

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, **[\$434,699,000]** \$454,000,000, to remain available until September 30, **[2021]** 2022, including official reception and representation expenses not to exceed \$17,000. *(Energy and Water Development and Related Agencies Appropriations Act, 2020.)*

Program and Financing (in millions of dollars)

Identification code 089-0313-0-1-053	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0010 Federal Salaries and Expenses	399	447	467
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	13	25	13
1021 Recoveries of prior year unpaid obligations	1	.....	.....
1050 Unobligated balance (total)	14	25	13
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	410	435	454
1900 Budget authority (total)	410	435	454
1930 Total budgetary resources available	424	460	467
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	25	13	.....

Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	70	60	72
3010 New obligations, unexpired accounts	399	447	467
3020 Outlays (gross)	-407	-435	-465
3040 Recoveries of prior year unpaid obligations, unexpired	-1	.....	.....
3041 Recoveries of prior year unpaid obligations, expired	-1	.....	.....
3050 Unpaid obligations, end of year	60	72	74
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	70	60	72
3200 Obligated balance, end of year	60	72	74

Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	410	435	454
Outlays, gross:			
4010 Outlays from new discretionary authority	340	364	380
4011 Outlays from discretionary balances	67	71	85
4020 Outlays, gross (total)	407	435	465
4180 Budget authority, net (total)	410	435	454
4190 Outlays, net (total)	407	435	465

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	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	223	250	263
11.3 Other than full-time permanent	2	4	4
11.5 Other personnel compensation	7	8	8
11.9 Total personnel compensation	232	262	275
12.1 Civilian personnel benefits	71	72	73
21.0 Travel and transportation of persons	16	17	18

23.3	Communications, utilities, and miscellaneous charges	4	6	7
25.1	Advisory and assistance services	27	31	33
25.2	Other services from non-Federal sources	6	9	10
25.3	Other goods and services from Federal sources	34	38	39
25.4	Operation and maintenance of facilities	8	10	10
26.0	Supplies and materials	1	2	2
99.9	Total new obligations, unexpired accounts	399	447	467

Employment Summary

Identification code 089-0313-0-1-053	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	1,645	1,753	1,836

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, **[\$1,648,396,000]** \$1,684,000,000, to remain available until expended **[**, of which, \$88,500,000 shall be transferred to "Department of Energy-Energy Programs-Nuclear Energy", for the Advanced Test Reactor]: *Provided*, That of such amount, **[\$50,500,000]** \$53,700,000 shall be available until September 30, **[2021]** 2022, for program direction. *(Energy and Water Development and Related Agencies Appropriations Act, 2020.)*

Program and Financing (in millions of dollars)

Identification code 089-0314-0-1-053	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0010 Naval reactors development	462	431	590
0020 Program direction	50	52	54
0030 S8G prototype refueling	279	170	135
0040 Naval reactors operations and infrastructure	664	554	506
0050 Construction	477	283	334
0060 COLUMBIA-class reactor systems development	149	75	65
0900 Total new obligations, unexpired accounts	2,081	1,565	1,684
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	17	6	.....
1021 Recoveries of prior year unpaid obligations	367	.....	.....
1050 Unobligated balance (total)	384	6	.....
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	1,789	1,648	1,684
1120 Appropriations transferred to other acct [089-0319]	-86	-89	.....
1160 Appropriation, discretionary (total)	1,703	1,559	1,684
1930 Total budgetary resources available	2,087	1,565	1,684
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	6	.....	.....

Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	783	1,009	984
3010 New obligations, unexpired accounts	2,081	1,565	1,684
3020 Outlays (gross)	-1,487	-1,590	-1,719
3040 Recoveries of prior year unpaid obligations, unexpired	-367	.....	.....
3041 Recoveries of prior year unpaid obligations, expired	-1	.....	.....
3050 Unpaid obligations, end of year	1,009	984	949
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	783	1,009	984
3200 Obligated balance, end of year	1,009	984	949

Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	1,703	1,559	1,684
Outlays, gross:			
4010 Outlays from new discretionary authority	837	857	926
4011 Outlays from discretionary balances	650	733	793

NAVAL REACTORS—Continued
Program and Financing—Continued

Identification code 089-0314-0-1-053	2019 actual	2020 est.	2021 est.
4020 Outlays, gross (total)	1,487	1,590	1,719
4180 Budget authority, net (total)	1,703	1,559	1,684
4190 Outlays, net (total)	1,487	1,590	1,719

Naval Reactors.—This account funds all naval nuclear propulsion work. It begins with reactor technology development and design, continues through reactor operation and maintenance, and ends with reactor plant disposal. The program ensures the safe and reliable operation of reactor plants in nuclear-powered submarines and aircraft carriers (constituting over 40 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	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	32	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	34	36	36
12.1 Civilian personnel benefits	11	9	11
21.0 Travel and transportation of persons	1	1	1
25.1 Advisory and assistance services	4	4	5
25.2 Other services from non-Federal sources	7	6	7
25.3 Other goods and services from Federal sources	3	2	3
25.4 Operation and maintenance of facilities	1,475	1,086	1,190
31.0 Equipment	22	20	22
32.0 Land and structures	522	399	407
41.0 Grants, subsidies, and contributions	2	2	2
99.9 Total new obligations, unexpired accounts	2,081	1,565	1,684

Employment Summary

Identification code 089-0314-0-1-053	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	235	246	246

NATIONAL NUCLEAR SECURITY ADMINISTRATION

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 aircraft*, one ambulance, and *two passenger buses* for replacement only, **[\$12,457,097,000]** \$15,602,000,000, to remain available until expended: *Provided*, That of such amount, **[\$107,660,000]** \$123,684,000 shall be available until September 30, **[2021]** 2022, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 089-0240-0-1-053	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0017 Stockpile management			4,284
0018 Production modernization			2,458
0019 Stockpile research, technology, and engineering			2,782
0020 Directed stockpile work	4,800	5,456	
0021 Science	496	595	

0022 Engineering	193	264	
0023 Inertial confinement fusion ignition and high yield	546	566	
0024 Advanced simulation and computing	735	841	
0027 Secure transportation asset	288	298	390
0028 Advanced manufacturing development	87	137	
0030 Infrastructure and Operations	3,292	3,181	4,383
0031 Information technology and cybersecurity	236	300	376
0032 Defense nuclear security	755	780	827
0033 Legacy contractor pensions	162	91	102
0034 Site stewardship	1		
0300 Subtotal, Weapons Activities	11,591	12,509	15,602
0799 Total direct obligations	11,591	12,509	15,602
0810 Weapons Activities (Reimbursable)	2,467	1,900	1,910
0900 Total new obligations, unexpired accounts	14,058	14,409	17,512

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	158	114	52
1021 Recoveries of prior year unpaid obligations	532		
1050 Unobligated balance (total)	690	114	52
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	11,100	12,457	15,602
Spending authority from offsetting collections, discretionary:			
1700 Collected	1,887	1,890	1,900
1701 Change in uncollected payments, Federal sources	495		
1750 Spending auth from offsetting collections, disc (total)	2,382	1,890	1,900
1900 Budget authority (total)	13,482	14,347	17,502
1930 Total budgetary resources available	14,172	14,461	17,554
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	114	52	42

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	9,014	10,037	10,544
3010 New obligations, unexpired accounts	14,058	14,409	17,512
3020 Outlays (gross)	-12,502	-13,902	-16,356
3040 Recoveries of prior year unpaid obligations, unexpired	-532		
3041 Recoveries of prior year unpaid obligations, expired	-1		
3050 Unpaid obligations, end of year	10,037	10,544	11,700
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-2,335	-2,830	-2,830
3070 Change in uncollected pymts, Fed sources, unexpired	-495		
3090 Uncollected pymts, Fed sources, end of year	-2,830	-2,830	-2,830
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	6,679	7,207	7,714
3200 Obligated balance, end of year	7,207	7,714	8,870

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	13,482	14,347	17,502
Outlays, gross:			
4010 Outlays from new discretionary authority	5,689	6,603	8,116
4011 Outlays from discretionary balances	6,813	7,299	8,240
4020 Outlays, gross (total)	12,502	13,902	16,356
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-1,795	-1,788	-1,798
4033 Non-Federal sources	-92	-102	-102
4040 Offsets against gross budget authority and outlays (total)	-1,887	-1,890	-1,900
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	-495		
4060 Additional offsets against budget authority only (total)	-495		
4070 Budget authority, net (discretionary)	11,100	12,457	15,602
4080 Outlays, net (discretionary)	10,615	12,012	14,456
4180 Budget authority, net (total)	11,100	12,457	15,602
4190 Outlays, net (total)	10,615	12,012	14,456

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:

Stockpile Management.—Maintains a safe, secure, and effective nuclear weapons stockpile. Activities include extending the expected life of weapons; maintenance, surveillance, assessment, development, and program planning; providing safe and secure dismantlement of nuclear weapons and components; and providing sustenance of needed manufacturing capabilities and capacities, including process improvements and investments focused on increased efficiency of production operations.

