	Spending auth from offsetting collections, disc (total)	86	96	93
1900	Budget authority (total)	289	262	211
1930	Total budgetary resources available	353	369	271
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	107	60	27
Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	122	102	138
3010	New obligations, unexpired accounts	246	309	244
3020	Outlays (gross)	-261	-273	-227
3040	Recoveries of prior year unpaid obligations, unexpired	-2	.....	.....
3041	Recoveries of prior year unpaid obligations, expired	-3	.....	.....
3050	Unpaid obligations, end of year	102	138	155
Uncollected payments:				
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-12	-9	-9
3070	Change in uncollected pymts, Fed sources, unexpired	-3	.....	.....
3071	Change in uncollected pymts, Fed sources, expired	6	.....	.....
3090	Uncollected pymts, Fed sources, end of year	-9	-9	-9
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	110	93	129
3200	Obligated balance, end of year	93	129	146
Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	289	262	211
Outlays, gross:				
4010	Outlays from new discretionary authority	145	114	85
4011	Outlays from discretionary balances	116	159	142
4020	Outlays, gross (total)	261	273	227
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources	-28	-40	-40
4033	Non-Federal sources	-58	-56	-53
4040	Offsets against gross budget authority and outlays (total)	-86	-96	-93
Additional offsets against gross budget authority only:				
4050	Change in uncollected pymts, Fed sources, unexpired	-3	.....	.....
4052	Offsetting collections credited to expired accounts	3	.....	.....
4070	Budget authority, net (discretionary)	203	166	118
4080	Outlays, net (discretionary)	175	177	134
4180	Budget authority, net (total)	203	166	118
4190	Outlays, net (total)	175	177	134

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 DOE 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.

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 Administration policies and procedures and statutory 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.

Office of Policy (OP).—Serves as the principal policy office advising the Secretary of Energy.

International Affairs (IA).—Advises Departmental leadership on strategic implementation of U.S. international energy policy, in line with energy security and 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 interagency processes, intergovernmental forums, and bilateral and multilateral proceedings that address energy policies, strategies and objectives. Beginning in FY 2020 funding for this program is requested in a separate appropriation account.

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 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 Manage-

DEPARTMENTAL ADMINISTRATION—Continued

ment'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).— 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 off-setting 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. Beginning in FY 2019, funding for this program is requested in a separate appropriation account.

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 outcomes toward technology transfer and development of DOE research outputs.

Object Classification (in millions of dollars)

Identification code 089-0228-0-1-276	2018 actual	2019 est.	2020 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	89	92	90
11.3 Other than full-time permanent	7	8	8
11.5 Other personnel compensation	2	3	3
11.9 Total personnel compensation	98	103	101
12.1 Civilian personnel benefits	29	30	24
21.0 Travel and transportation of persons	4	4	3
23.3 Communications, utilities, and miscellaneous charges	5	5	4
24.0 Pamphlets, Documents, Subscriptions and Publications	2	2	2
25.1 Advisory and assistance services	23	42	18
25.2 Other services from non-Federal sources	11	23	9
25.3 Other goods and services from Federal sources	42	52	51
25.4 Operation and maintenance of facilities	23	38	25
25.7 Other Contractual Services	2	3	2
44.0 Non-Capitalized Personal Property	1	1	1
44.0 Refunds	6	6	4
99.9 Total new obligations, unexpired accounts	246	309	244

Employment Summary

Identification code 089-0228-0-1-276	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	656	827	809

INTERNATIONAL AFFAIRS

For necessary expenses for International Affairs in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), \$36,100,000, to remain available until expended.

Program and Financing (in millions of dollars)

Identification code 089-0351-0-1-276	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0010 International affairs			36
Budgetary resources:			
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation			36
1930 Total budgetary resources available			36
Change in obligated balance:			
Unpaid obligations:			
3010 New obligations, unexpired accounts			36
3020 Outlays (gross)			-27
3050 Unpaid obligations, end of year			9
Memorandum (non-add) entries:			
3200 Obligated balance, end of year			9
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross			36
Outlays, gross:			
4010 Outlays from new discretionary authority			27
4180 Budget authority, net (total)			36
4190 Outlays, net (total)			27

International Affairs (IA).— Advises Department leadership on strategic implementation of U.S. international energy policy, in line with energy security and 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 interagency processes, intergovernmental forums, and bilateral and multilateral proceedings that address energy policies, strategies and objectives. IA is the Department lead on fulfilling the Agency's requirements on the Committee of Foreign Investment in the U.S., including the expanded responsibilities derived from the Foreign Investment Risk Review Modernization Act of 2018.