Production Modernization.—Focuses on the production capabilities of nuclear weapons, including primaries, secondaries, and radiation cases, which are critical to weapon performance.

Stockpile Research, Technology, and Engineering.—Provides the foundation for science-based stockpile decisions, tools, and components; focuses on the most pressing investments the nuclear security enterprise requires to meet Department of Defense warhead needs and schedules; and enables assessment and certification capabilities used throughout the enterprise. Provides the knowledge and expertise needed to maintain confidence in the nuclear weapons stockpile without additional explosive 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. 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	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	47	52	55
11.5 Other personnel compensation	12	14	15
11.9 Total personnel compensation	59	66	70
12.1 Civilian personnel benefits	26	30	32
21.0 Travel and transportation of persons	7	7	8
23.1 Rental payments to GSA	51	52	53
23.3 Communications, utilities, and miscellaneous charges	52	54	56
25.1 Advisory and assistance services	228	258	302
25.2 Other services from non-Federal sources	510	535	552
25.3 Other goods and services from Federal sources	24	27	31
25.4 Operation and maintenance of facilities	8,681	9,103	11,853
25.5 Research and development contracts	166	186	201
25.6 Medical care	5	6	8
26.0 Supplies and materials	7	15	26
31.0 Equipment	378	400	426
32.0 Land and structures	1,343	1,711	1,922
41.0 Grants, subsidies, and contributions	54	59	62
99.0 Direct obligations	11,591	12,509	15,602
99.0 Reimbursable obligations	2,467	1,900	1,910
99.9 Total new obligations, unexpired accounts	14,058	14,409	17,512

Employment Summary

Identification code 089-0240-0-1-053	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	505	566	590

DEFENSE NUCLEAR NONPROLIFERATION

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 two aircraft [], [\$2,164,400,000] \$2,031,000,000, to remain available until expended. (Energy and Water Development and Related Agencies Appropriations Act, 2020.)

Program and Financing (in millions of dollars)

Identification code 089-0309-0-1-053	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0010 Defense nuclear nonproliferation research and development	584	534	533
0040 International materials protection and cooperation	2	40	.....
0050 Fissile materials disposition .....	.....	4	.....
0071 Global material security	407	456	402
0072 Material management and minimization	337	363	437
0073 Nonproliferation and arms control	128	143	139
0074 Nonproliferation construction	85	435	148
0075 Nuclear counterterrorism and incident response	322	376	378
0076 National Technical Nuclear Forensics .....	.....	.....	40
0080 Global threat reduction initiative	1	.....	.....
0085 Legacy contractor pensions	29	14	14
0100 Subtotal, obligations by program activity	1,895	2,365	2,091
0799 Total direct obligations	1,895	2,365	2,091
0801 Global material security	6	.....	.....
0802 International materials protection and cooperation	1	.....	.....
0899 Total reimbursable obligations	7	.....	.....
0900 Total new obligations, unexpired accounts	1,902	2,365	2,091
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	171	261	60
1021 Recoveries of prior year unpaid obligations	62	.....	.....
1033 Recoveries of prior year paid obligations	5	.....	.....
1050 Unobligated balance (total)	238	261	60
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	1,949	2,164	2,031
1120 Appropriations transferred to other accts (089-0222)	-10	.....	.....
1131 Unobligated balance of appropriations permanently reduced	-19	.....	.....
1160 Appropriation, discretionary (total)	1,920	2,164	2,031
Spending authority from offsetting collections, discretionary:			
1700 Collected	5	.....	.....
1900 Budget authority (total)	1,925	2,164	2,031
1930 Total budgetary resources available	2,163	2,425	2,091
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	261	60	.....
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	1,523	1,548	1,865
3010 New obligations, unexpired accounts	1,902	2,365	2,091
3020 Outlays (gross)	-1,815	-2,048	-2,030
3040 Recoveries of prior year unpaid obligations, unexpired	-62	.....	.....
3050 Unpaid obligations, end of year	1,548	1,865	1,926
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	1,523	1,548	1,865
3200 Obligated balance, end of year	1,548	1,865	1,926
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	1,925	2,164	2,031
Outlays, gross:			
4010 Outlays from new discretionary authority	876	974	914

DEFENSE NUCLEAR NONPROLIFERATION—Continued
Program and Financing—Continued

Identification code 089-0309-0-1-053	2019 actual	2020 est.	2021 est.
4011 Outlays from discretionary balances	939	1,074	1,116
4020 Outlays, gross (total)	1,815	2,048	2,030
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-4		
4033 Non-Federal sources	-1		
4034 Offsetting governmental collections	-5		
4040 Offsets against gross budget authority and outlays (total)	-10		
Additional offsets against gross budget authority only:			
4053 Recoveries of prior year paid obligations, unexpired accounts	5		
4070 Budget authority, net (discretionary)	1,920	2,164	2,031
4080 Outlays, net (discretionary)	1,805	2,048	2,030
4180 Budget authority, net (total)	1,920	2,164	2,031
4190 Outlays, net (total)	1,805	2,048	2,030

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. This includes minimizing the civilian use of highly enriched uranium (HEU); removing or eliminating the world's most vulnerable weapons-usable nuclear material; and disposing of excess nuclear material in the United States.

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 with countries in bilateral partnerships, and with and through multilateral partners such as the International Atomic Energy Agency (IAEA) and International Criminal Police Organization (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.

National Technical Nuclear Forensics (NTNF).—NNSA will focus on expanding nuclear forensics capabilities in both research and development (R&D) and operations leveraging existing capabilities in the DNN and Counterterrorism and Counterproliferation offices.

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.—The budget supports the 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 and remove plutonium from the state of South Carolina. The request supports the continuation of preliminary design for the Surplus Plutonium Disposition (SPD) project, as well as long-lead procurements. With available prior year balances, termination activities for the Mixed Oxide Fuel Fabrication project will be completed in FY 2021.

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, including helping to coordinate the interagency nuclear forensics mission.

Object Classification (in millions of dollars)

Identification code 089-0309-0-1-053	2019 actual	2020 est.	2021 est.
Direct obligations:			
23.3 Communications, utilities, and miscellaneous charges	1	1	1
25.1 Advisory and assistance services	124	135	135
25.2 Other services from non-Federal sources	124	135	135
25.3 Other goods and services from Federal sources	3	3	3
25.4 Operation and maintenance of facilities	1,489	1,922	1,648
25.7 Operation and maintenance of equipment	1	1	1
31.0 Equipment	95	110	110
32.0 Land and structures	41	41	41
41.0 Grants, subsidies, and contributions	17	17	17
99.0 Direct obligations	1,895	2,365	2,091
99.0 Reimbursable obligations	7		
99.9 Total new obligations, unexpired accounts	1,902	2,365	2,091

ENVIRONMENTAL AND OTHER DEFENSE ACTIVITIES

Federal Funds

DEFENSE ENVIRONMENTAL CLEANUP

(INCLUDING 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, **[\$6,255,000,000]** \$5,092,608,000, to remain available until expended: *Provided*, That of such amount, **[\$281,119,000]** \$275,285,000 shall be available until September 30, **[2021]** 2022, for program direction: *Provided further*, That of the unobligated balances from prior year appropriations available under this heading for LLNL Excess Facilities D&D, \$109,000,000 is hereby permanently cancelled: *Provided further*, That no amounts may be 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, 2020.)

Program and Financing (in millions of dollars)

Identification code 089-0251-0-1-053	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Closure Sites	5	5	5
0002 Hanford Site	885	912	553
0003 River Protection - Tank Farm	777	763	598
0004 River Protection - Waste Treatment Plant	745	841	660
0006 Idaho	419	434	263
0007 NNSA Sites	310	350	187
0008 Oak Ridge	383	450	263
0009 Savannah River	1,356	1,456	1,532
0010 Waste Isolation Pilot Plant	399	397	383
0011 Program Support	28	13	13
0012 Safeguards & Security	308	313	321
0013 Technology Development & Demonstration	23	25	25
0014 Program Direction	281	281	275
0020 SPRU	4	15	15
0900 Total new obligations, unexpired accounts	5,923	6,255	5,093
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	268	429	441
1021 Recoveries of prior year unpaid obligations	52	12	12
1033 Recoveries of prior year paid obligations	9		
1050 Unobligated balance (total)	329	441	453
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	6,029	6,255	5,093
1120 Appropriations transferred to other accts (089-0222)	-1		
1131 Unobligated balance of appropriations permanently reduced	-5		-109
1160 Appropriation, discretionary (total)	6,023	6,255	4,984
1930 Total budgetary resources available	6,352	6,696	5,437
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	429	441	344
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	2,659	2,782	2,589
3010 New obligations, unexpired accounts	5,923	6,255	5,093
3020 Outlays (gross)	-5,747	-6,436	-6,282
3040 Recoveries of prior year unpaid obligations, unexpired	-52	-12	-12
3041 Recoveries of prior year unpaid obligations, expired	-1		
3050 Unpaid obligations, end of year	2,782	2,589	1,388
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	2,659	2,782	2,589
3200 Obligated balance, end of year	2,782	2,589	1,388
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	6,023	6,255	4,984
Outlays, gross:			
4010 Outlays from new discretionary authority	3,523	4,378	3,565
4011 Outlays from discretionary balances	2,224	2,058	2,717
4020 Outlays, gross (total)	5,747	6,436	6,282
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources:	-8		
4033 Non-Federal sources	-1		
4040 Offsets against gross budget authority and outlays (total)	-9		
Additional offsets against gross budget authority only:			
4053 Recoveries of prior year paid obligations, unexpired accounts	9		
4060 Additional offsets against budget authority only (total)	9		
4070 Budget authority, net (discretionary)	6,023	6,255	4,984
4080 Outlays, net (discretionary)	5,738	6,436	6,282
4180 Budget authority, net (total)	6,023	6,255	4,984
4190 Outlays, net (total)	5,738	6,436	6,282

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. Funding is included to support the deactivation and decommissioning (D&D) of specific high-risk excess facilities to be transferred to the Environmental Management program for Lawrence Livermore National Laboratory.

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

DEFENSE ENVIRONMENTAL CLEANUP—Continued

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.

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	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	150	158	142
11.3 Other than full-time permanent	2	2	2
11.5 Other personnel compensation	3	3	3
11.9 Total personnel compensation	155	163	147
12.1 Civilian personnel benefits	51	54	48
21.0 Travel and transportation of persons	5	5	5
23.1 Rental payments to GSA	12	13	11
23.2 Rental payments to others	2	2	2
23.3 Communications, utilities, and miscellaneous charges	10	11	9
25.1 Advisory and assistance services	752	794	713
25.2 Other services from non-Federal sources	449	474	426
25.3 Other goods and services from Federal sources	47	50	45
25.4 Operation and maintenance of facilities	3,324	3,510	2,628
25.5 Research and development contracts	6	6	6
25.6 Medical care	22	23	21
26.0 Supplies and materials	10	11	9
31.0 Equipment	100	106	95
32.0 Land and structures	916	967	869
41.0 Grants, subsidies, and contributions	62	66	59
99.9 Total new obligations, unexpired accounts	5,923	6,255	5,093

Employment Summary

Identification code 089-0251-0-1-053	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	1,218	1,350	1,275

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], [\$906,000,000] \$1,054,727,000, to remain available until expended: *Provided*, That of such amount, [\$328,917,000] \$341,174,000 shall be available until September 30, [2021] 2022, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 089-0243-0-1-999	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0008 Environment, Health, Safety, and Security Mission Support	201	221	209
0009 Independent Enterprise Assessments	74	87	82
0015 Specialized security activities	282	281	258
0020 Legacy management	169	162	317
0030 Defense related administrative support	162	163	184
0060 Hearings and Appeals	4	5	5

0100 Subtotal, Direct program activities	892	919	1,055
0799 Total direct obligations	892	919	1,055
0810 Other Defense Activities (Reimbursable)	1,904	1,826	1,826
0819 Reimbursable program activities, subtotal	1,904	1,826	1,826
0900 Total new obligations, unexpired accounts	2,796	2,745	2,881

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	51	64	46
1011 Unobligated balance transfer from other acct [047-0616]		4	
1020 Adjustment of unobligated bal brought forward, Oct 1	-1		
1021 Recoveries of prior year unpaid obligations	86		
1033 Recoveries of prior year paid obligations	19		
1050 Unobligated balance (total)	155	68	46
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	860	906	1,055
Spending authority from offsetting collections, discretionary:			
1700 Collected	1,764	1,817	1,855
1701 Change in uncollected payments, Federal sources	83		
1750 Spending auth from offsetting collections, disc (total)	1,847	1,817	1,855
1900 Budget authority (total)	2,707	2,723	2,910
1930 Total budgetary resources available	2,862	2,791	2,956
Memorandum (non-add) entries:			
1940 Unobligated balance expiring	-2		
1941 Unexpired unobligated balance, end of year	64	46	75

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	1,781	1,942	1,943
3010 New obligations, unexpired accounts	2,796	2,745	2,881
3020 Outlays (gross)	-2,548	-2,744	-2,959
3040 Recoveries of prior year unpaid obligations, unexpired	-86		
3041 Recoveries of prior year unpaid obligations, expired	-1		
3050 Unpaid obligations, end of year	1,942	1,943	1,865
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-1,365	-1,448	-1,448
3070 Change in uncollected pymts, Fed sources, unexpired	-83		
3090 Uncollected pymts, Fed sources, end of year	-1,448	-1,448	-1,448
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	416	494	495
3200 Obligated balance, end of year	494	495	417

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	2,707	2,723	2,910
Outlays, gross:			
4010 Outlays from new discretionary authority	1,165	1,443	1,570
4011 Outlays from discretionary balances	1,383	1,301	1,389
4020 Outlays, gross (total)	2,548	2,744	2,959
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-1,678	-1,747	-1,784
4033 Non-Federal sources	-105	-70	-71
4040 Offsets against gross budget authority and outlays (total)	-1,783	-1,817	-1,855
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	-83		
4053 Recoveries of prior year paid obligations, unexpired accounts	19		
4060 Additional offsets against budget authority only (total)	-64		
4070 Budget authority, net (discretionary)	860	906	1,055
4080 Outlays, net (discretionary)	765	927	1,104
4180 Budget authority, net (total)	860	906	1,055
4190 Outlays, net (total)	765	927	1,104

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 the Department's work is managed and performed in a manner that protects workers and the public as well as the Department's material and information assets. The program functions include: policy and guidance development and technical assistance; analysis of health,

safety, environment, and security performance; nuclear safety; domestic and international health studies; medical screening programs for former workers; Energy Employee Occupational Illness Compensation Program Act support; quality assurance programs; interface with the Defense Nuclear Facilities Safety Board; national security information programs; and security for the Department's facilities and personnel in the National Capital Area.

Enterprise Assessments.—The program supports the Department's independent assessments of security, 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.

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 post-retirement benefits for former contractor employees. In 2021, the requested funding supports the administration of the Formerly Utilized Sites Remedial Action Program (FUSRAP), which includes funding cleanup activities performed by the U.S. Army Corps of Engineers (USACE).

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 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	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	90	113	116
11.3 Other than full-time permanent	1	1	1
11.5 Other personnel compensation	3	3	3
11.9 Total personnel compensation	94	117	120
12.1 Civilian personnel benefits	30	34	35
13.0 Benefits for former personnel	3	3	3
21.0 Travel and transportation of persons	7	7	7
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	22	22	22
25.1 Advisory and assistance services	356	363	370
25.2 Other services from non-Federal sources	72	72	122
25.3 Other goods and services from Federal sources	43	43	63
25.4 Operation and maintenance of facilities	199	192	247
25.7 Operation and maintenance of equipment	3	3	3
26.0 Supplies and materials	1	1	1
31.0 Equipment	6	6	6
32.0 Land and structures	6	6	6
41.0 Grants, subsidies, and contributions	48	48	48
99.0 Direct obligations	892	919	1,055
99.0 Reimbursable obligations	1,904	1,826	1,826
99.9 Total new obligations, unexpired accounts	2,796	2,745	2,881

Employment Summary

Identification code 089-0243-0-1-999	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	659	808	814

DEFENSE NUCLEAR WASTE DISPOSAL

Program and Financing (in millions of dollars)

Identification code 089-0244-0-1-053	2019 actual	2020 est.	2021 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
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	6	4	.....
3020 Outlays (gross)	-2	-4	.....
3050 Unpaid obligations, end of year	4	.....	.....
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	6	4	.....
3200 Obligated balance, end of year	4	.....	.....
Budget authority and outlays, net:			
Discretionary:			
Outlays, gross:			
4011 Outlays from discretionary balances	2	4	.....
4180 Budget authority, net (total) .....	.....	.....	.....
4190 Outlays, net (total)	2	4	.....