Object Classification (in millions of dollars)

Identification code 089-0351-0-1-276	2018 actual	2019 est.	2020 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent			13
11.9 Total personnel compensation			13
12.1 Civilian personnel benefits			5
21.0 Travel and transportation of persons			1
23.3 Communications, utilities, and miscellaneous charges			3
25.1 Advisory and assistance services			6
25.3 Other goods and services from Federal sources			5
32.0 Land and structures			3
99.9 Total new obligations, unexpired accounts			36

Employment Summary

Identification code 089-0351-0-1-276	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment			108

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, **[\$51,330,000]** \$54,215,000, to remain available until September 30, **[2020]** 2021. (Energy and Water Development and Related Agencies Appropriations Act, 2019.)

Program and Financing (in millions of dollars)

Identification code 089-0236-0-1-276	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0001 Office of the Inspector General (Direct)	48	55	54
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	3	4	
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	49	51	54
1930 Total budgetary resources available	52	55	54
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	4		
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	3	4	9
3010 New obligations, unexpired accounts	48	55	54
3020 Outlays (gross)	-47	-50	-55
3050 Unpaid obligations, end of year	4	9	8
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	3	4	9
3200 Obligated balance, end of year	4	9	8
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	49	51	54
Outlays, gross:			
4010 Outlays from new discretionary authority	42	43	46
4011 Outlays from discretionary balances	5	7	9
4020 Outlays, gross (total)	47	50	55
4180 Budget authority, net (total)	49	51	54
4190 Outlays, net (total)	47	50	55

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	2018 actual	2019 est.	2020 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	27	30	30
11.5 Other personnel compensation	2	3	3
11.9 Total personnel compensation	29	33	33
12.1 Civilian personnel benefits	12	15	15
21.0 Travel and transportation of persons	2	2	2
25.2 Other services from non-Federal sources	1	1	1
25.3 Other goods and services from Federal sources	3	3	2
31.0 Equipment	1	1	1
99.9 Total new obligations, unexpired accounts	48	55	54

Employment Summary

Identification code 089-0236-0-1-276	2018 actual	2019 est.	2020 est.
1001 Direct civilian full-time equivalent employment	252	279	291

WORKING CAPITAL FUND

Program and Financing (in millions of dollars)

Identification code 089-4563-0-4-276	2018 actual	2019 est.	2020 est.
Obligations by program activity:			
0802 Project management and career development program	2	2	2
0810 Supplies	2	2	2
0812 Copying Services	3	4	4
0813 Printing and graphics	4	5	5
0814 Building Occupancy (Rent, Operations & Maintenance)	125	112	113
0815 Corporate Business Systems	38	47	47
0816 Mail and Transportation Services	4	4	4
0817 Financial Statement Audits	12	12	12
0818 Procurement Management	6	16	16
0820 Telecommunication	35	37	37
0821 Overseas Presence	9	16	16
0822 Interagency Transfers	7	9	9
0823 Health Services	2	2	2
0825 Corporate Training Services	2	3	3
0826 A-123 / Internal Controls	1	3	3
0827 Pension Studies	1	1	1
0900 Total new obligations, unexpired accounts	253	275	276
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	46	64	64
1021 Recoveries of prior year unpaid obligations	2		
1050 Unobligated balance (total)	48	64	64
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected	269	275	276
1930 Total budgetary resources available	317	339	340
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	64	64	64
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	135	133	73
3010 New obligations, unexpired accounts	253	275	276
3020 Outlays (gross)	-253	-335	-331
3040 Recoveries of prior year unpaid obligations, unexpired	-2		
3050 Unpaid obligations, end of year	133	73	18
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	135	133	73
3200 Obligated balance, end of year	133	73	18
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	269	275	276
Outlays, gross:			
4010 Outlays from new discretionary authority	111	264	265
4011 Outlays from discretionary balances	142	71	66
4020 Outlays, gross (total)	253	335	331
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-269	-275	-276
4180 Budget authority, net (total)			
4190 Outlays, net (total)	-16	60	55

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 assists the Department in improving operational efficiency.

WORKING CAPITAL FUND—Continued

Object Classification (in millions of dollars)

Identification code 089-4563-0-4-276	2018 actual	2019 est.	2020 est.
Reimbursable obligations:			
Personnel compensation:			
11.1 Full-time permanent	11	11	11
11.8 Special personal services payments	1	1	1
11.9 Total personnel compensation	12	12	12
12.1 Civilian personnel benefits	4	4	4
21.0 Travel and transportation of persons	1	1	1
22.0 Transportation of things	2	2	2
23.1 Rental payments to GSA	58	58	58
23.2 Rental payments to others	1	1	1
23.3 Communications, utilities, and miscellaneous charges	16	16	16
24.0 Printing and reproduction	1	1	1
25.1 Advisory and assistance services	43	43	43
25.2 Other services from non-Federal sources	19	19	19
25.3 Other goods and services from Federal sources	50	72	73
25.4 Operation and maintenance of facilities	30	30	30
26.0 Supplies and materials	1	1	1
31.0 Equipment	3	3	3
32.0 Land and structures	12	12	12
99.9 Total new obligations, unexpired accounts	253	275	276