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 [33] 35 passenger motor vehicles [including one bus] for replacement only, [\$7,000,000,000] \$5,837,806,000, to remain available until expended: *Provided*, That of such amount, [\$186,300,000] \$190,306,000 shall be available until September 30, [2021] 2022, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 089-0222-0-1-251	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Basic Energy Sciences	2,126	2,213	1,936
0002 Advanced Scientific Computing Research	917	980	988
0003 Biological and Environmental Research	687	750	517
0004 High Energy Physics	959	1,045	818
0005 Nuclear Physics	665	713	653
0006 Fusion Energy Sciences	548	671	425
0007 Science Laboratories Infrastructure	233	301	174
0008 Science Program Direction	179	186	190
0009 Workforce Development for Teachers and Scientists	23	28	21
0010 Safeguards and Security	106	113	116
0011 Small Business Innovation Research	263	.....	.....
0012 Small Business Technology Transfer	36	.....	.....
0799 Total direct obligations	6,742	7,000	5,838

SCIENCE—Continued
Program and Financing—Continued

Identification code 089–0222–0–1–251	2019 actual	2020 est.	2021 est.
0801 Science (Reimbursable)	599	611	602
0900 Total new obligations, unexpired accounts	7,341	7,611	6,440
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	41	48	27
1021 Recoveries of prior year unpaid obligations	62	.....	.....
1050 Unobligated balance (total)	103	48	27
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	6,585	7,000	5,838
1121 Appropriations transferred from other acct [089–0319]	26	.....	.....
1121 Appropriations transferred from other acct [089–0309]	10	.....	.....
1121 Appropriations transferred from other acct [089–0213]	20	.....	.....
1121 Appropriations transferred from other acct [089–0251]	1	.....	.....
1121 Appropriations transferred from other acct [089–2250]	2	.....	.....
1121 Appropriations transferred from other acct [089–0321]	59	.....	.....
1121 Appropriations transferred from other acct [089–0318]	5	.....	.....
1160 Appropriation, discretionary (total)	6,708	7,000	5,838
Spending authority from offsetting collections, discretionary:			
1700 Collected	566	590	602
1701 Change in uncollected payments, Federal sources	12	.....	.....
1750 Spending auth from offsetting collections, disc (total)	578	590	602
1900 Budget authority (total)	7,286	7,590	6,440
1930 Total budgetary resources available	7,389	7,638	6,467
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	48	27	27
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	6,139	7,120	7,431
3010 New obligations, unexpired accounts	7,341	7,611	6,440
3020 Outlays (gross)	-6,298	-7,300	-7,140
3040 Recoveries of prior year unpaid obligations, unexpired	-62	.....	.....
3050 Unpaid obligations, end of year	7,120	7,431	6,731
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-459	-471	-471
3070 Change in uncollected pymts, Fed sources, unexpired	-12	.....	.....
3090 Uncollected pymts, Fed sources, end of year	-471	-471	-471
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	5,680	6,649	6,960
3200 Obligated balance, end of year	6,649	6,960	6,260
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	7,286	7,590	6,440
Outlays, gross:			
4010 Outlays from new discretionary authority	1,761	2,673	2,271
4011 Outlays from discretionary balances	4,537	4,627	4,869
4020 Outlays, gross (total)	6,298	7,300	7,140
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-359	-365	-365
4033 Non-Federal sources	-207	-225	-237
4040 Offsets against gross budget authority and outlays (total)	-566	-590	-602
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	-12	.....	.....
4060 Additional offsets against budget authority only (total)	-12	.....	.....
4070 Budget authority, net (discretionary)	6,708	7,000	5,838
4080 Outlays, net (discretionary)	5,732	6,710	6,538
4180 Budget authority, net (total)	6,708	7,000	5,838
4190 Outlays, net (total)	5,732	6,710	6,538

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 three thrusts: developing, deploying, and maintaining world-class computing

and network facilities for science; advancing research in applied mathematics, computer science and advanced networking; and partnering with other DOE and Office of Science (SC) programs to advance the use of its high performance computers to drive scientific advances for the Nation. 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 quantum computing and networking, artificial intelligence (AI), and machine learning (ML) in the science domain and in 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 SC and the 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 high-performance computing (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 invests in fundamental research to drive the scientific frontiers and innovation in high priority areas such as QIS, AI/ML, microelectronics, polymer upcycling, critical materials and rare earth separations, and exascale computing. BES also manages a research portfolio in accelerator physics, x-ray and neutron detectors, and x-ray-optics to explore technology options for developing the next generations of x-ray and neutron sources. BES also supports twelve 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. These facilities undergo continual development and upgrade of capabilities, including fabricating new x-ray and neutron experimental stations, improving core facilities, and providing new stand-alone instruments and capabilities. BES also manages construction projects to build new or upgrade existing facilities to provide world-leading tools and instruments to the scientific community and maintain U.S. leadership in the physical sciences.

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 predictive 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. The program also is initiating new efforts in translating biodesign rules to functional properties of novel biological polymers. 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 in both terrestrial and subsurface environments. 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) provides high quality genome sequence data and analysis techniques for a wide variety of plants and microbial communities in support of sustainable, renewable bioenergy and bioproducts research, and environmental research. JGI continues to be an essential component of DOE systems biology efforts. The Atmospheric Radiation Measurement (ARM) research facility provides unique, multi-instrumented capabilities for continuous, long-term observations of clouds, aerosols, and related meteorological information that can be used to improve earth system models. The Environmental Molecular Sciences Laboratory (EMSL) provides integrated experimental and computational resources for discovery and technological innovation in the environmental molecular sciences.

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 percent 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 the 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. The element supports FES Scientific Discovery through Advanced Computing centers 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. The element supports research to develop novel materials that can withstand the extreme fusion environment; 3) Discovery Plasma Science: Research—This element supports research on areas including 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 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 of particle physics. 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, to study some of the rarest particle interactions predicted by the Standard Model, and to 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 scientists to map the distribution of dark matter and perhaps unravel the nature of dark energy. Investments in Theoretical, Computational, and Interdisciplinary Physics provide the framework to explain experimental observations and gain a deeper understanding of nature while addressing cross-cutting challenges in QIS and AI/ML. Advanced Technology R&D fosters fundamental research into particle acceleration and detection techniques and instrumentation, supporting the frontiers and enabling future discovery experiments. Accelerator Stewardship supports R&D for advanced technologies and research tools synergistic with HEP that directly impact other sciences, 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, 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

SCIENCE—Continued

nuclei and how these nuclei have arisen during the 13.8 billion years since the birth of the cosmos. NP provides approximately 95 percent of all nuclear science federal research funding. NP supports highly trained university and national laboratory scientists 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 nearing completion at Michigan State University, and will provide advanced world-leading capabilities for science, national security applications, and isotope production. Researchers will use NP's low energy, precision nuclear experiments, many enabled by new quantum sensors, to search for a deeper understanding of nuclear interactions. The Electron Ion Collider (EIC) will ensure U.S. leadership in nuclear physics research and accelerator R&D. The EIC will enable scientists to investigate and answer questions about the basic building blocks of nuclei and how quarks and gluons (particles inside neutrons and protons), interact dynamically via the strong force to generate the fundamental properties of neutrons and protons, such as mass and spin.

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. The program provides mission readiness for the production of radioactive and stable isotopes that are in short supply for research and a wide array of applications. Construction continues for the Stable Isotope Production and Research Center to expand the stable isotope production capability to meet the demand of the Nation, while also mitigating dependency on critical isotopes from foreign suppliers. 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 2021 Budget includes funding for three new construction starts and fifteen on-going SLI 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 over 23,000 researchers located at over 300 institutions and the 17 DOE national laboratories, spanning all fifty states and the District of Columbia and 28 scientific user facilities serving over 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	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	97	99	101
11.3 Other than full-time permanent	2	2	2
11.5 Other personnel compensation	3	2	3
11.8 Special personnel services payments	1	1	1
11.9 Total personnel compensation	103	104	107
12.1 Civilian personnel benefits	31	31	31
13.0 Benefits for former personnel		1	1
21.0 Travel and transportation of persons	4	4	4
23.1 Rental payments to GSA		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	29	29	29
25.2 Other services from non-Federal sources	28	28	28
25.3 Other goods and services from Federal sources	14	14	14
25.4 Operation and maintenance of facilities	3,709	3,854	3,192
25.5 Research and development contracts	8	8	7
26.0 Supplies and materials	2	2	2
31.0 Equipment	303	315	261
32.0 Land and structures	1,290	1,340	1,007
41.0 Grants, subsidies, and contributions	1,217	1,265	1,150
99.0 Direct obligations	6,742	7,000	5,838
99.0 Reimbursable obligations	599	611	602
99.9 Total new obligations, unexpired accounts	7,341	7,611	6,440

Employment Summary

Identification code 089-0222-0-1-251	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	778	785	785

ADVANCED RESEARCH PROJECTS AGENCY—ENERGY

(INCLUDING CANCELLATION OF FUNDS)

For Department of Energy expenses necessary in [carrying out] overseeing execution of obligations carried forward into fiscal year 2022 for the activities authorized by section 5012 of the America COMPETES Act (Public Law 110-69), [\$425,000,000, to remain available until expended: Provided, That of such amount, \$35,000,000] \$21,256,000 shall be available until September 30, [2021] 2022, for program direction: Provided, That of the unobligated balances from prior year appropriations available under this heading, \$332,000,000 is hereby permanently cancelled: Provided further, 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, 2020.)

Program and Financing (in millions of dollars)

Identification code 089-0337-0-1-270	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 ARPA-E Projects	393	403	.....
0002 Program Direction	30	22	21
0799 Total direct obligations	423	425	21
0801 Advanced Research Projects Agency - Energy (Reimbursable)	1	.....	.....
0900 Total new obligations, unexpired accounts	424	425	21
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	450	412	413
1021 Recoveries of prior year unpaid obligations	19	.....	.....
1050 Unobligated balance (total)	469	412	413
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	366	425	21
1131 Unobligated balance of appropriations permanently reduced .....	.....	.....	-332
1160 Appropriation, discretionary (total)	366	425	-311
Spending authority from offsetting collections, discretionary:			
1700 Collected	1	.....	.....
1701 Change in uncollected payments, Federal sources .....	.....	1	1
1750 Spending auth from offsetting collections, disc (total)	1	1	1
1900 Budget authority (total)	367	426	-310
1930 Total budgetary resources available	836	838	103
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	412	413	82
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	409	566	643
3010 New obligations, unexpired accounts	424	425	21
3020 Outlays (gross)	-248	-348	-419
3040 Recoveries of prior year unpaid obligations, unexpired	-19	.....	.....
3050 Unpaid obligations, end of year	566	643	245
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-1	-1	-2
3070 Change in uncollected pymts, Fed sources, unexpired .....	.....	-1	-1
3090 Uncollected pymts, Fed sources, end of year	-1	-2	-3
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	408	565	641
3200 Obligated balance, end of year	565	641	242
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	367	426	-310
Outlays, gross:			
4010 Outlays from new discretionary authority	21	128	-326
4011 Outlays from discretionary balances	227	220	745
4020 Outlays, gross (total)	248	348	419
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
4052 Offsetting collections credited to expired accounts .....	.....	1	1
4070 Budget authority, net (discretionary)	366	425	-311
4080 Outlays, net (discretionary)	247	347	418
4180 Budget authority, net (total)	366	425	-311
4190 Outlays, net (total)	247	347	418

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. The Budget requests \$21,256,000 for administrative expenses related to overseeing ARPA-E obligations carried forward to remain available until September 30, 2022. The Budget also requests the cancellation of \$332,000,000 in unobligated balances.

Object Classification (in millions of dollars)

Identification code 089-0337-0-1-270	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	2	2	2
11.3 Other than full-time permanent	5	5	5
11.9 Total personnel compensation	7	7	7
12.1 Civilian personnel benefits	2	2	2
21.0 Travel and transportation of persons	1	1	.....
25.1 Advisory and assistance services	11	11	6
25.2 Other services from non-Federal sources	14	14	6
25.3 Other goods and services from Federal sources	4	4	.....
25.4 Operation and maintenance of facilities	54	54	.....
25.5 Research and development contracts	330	331	.....
99.0 Direct obligations	423	424	21
99.0 Reimbursable obligations	1	1	.....
99.9 Total new obligations, unexpired accounts	424	425	21

Employment Summary

Identification code 089-0337-0-1-270	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	45	64	52

ENERGY SUPPLY AND CONSERVATION

Program and Financing (in millions of dollars)

Identification code 089-0224-0-1-999	2019 actual	2020 est.	2021 est.
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	6	6	6
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	-1	-1	-1
3090 Uncollected pymts, Fed sources, end of year	-1	-1	-1
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	-1	-1	-1
3200 Obligated balance, end of year	-1	-1	-1
4180 Budget authority, net (total) .....	.....	.....	.....
4190 Outlays, net (total) .....	.....	.....	.....

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, **[\$1,493,408,000]** \$1,179,931,000, to remain available until expended: *Provided*, That of such amount, **[\$80,000,000]** \$75,131,000 shall be available until September 30, **[2021]** 2022, for program direction. (Energy and Water Development and Related Agencies Appropriations Act, 2020.)

Program and Financing (in millions of dollars)

Identification code 089-0319-0-1-999	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0010 Naval Reactors Development	86	89	.....
0032 Reactor Concepts RD&D	288	267	112
0033 Versatile Test Reactor .....	.....	.....	295
0034 Advanced Reactors Demonstration Program .....	.....	230	20
0041 Fuel Cycle R&D	265	305	187
0042 Integrated University Program	5	5	.....
0043 Nuclear Energy Enabling Technologies R&D	131	113	116
0091 Research and Development programs, subtotal	775	1,009	730
0301 Radiological Facilities Management	29	.....	12

NUCLEAR ENERGY—Continued
Program and Financing—Continued

Identification code 089-0319-0-1-999	2019 actual	2020 est.	2021 est.
0401 Idaho Facilities Management	318	334	226
0450 Idaho National Laboratory safeguards and security	146	153	138
0451 International Nuclear Safety	4		
0491 Infrastructure programs, subtotal	468	487	364
0501 Small Modular Reactor Licensing Technical Support Program	1		
0502 Supercritical Transformational Electric Power Generation	5	5	
0551 Program Direction	77	80	75
0552 International Nuclear Energy Cooperation	3		
0591 Other direct program activities, subtotal	86	85	75
0799 Total direct obligations	1,358	1,581	1,181
0801 Nuclear Energy (Reimbursable)	159	161	139
0900 Total new obligations, unexpired accounts	1,517	1,742	1,320
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	81	117	87
1011 Unobligated balance transfer from other acct [072-0306]	4		
1021 Recoveries of prior year unpaid obligations	13	10	
1050 Unobligated balance (total)	98	127	87
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	1,326	1,493	1,180
1120 Appropriations transferred to other accts [089-0222]	-26		
1121 Appropriations transferred from other acct [089-0314]	86	89	
1160 Appropriation, discretionary (total)	1,386	1,582	1,180
Spending authority from offsetting collections, discretionary:			
1700 Collected	123	120	120
1701 Change in uncollected payments, Federal sources	31		
1750 Spending auth from offsetting collections, disc (total)	154	120	120
1900 Budget authority (total)	1,540	1,702	1,300
1930 Total budgetary resources available	1,638	1,829	1,387
Memorandum (non-add) entries:			
1940 Unobligated balance expiring	-4		
1941 Unexpired unobligated balance, end of year	117	87	67
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	1,035	1,188	1,738
3010 New obligations, unexpired accounts	1,517	1,742	1,320
3020 Outlays (gross)	-1,351	-1,182	-1,346
3040 Recoveries of prior year unpaid obligations, unexpired	-13	-10	
3050 Unpaid obligations, end of year	1,188	1,738	1,712
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-79	-110	-110
3070 Change in uncollected pymts, Fed sources, unexpired	-31		
3090 Uncollected pymts, Fed sources, end of year	-110	-110	-110
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	956	1,078	1,628
3200 Obligated balance, end of year	1,078	1,628	1,602
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	1,540	1,702	1,300
Outlays, gross:			
4010 Outlays from new discretionary authority	556	570	432
4011 Outlays from discretionary balances	795	612	914
4020 Outlays, gross (total)	1,351	1,182	1,346
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-109	-120	-120
4033 Non-Federal sources	-14		
4040 Offsets against gross budget authority and outlays (total)	-123	-120	-120
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	-31		
4070 Budget authority, net (discretionary)	1,386	1,582	1,180
4080 Outlays, net (discretionary)	1,228	1,062	1,226
4180 Budget authority, net (total)	1,386	1,582	1,180
4190 Outlays, net (total)	1,228	1,062	1,226

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 2021 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.

Advanced Reactors Demonstration Program.—This program focuses federal and non-federal resources on the actual construction of demonstration reactors that are safe and affordable (to build and operate) in the near- and mid-term.

Versatile Test Reactor Project.— This program will provide the United States with a fast neutron testing capability to support the development of advanced nuclear reactor technologies. The Versatile Test Reactor (VTR) project will provide a leading edge capability for accelerated testing of advanced nuclear fuels, materials, instrumentation, and sensors.

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	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	36	40	37
11.5 Other personnel compensation	1		
11.9 Total personnel compensation	37	40	37
12.1 Civilian Personnel	12	19	18
12.1 Civilian personnel benefits	1		
21.0 Travel Subject to Travel Regulations	2	4	1
23.3 Communications, utilities, and miscellaneous charges	2	9	1
25.1 Advisory and assistance services	7	12	5
25.1 Other Contractual Services	2	5	2
25.2 Other services from non-Federal sources	195	265	177
25.3 Other goods and services from Federal sources	12	20	10
25.4 Operation and maintenance of facilities	960	1,009	837
25.7 Operation and maintenance of equipment	2	5	2
26.0 Supplies and materials	2	9	2

26.0	Other Supplies and Materials	2	10	2
31.0	Equipment	12	30	6
32.0	Land and structures	72	95	55
41.0	Grants, subsidies, and contributions	36	45	25
41.0	Other Grants Not Otherwise Classified	2	5	2
99.0	Direct obligations	1,358	1,582	1,182
99.0	Reimbursable obligations	159	160	138
99.9	Total new obligations, unexpired accounts	1,517	1,742	1,320

Employment Summary

Identification code 089-0319-0-1-999	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	281	287	272
2001 Reimbursable civilian full-time equivalent employment	2		

URANIUM RESERVE

For Department of Energy expenses necessary for Uranium Reserve activities to carry out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), \$150,000,000, to remain available until expended.