Employment Summary

Identification code 089-4563-0-4-276	2018 actual	2019 est.	2020 est.
2001 Reimbursable civilian full-time equivalent employment	97	100	100

GENERAL FUND RECEIPT ACCOUNTS

(in millions of dollars)

	2018 actual	2019 est.	2020 est.
Offsetting receipts from the public:			
089-089400 Fees and Recoveries, Federal Energy Regulatory Commission	8	16	16
089-223400 Sale of Strategic Petroleum Reserve Oil	825	758	373
089-224500 Sale and Transmission of Electric Energy, Falcon Dam	2		
089-224500 Sale and Transmission of Electric Energy, Falcon Dam: Legislative proposal, subject to PAYGO			1
089-224700 Sale and Transmission of Electric Energy, Southwestern Power Administration	6	21	24
089-224700 Sale and Transmission of Electric Energy, Southwestern Power Administration: Legislative proposal, subject to PAYGO			-19
089-224800 Sale and Transmission of Electric Energy, Southeastern Power Administration	164	175	177
089-224800 Sale and Transmission of Electric Energy, Southeastern Power Administration: Legislative proposal, subject to PAYGO			-53
089-224900 Sale of Power and Other Utilities, not Otherwise Classified	37	30	30
089-224900 Sale of Power and Other Utilities, not Otherwise Classified: Legislative proposal, subject to PAYGO			318
089-267910 Title 17 Innovative Technology Loan Guarantees, Negative Subsidies		107	15
089-279530 DOE ATVM Direct Loans Downward Reestimate Account	74	22	
089-279730 DOE Loan Guarantees Downward Reestimate Account	258	263	
089-288900 Repayments on Miscellaneous Recoverable Costs, not Otherwise Classified	40	31	38
089-322000 All Other General Fund Proprietary Receipts Including Budget Clearing Accounts	106	14	14
General Fund Offsetting receipts from the public	1,520	1,437	934
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 TRANSFERS 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 "Conference" column in the "Department of Energy" table included under the heading "Title III—Department of Energy" in the joint 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, and obtain the prior approval of, 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.

(h) 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. 302. 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 [2019] 2020 until the enactment of the Intelligence Authorization Act for fiscal year [2019] 2020.

SEC. 303. 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. 304. 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. 305. The Secretary of Energy may not transfer more than \$274,833,000 from the amounts made available under this title to the working capital fund established under section 653 of the Department of Energy Organization Act (42 U.S.C. 7263): *Provided*, That the Secretary may transfer additional amounts to the working capital fund after the Secretary provides notification in advance of any such transfer to the Committees on Appropriations of both Houses of Congress: *Provided further*, That any such notification shall identify the sources of funds by program, project, or activity: *Provided further*, That the Secretary shall notify the Committees on Appropriations of both Houses of Congress before adding or removing any activities from the fund.]

SEC. [306]305. (a) None of the funds made available in this or any prior Act under the heading "Defense Nuclear Nonproliferation" may be made available to enter into new contracts with, or new agreements for Federal assistance to, the Russian Federation.

(b) The Secretary of Energy may waive the prohibition in subsection (a) if the Secretary determines that such activity is in the national security interests of the United States. This waiver authority may not be delegated.

(c) A waiver under subsection (b) shall not be effective until 15 days after the date on which the Secretary submits to the Committees on Appropriations of both Houses of Congress, in classified form if necessary, a report on the justification for the waiver.

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]306. Notwithstanding section 161 of the Energy Policy and Conservation Act (42 U.S.C. 6241), upon a determination by the President in this fiscal year that a regional supply shortage of refined petroleum product of significant scope and duration exists, that a severe increase in the price of refined petroleum product will likely result from such shortage, and that a draw down and sale of refined petroleum product would assist directly and significantly in reducing the adverse impact of such shortage, the Secretary of Energy may draw down and sell refined petroleum product from the Strategic Petroleum Reserve. Proceeds from a sale under this section shall be deposited into the SPR Petroleum Account established in section 167 of the Energy Policy and Conservation Act (42 U.S.C. 6247), and such amounts shall be available for obligation, without fiscal year limitation, consistent with that section.