Program and Financing (in millions of dollars)

Identification code 089-2296-0-1-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Purchase of uranium			150
0900 Total new obligations, unexpired accounts (object class 25.2)			150
Budgetary resources:			
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation			150
1930 Total budgetary resources available			150
Change in obligated balance:			
Unpaid obligations:			
3010 New obligations, unexpired accounts			150
3020 Outlays (gross)			-45
3050 Unpaid obligations, end of year			105
Memorandum (non-add) entries:			
3200 Obligated balance, end of year			105
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross			150
Outlays, gross:			
4010 Outlays from new discretionary authority			45
4180 Budget authority, net (total)			150
4190 Outlays, net (total)			45

Establishing a Uranium Reserve provides assurance of availability of uranium in the event of a market disruption and supports strategic U.S. fuel cycle capabilities. This action addresses immediate challenges to the production of domestic uranium and reflects the Administration's Nuclear Fuel Working Group (NFWG) priorities. The NFWG will continue to evaluate issues related to uranium supply chain and fuel supply.

ELECTRICITY

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, \$190,000,000 \$195,045,000, to remain available until expended: Provided, That of such amount, \$18,000,000 \$19,645,000 shall be available until September 30, [2021] 2022, for program direction. (Energy and Water Development and Related Agencies Appropriations Act, 2020.)

Program and Financing (in millions of dollars)

Identification code 089-0318-0-1-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0011 Transmission reliability and resiliency	47	57	56
0012 Resilient distribution systems	34	45	18
0014 Energy Storage	45	56	84
0015 Transformer Resilience and Advanced Components	12	7	9
0016 DCEI Energy Mission Assurance			2
0030 Transmission permitting and technical assistance	7	7	7
0040 Program Direction	18	18	20
0799 Total direct obligations	163	190	196
0801 Reimbursable work	2	2	2
0809 Reimbursable program activities, subtotal	2	2	2
0900 Total new obligations, unexpired accounts	165	192	198
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	43	33	37
1010 Unobligated balance transfer to other accts [089-2250]	-7		
1021 Recoveries of prior year unpaid obligations	14		
1050 Unobligated balance (total)	50	33	37
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	156	190	195
1120 Appropriations transferred to other accts [089-0222]	-5		
1160 Appropriation, discretionary (total)	151	190	195
Spending authority from offsetting collections, discretionary:			
1700 Collected	2	3	3
1701 Change in uncollected payments, Federal sources	-5	3	3
1750 Spending auth from offsetting collections, disc (total)	-3	6	6
1900 Budget authority (total)	148	196	201
1930 Total budgetary resources available	198	229	238
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	33	37	40
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	352	298	249
3010 New obligations, unexpired accounts	165	192	198
3020 Outlays (gross)	-205	-241	-247
3040 Recoveries of prior year unpaid obligations, unexpired	-14		
3050 Unpaid obligations, end of year	298	249	200
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-19	-14	-17
3070 Change in uncollected pymts, Fed sources, unexpired	5	-3	-3
3090 Uncollected pymts, Fed sources, end of year	-14	-17	-20
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	333	284	232
3200 Obligated balance, end of year	284	232	180
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	148	196	201
Outlays, gross:			
4010 Outlays from new discretionary authority	15	82	84
4011 Outlays from discretionary balances	190	159	163
4020 Outlays, gross (total)	205	241	247
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-2	-3	-3
4040 Offsets against gross budget authority and outlays (total)	-2	-3	-3
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	5	-3	-3
4070 Budget authority, net (discretionary)	151	190	195
4080 Outlays, net (discretionary)	203	238	244
4180 Budget authority, net (total)	151	190	195
4190 Outlays, net (total)	203	238	244

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:

ELECTRICITY—Continued

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, which is included in 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.

Defense Critical Energy Infrastructure (DCEI) Energy Mission Assurance.—The DCEI Energy Mission Assurance program will identify, evaluate, prioritize, and assist in developing executable strategies to strengthen the energy infrastructure systems that supply critical infrastructure needed to ensure government continuity following severe natural and manmade disasters. This is a new activity in FY 2021.

Transmission Permitting & Technical Assistance (TPTA).—The TPTA program helps States address issues shaping their energy infrastructure programs, policies, and decisions by advancing methods and approaches that address challenges such as incorporating resilience into planning processes, developing effective grid modernization strategies, and evaluating myriad resource options. TPTA also carries out regulatory responsibilities and evaluates regulatory reform to reduce the Federal burden associated with investing in our Nations electricity infrastructure.

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	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	8	8	8
11.3 Other than full-time permanent	1	1	1
11.9 Total personnel compensation	9	9	9
12.1 Civilian personnel benefits	3	3	3
25.1 Advisory and assistance services	9	9	9
25.3 Other goods and services from Federal sources	6	6	6
25.4 Operation and maintenance of facilities	119	146	151
25.5 Research and development contracts	16	16	17
32.0 Land and structures	1	1	1
99.0 Direct obligations	163	190	196
99.0 Reimbursable obligations	2	2	2
99.9 Total new obligations, unexpired accounts	165	192	198

Employment Summary

Identification code 089-0318-0-1-271	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	54	62	62

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, **[\$156,000,000] \$184,621,000**, to remain available until expended: *Provided*, That of such amount, **[\$13,000,000] \$11,521,000** shall be available until September 30, **[2021] 2022**, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 089-2250-0-1-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0010 Cybersecurity for energy delivery systems	87	99	107
0020 Infrastructure security and energy restoration	15	50	72
0030 Program direction	7	15	14
0799 Total direct obligations	109	164	193
0801 Reimbursable work	1	38	1
0900 Total new obligations, unexpired accounts	110	202	194
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1		16	8
1011 Unobligated balance transfer from other acct [089-0318]	7		
1050 Unobligated balance (total)	7	16	8
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	120	156	185
1120 Appropriations transferred to other acct [089-0222]	-2		
1160 Appropriation, discretionary (total)	118	156	185
Spending authority from offsetting collections, discretionary:			
1701 Change in uncollected payments, Federal sources	1	38	1
1900 Budget authority (total)	119	194	186
1930 Total budgetary resources available	126	210	194
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	16	8	
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1		91	169
3010 New obligations, unexpired accounts	110	202	194
3020 Outlays (gross)	-19	-124	-146
3050 Unpaid obligations, end of year	91	169	217
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1		-1	-39
3070 Change in uncollected pymts, Fed sources, unexpired	-1	-38	-1
3090 Uncollected pymts, Fed sources, end of year	-1	-39	-40
Memorandum (non-add) entries:			
3100 Obligated balance, start of year		90	130
3200 Obligated balance, end of year	90	130	177
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	119	194	186
Outlays, gross:			
4010 Outlays from new discretionary authority	19	100	75
4011 Outlays from discretionary balances		24	71
4020 Outlays, gross (total)	19	124	146
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	-1	-38	-1
4180 Budget authority, net (total)	118	156	185
4190 Outlays, net (total)	19	124	146

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				
	2019 actual	2020 est.	2021 est.	
11.1 Direct obligations: Personnel compensation: Full-time permanent	1	3	4	
11.9 Total personnel compensation	1	3	4	
12.1 Civilian personnel benefits	1	1	2	
23.3 Communications, utilities, and miscellaneous charges	1	1	2	
25.1 Advisory and assistance services	11	15	19	
25.3 Other goods and services from Federal sources	2	2	3	
25.4 Operation and maintenance of facilities	21	27	35	
25.5 Research and development contracts	71	115	128	
99.0 Direct obligations	108	164	193	
99.0 Reimbursable obligations	1	38	1	
99.5 Adjustment for rounding	1			
99.9 Total new obligations, unexpired accounts	110	202	194	

Employment Summary				
Identification code 089–2250–0–1–271				
	2019 actual	2020 est.	2021 est.	
1001 Direct civilian full-time equivalent employment	16	27	43	

ARTIFICIAL INTELLIGENCE AND TECHNOLOGY OFFICE

For program direction for the Artificial Intelligence and Technology Office in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), \$4,912,000, to remain available until September 30, 2022.

Program and Financing (in millions of dollars)				
Identification code 089–2295–0–1–271				
	2019 actual	2020 est.	2021 est.	
Obligations by program activity:				
0001 Direct program activity			5	

Budgetary resources:				
Budget authority:				
Appropriations, discretionary:				
1100	Appropriation			5
1930	Total budgetary resources available			5
Change in obligated balance:				
Unpaid obligations:				
3010	New obligations, unexpired accounts			5
3020	Outlays (gross)			–4
3050	Unpaid obligations, end of year			1
Memorandum (non-add) entries:				
3200	Obligated balance, end of year			1
Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross			5
Outlays, gross:				
4010	Outlays from new discretionary authority			4
4180	Budget authority, net (total)			5
4190	Outlays, net (total)			4

The Artificial Intelligence and Technology Office (AITO) serves as the Department's hub for the development, coordination, and execution of efforts in Artificial Intelligence (AI), building upon the Department's capabilities as a world-leading enterprise in scientific and technological discovery. AITO accelerates the development, delivery, and adoption of AI by coordinating and overseeing efforts across DOE and implements the Secretary's vision for cross-cutting, mission relevant AI projects that are aligned with the Office of Science and Technology Policy AI strategic priorities. AITO will engage programs, functional offices, sites, and associated National Laboratories for oversight of funded AI projects for transparency, shared learning, and to ensure that DOE's AI efforts align and fulfill the priorities outlined in the National Artificial Intelligence Research and Development Strategic Plan.

Object Classification (in millions of dollars)				
Identification code 089–2295–0–1–271				
		2019 actual	2020 est.	2021 est.
11.1	Direct obligations: Personnel compensation: Full-time permanent			2
11.9	Total personnel compensation			2
12.1	Civilian personnel benefits			1
25.1	Advisory and assistance services			1
25.2	Other services from non-Federal sources			1
99.0	Direct obligations			5
99.9	Total new obligations, unexpired accounts			5

Employment Summary				
Identification code 089–2295–0–1–271				
		2019 actual	2020 est.	2021 est.
1001	Direct civilian full-time equivalent employment			12

ENERGY EFFICIENCY AND RENEWABLE ENERGY

[(INCLUDING RESCISSION OF FUNDS)]

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, [\$2,848,000,000] \$719,563,000, to remain available until expended: *Provided*, That of such amount, [\$165,000,000] \$122,563,000 shall be available until September 30, [2021] 2022, for program direction: *Provided further*, That of the unobligated balances from prior year appropriations available under this heading, \$58,000,000 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, 2020.)

ENERGY EFFICIENCY AND RENEWABLE ENERGY—Continued
Program and Financing (in millions of dollars)

Identification code 089-0321-0-1-270	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Vehicle Technologies	333	441	97
0002 Bioenergy Technologies	172	359	83
0003 Hydrogen & Fuel Cell Technologies	121	146	44
0091 Sustainable Transportation, subtotal	626	946	224
0101 Solar Energy	199	413	117
0102 Wind Energy	74	143	37
0103 Water Power	109	196	64
0104 Geothermal Technologies	194	181	52
0191 Renewable Electricity, subtotal	576	933	270
0201 Advanced Manufacturing	241	469	128
0202 Building Technologies	181	366	94
0203 Weatherization & Intergovernmental Activities	341	357	1
0204 Federal Energy Management Program	29	48	11
0291 Energy Efficiency, subtotal	792	1,240	234
0301 Program Direction & Support	161	165	123
0302 Strategic Programs	12	19	5
0303 Facilities & Infrastructure	97	130	107
0391 EERE Corporate Support, subtotal	270	314	235
0799 Total direct obligations	2,264	3,433	963
0810 Energy Efficiency and Renewable Energy (Reimbursable)	156	181	181
0900 Total new obligations, unexpired accounts	2,420	3,614	1,144
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	666	836	270
1011 Unobligated balance transfer from other acct [097-0360]	58		
1021 Recoveries of prior year unpaid obligations	61	90	90
1050 Unobligated balance (total)	785	926	360
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	2,379	2,848	720
1120 Appropriations transferred to other accts [089-0222]	-59		
1131 Unobligated balance of appropriations permanently reduced		-71	
1160 Appropriation, discretionary (total)	2,320	2,777	720
Spending authority from offsetting collections, discretionary:			
1700 Collected	139	181	181
1701 Change in uncollected payments, Federal sources	12		
1750 Spending auth from offsetting collections, disc (total)	151	181	181
1900 Budget authority (total)	2,471	2,958	901
1930 Total budgetary resources available	3,256	3,884	1,261
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	836	270	117
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	3,075	3,361	4,459
3010 New obligations, unexpired accounts	2,420	3,614	1,144
3020 Outlays (gross)	-2,072	-2,426	-2,541
3040 Recoveries of prior year unpaid obligations, unexpired	-61	-90	-90
3041 Recoveries of prior year unpaid obligations, expired	-1		
3050 Unpaid obligations, end of year	3,361	4,459	2,972
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-71	-83	-83
3070 Change in uncollected pymts, Fed sources, unexpired	-12		
3090 Uncollected pymts, Fed sources, end of year	-83	-83	-83
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	3,004	3,278	4,376
3200 Obligated balance, end of year	3,278	4,376	2,889
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	2,471	2,958	901
Outlays, gross:			
4010 Outlays from new discretionary authority	314	571	208
4011 Outlays from discretionary balances	1,758	1,855	2,333
4020 Outlays, gross (total)	2,072	2,426	2,541
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-64	-81	-81
4033 Non-Federal sources	-75	-100	-100

4040 Offsets against gross budget authority and outlays (total)	-139	-181	-181
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	-12		
4060 Additional offsets against budget authority only (total)	-12		
4070 Budget authority, net (discretionary)	2,320	2,777	720
4080 Outlays, net (discretionary)	1,933	2,245	2,360
4180 Budget authority, net (total)	2,320	2,777	720
4190 Outlays, net (total)	1,933	2,245	2,360

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	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	69	61	64
11.3 Other than full-time permanent	2	3	2
11.5 Other personnel compensation	1	2	2
11.9 Total personnel compensation	72	66	68
12.1 Civilian personnel benefits	23	42	36
21.0 Travel and transportation of persons	3	5	10
23.3 Communications, utilities, and miscellaneous charges	3	5	2
25.1 Advisory and assistance services	118	181	92
25.2 Other services from non-Federal sources	12	21	24
25.3 Other goods and services from Federal sources	10	19	42
25.4 Operation and maintenance of facilities	1,094	1,659	506
25.5 Research and development contracts	236	361	154
31.0 Equipment	16	49	29
41.0 Grants, subsidies, and contributions	677	1,025	
99.0 Direct obligations	2,264	3,433	963
99.0 Reimbursable obligations	156	181	181
99.9 Total new obligations, unexpired accounts	2,420	3,614	1,144

Employment Summary

Identification code 089-0321-0-1-270	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	579	461	454

Employment Summary

Identification code 089-0342-0-1-271	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	6	7	7

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.), **[\$22,000,000] \$8,005,000**, to remain available until expended: *Provided*, That, of the amount appropriated under this heading, **[\$5,000,000] \$3,526,000** shall be available until September 30, **[2021] 2022**, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 089-0342-0-1-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0010 Direct program activity	11	12	12
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1		7	17
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	18	22	8
1930 Total budgetary resources available	18	29	25
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	7	17	13
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1		10	19
3010 New obligations, unexpired accounts	11	12	12
3020 Outlays (gross)	-1	-3	-10
3050 Unpaid obligations, end of year	10	19	21
Memorandum (non-add) entries:			
3100 Obligated balance, start of year		10	19
3200 Obligated balance, end of year	10	19	21
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	18	22	8
Outlays, gross:			
4010 Outlays from new discretionary authority	1	1	
4011 Outlays from discretionary balances		2	10
4020 Outlays, gross (total)	1	3	10
4180 Budget authority, net (total)	18	22	8
4190 Outlays, net (total)	1	3	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	2019 actual	2020 est.	2021 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent	1	1	1
11.9 Total personnel compensation	1	1	1
25.1 Advisory and assistance services	1	1	1
25.4 Operation and maintenance of facilities	1	1	1
41.0 Grants, subsidies, and contributions	8	9	9
99.9 Total new obligations, unexpired accounts	11	12	12

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, **[\$319,200,000] \$275,820,000**, to remain available until expended: *Provided*, That **[\$200,000 of the funds provided are for community support]**, in addition, amounts deposited under this heading in fiscal year 2021 pursuant to section 309 of title III of division C of Public Law 116-94 are appropriated, to remain available until expended, for mercury storage costs. (*Energy and Water Development and Related Agencies Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 089-0315-0-1-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0002 Fast Flux Test Facility	1	3	3
0003 Gaseous Diffusion Plants	106	113	115
0004 Small Sites	107	127	70
0005 West Valley Demonstration Project	75	75	88
0006 Management and Storage of Elemental Mercury		1	
0799 Total direct obligations	289	319	276
0801 Non-defense Environmental Cleanup (Reimbursable)	44	29	35
0900 Total new obligations, unexpired accounts	333	348	311
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	13	39	39
1021 Recoveries of prior year unpaid obligations	5		
1050 Unobligated balance (total)	18	39	39
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	310	319	276
Spending authority from offsetting collections, discretionary:			
1700 Collected	44	29	35
1900 Budget authority (total)	354	348	311
1930 Total budgetary resources available	372	387	350
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	39	39	39
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	154	171	136
3010 New obligations, unexpired accounts	333	348	311
3020 Outlays (gross)	-311	-383	-339
3040 Recoveries of prior year unpaid obligations, unexpired	-5		
3050 Unpaid obligations, end of year	171	136	108
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	154	171	136
3200 Obligated balance, end of year	171	136	108
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	354	348	311
Outlays, gross:			
4010 Outlays from new discretionary authority	202	252	228
4011 Outlays from discretionary balances	109	131	111
4020 Outlays, gross (total)	311	383	339
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-2		
4033 Non-Federal sources	-42	-29	-35
4040 Offsets against gross budget authority and outlays (total) ...	-44	-29	-35
4070 Budget authority, net (discretionary)	310	319	276
4080 Outlays, net (discretionary)	267	354	304
4180 Budget authority, net (total)	310	319	276
4190 Outlays, net (total)	267	354	304