SEC. 307. *Section 310 of the Omnibus Appropriations Act, 2009 (Public Law 111-8; 50 U.S.C. 2743a note) and section 306 of the Consolidated Appropriations Act, 2012 (Public Law 112-74; 50 U.S.C. 2743a) are repealed.*

SEC. 308. *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. 309. *Sec. 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. *Notwithstanding provisions of title 5, United States Code, the South-eastern Power Administration shall pay power system dispatchers at basic pay and premium pay rates that are based on those prevailing for similar occupations in the electric power industry. Pay may not be paid, by reason of this section, at a rate in excess of the rate of basic pay for level V of the Executive Schedule.*

SEC. 311. *Section 3131 of the National Defense Authorization Act for Fiscal Year 2000 (Public Law 106-65; 10 U.S.C. 2701 note) is amended by striking "or the defense activities of the Department of Energy". (Energy and Water Development and Related Agencies Appropriations Act, 2019.)*

TITLE V—GENERAL PROVISIONS

[(INCLUDING TRANSFER OF FUNDS)]

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. (a) None of the funds made available in title III of this Act may be transferred to any department, agency, or instrumentality of the United States Government, except pursuant to a transfer made by or transfer authority provided in this Act or any other appropriations Act for any fiscal year, transfer authority referenced in the joint explanatory statement accompanying this Act, or any authority whereby a department, agency, or instrumentality of the United States Government may provide goods or services to another department, agency, or instrumentality.

(b) None of the funds made available for any department, agency, or instrumentality of the United States Government may be transferred to accounts funded in title III of this Act, except pursuant to a transfer made by or transfer authority provided in this Act or any other appropriations Act for any fiscal year, transfer authority referenced in the joint explanatory statement accompanying this Act, or any authority whereby a department, agency, or instrumentality of the United States Government may provide goods or services to another department, agency, or instrumentality.

(c) The head of any relevant department or agency funded in this Act utilizing any transfer authority shall submit to the Committees on Appropriations of both Houses of Congress a semiannual report detailing the transfer authorities, except for any authority whereby a department, agency, or instrumentality of the United States Government may provide goods or services to another department, agency, or instrumentality, used in the previous 6 months and in the year-to-date. This report shall include the amounts transferred and the purposes for which they were transferred, and shall not replace or modify existing notification requirements for each authority.

SEC. 503. 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).

SEC. 504. (a) None of the funds made available in this Act may be used to maintain or establish a computer network unless such network blocks the viewing, downloading, and exchanging of pornography.

(b) Nothing in subsection (a) shall limit the use of funds necessary for any Federal, State, tribal, or local law enforcement agency or any other entity carrying out criminal investigations, prosecution, or adjudication activities.

SEC. 505. *Section 611 of the Energy and Water Development Appropriations Act, 2000 (P.L. 106-60; 10 U.S.C. 2701 note) is amended as follows:*

(a) *In subsection (a), by striking "the Army, acting through the Chief of Engineers" and inserting "Energy".*

(b) *In subsection (a)(6), by striking "by the Secretary of the Army, acting through the Chief of Engineers" and striking ", which may be transferred upon completion of remediation to the administrative jurisdiction of the Secretary of Energy".*

(c) *In subsection (a), by adding after paragraph (6) the following undesignated matter: "Upon completion of remediation of a site acquired by the Secretary of the Army prior to fiscal year 2020, the Secretary of the Army may transfer administrative jurisdiction of such site to the Secretary of Energy."*

(d) In subsection (b), by striking "the Army, acting through the Chief of Engineers," and inserting "Energy".

(e) In subsection (c), by striking "amounts made available to carry out that program and shall be available until expended for costs of response actions for any eligible site" and inserting "'Other Defense Activities' appropriation account or successor appropriation account and shall be available until expended for costs of response actions for any eligible Formerly Utilized Sites Remedial Action Program Site".

(f) By redesignating subsection (f) as subsection (g).

(g) By inserting after subsection (e) the following new subsection: "(f) The Secretary of Energy, in carrying out subsection (a), shall enter into an agreement with the Secretary of the Army to carry out the functions and activities described in subsections (a)(1) through (a)(6).".

【SEC. 505. For an additional amount for "Department of the Interior—Bureau of Reclamation—Water and Related Resources", \$21,400,000, to remain available until expended, for transfer to Reclamation's Upper Colorado River Basin Fund to carry out environmental stewardship and endangered species recovery efforts pursuant to the Grand Canyon Protection Act of 1992 (Public Law 102-575), Public Law 106-392, the Colorado River Basin Project Act (43 U.S.C. 1551(b)), and the Act of April 11, 1956 (commonly known as the "Colorado River Storage Project Act") (43 U.S.C. 620n).

This division may be cited as the "Energy and Water Development and Related Agencies Appropriations Act, 2019".】
(Energy and Water Development and Related Agencies Appropriations Act, 2019.)