NON-DEFENSE ENVIRONMENTAL CLEANUP—Continued

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	2019 actual	2020 est.	2021 est.
Direct obligations:			
25.1 Advisory and assistance services	2	2	2
25.2 Other services from non-Federal sources	17	19	16
25.3 Other goods and services from Federal sources	1	1	1
25.4 Operation and maintenance of facilities	266	294	254
32.0 Land and structures	3	3	3
99.0 Direct obligations	289	319	276
99.0 Reimbursable obligations	44	29	35
99.9 Total new obligations, unexpired accounts	333	348	311

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), **[\$750,000,000]** \$730,601,000, to remain available until expended: *Provided*, That of such amount **[\$61,500,000]** \$62,451,000 shall be available until September 30, **[2021]** 2022, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 089-0213-0-1-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0002 Carbon Capture	85	118	.....
0003 Carbon Storage	95	100	.....
0004 Advanced Energy Systems	127	120	323
0005 Cross-Cutting Research	63	56	65
0012 Program Direction - Management	59	61	62
0013 Program Direction - NETL R&D	145	.....	.....
0017 Special Recruitment Program	1	1	1
0020 Natural gas technologies	38	51	15
0021 Unconventional FE Technologies	41	46	17
0022 STEP (Supercritical CO2)	17	16	.....

0024 NETL Research and Operations	50	46	.....
0025 NETL Infrastructure	50	43	.....
0027 Carbon Capture, Utilization and Storage .....	.....	.....	123
0028 NETL Coal R&D	61	36	.....
0030 Transformational Coal Pilots	20	.....	.....
0799 Total direct obligations	671	750	731
0801 Fossil Energy Research and Development (Reimbursable)	1	.....	.....
0900 Total new obligations, unexpired accounts	672	750	731

Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	246	304	306
1021 Recoveries of prior year unpaid obligations	9	.....	.....
1050 Unobligated balance (total)	255	304	306
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	740	750	731
1120 Appropriations transferred to other accts [089-0222]	-20	.....	.....
1160 Appropriation, discretionary (total)	720	750	731
Spending authority from offsetting collections, discretionary:			
1700 Collected	1	2	2
1900 Budget authority (total)	721	752	733
1930 Total budgetary resources available	976	1,056	1,039
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	304	306	308

Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	904	946	854
3010 New obligations, unexpired accounts	672	750	731
3020 Outlays (gross)	-620	-842	-973
3040 Recoveries of prior year unpaid obligations, unexpired	-9	.....	.....
3041 Recoveries of prior year unpaid obligations, expired	-1	.....	.....
3050 Unpaid obligations, end of year	946	854	612
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	903	945	853
3200 Obligated balance, end of year	945	853	611

Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	721	752	733
Outlays, gross:			
4010 Outlays from new discretionary authority	131	301	293
4011 Outlays from discretionary balances	489	541	680
4020 Outlays, gross (total)	620	842	973
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4033 Non-Federal sources	-1	-2	-2
4040 Offsets against gross budget authority and outlays (total)	-1	-2	-2
4180 Budget authority, net (total)	720	750	731
4190 Outlays, net (total)	619	840	971

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 resiliency, and improve the efficiency of existing and new 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 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	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	60	60	60
11.3 Other than full-time permanent	1	1	1
11.5 Other personnel compensation	1	1	1
11.9 Total personnel compensation	62	62	62
12.1 Civilian personnel benefits	21	23	23
21.0 Travel and transportation of persons	4	5	4
23.3 Communications, utilities, and miscellaneous charges	11	12	12
25.1 Advisory and assistance services	120	138	134
25.3 Other goods and services from Federal sources	8	9	9
25.4 Operation and maintenance of facilities	85	95	93
25.5 Research and development contracts	329	369	359
25.7 Operation and maintenance of equipment	7	8	8
26.0 Supplies and materials	3	4	3
31.0 Equipment	12	14	13
32.0 Land and structures	8	9	9
41.0 Grants, subsidies, and contributions	1	1	1
99.0 Direct obligations	671	749	730
99.0 Reimbursable obligations	1	1	1
99.9 Total new obligations, unexpired accounts	672	750	731

Employment Summary

Identification code 089-0213-0-1-271	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	500	657	679

NAVAL PETROLEUM AND OIL SHALE RESERVES

For Department of Energy expenses necessary to carry out naval petroleum and oil shale reserve activities, **[\$14,000,000]** \$13,006,000, 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: *Provided further*, That up to \$242,000,000 in proceeds from the sale of crude oil from the Strategic Petroleum Reserve shall be made available until expended to complete comprehensive remediation activities at the Naval Petroleum Reserve-1 site as provided for in section 309 of this title. (Energy and Water Development and Related Agencies Appropriations Act, 2020.)

Program and Financing (in millions of dollars)

Identification code 089-0219-0-1-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Production and Operations	13	12	19
0003 Program support		2	1
0799 Total direct obligations	13	14	20
0900 Total new obligations, unexpired accounts	13	14	20
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	9	3	3
1020 Adjustment of unobligated bal brought forward, Oct 1	-5		
1021 Recoveries of prior year unpaid obligations	2		
1050 Unobligated balance (total)	6	3	3
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	10	14	13

Spending authority from offsetting collections, discretionary:			
1700 Collected			242
1900 Budget authority (total)	10	14	255
1930 Total budgetary resources available	16	17	258
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	3	3	238

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	21	17	4
3010 New obligations, unexpired accounts	13	14	20
3020 Outlays (gross)	-15	-27	-17
3040 Recoveries of prior year unpaid obligations, unexpired	-2		
3050 Unpaid obligations, end of year	17	4	7
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	21	17	4
3200 Obligated balance, end of year	17	4	7

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	10	14	255
Outlays, gross:			
4010 Outlays from new discretionary authority	1	9	13
4011 Outlays from discretionary balances	14	18	4
4020 Outlays, gross (total)	15	27	17
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4034 Offsetting governmental collections:			-242
4040 Offsets against gross budget authority and outlays (total)			-242
4180 Budget authority, net (total)	10	14	13
4190 Outlays, net (total)	15	27	-225

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 2021, funding will continue ongoing activities to attain release from the remaining environmental findings related to the sale of NPR-1. This Budget also includes a proposal to sell 15 million barrels of SPR crude oil to raise funding for other Departmental priorities, including \$242 million needed to fund the comprehensive completion of remediation work at the Naval Petroleum Reserve-1 site in Elk Hills, CA. 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	2019 actual	2020 est.	2021 est.
Direct obligations:			
25.1 Advisory and assistance services		2	1
25.4 Operation and maintenance of facilities	13	12	19
99.0 Direct obligations	13	14	20
99.9 Total new obligations, unexpired accounts	13	14	20

Employment Summary

Identification code 089-0219-0-1-271	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	1	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.), **[\$195,000,000]** \$187,081,000, 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 \$450,000,000 of crude oil from the Strategic Petroleum Reserve in fiscal year 2020: *Provided further*, 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. (Energy and Water Development and Related Agencies Appropriations Act, 2020.)

Program and Financing (in millions of dollars)

Identification code 089–0218–0–1–274	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 SPR Management	40	30	28
0002 SPR Storage Facilities Development	176	165	159
0900 Total new obligations, unexpired accounts	216	195	187
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	38	57	57
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	235	195	187
1930 Total budgetary resources available	273	252	244
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	57	57	57
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	164	168	153
3010 New obligations, unexpired accounts	216	195	187
3020 Outlays (gross)	–212	–210	–236
3050 Unpaid obligations, end of year	168	153	104
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	164	168	153
3200 Obligated balance, end of year	168	153	104
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	235	195	187
Outlays, gross:			
4010 Outlays from new discretionary authority	65	107	103
4011 Outlays from discretionary balances	147	103	133
4020 Outlays, gross (total)	212	210	236
4180 Budget authority, net (total)	235	195	187
4190 Outlays, net (total)	212	210	236

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 2021 Budget will support the SPR's operational readiness and drawdown capabilities of 4.4 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) and sell one million barrels of 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. The Budget also proposes to sell 15 million barrels of SPR crude oil to fund other Department priorities, including the comprehensive remediation of the Navel Petroleum Reserve–1 site in Elk Hills, CA.

Object Classification (in millions of dollars)

Identification code 089–0218–0–1–274	2019 actual	2020 est.	2021 est.
Direct obligations:			
11.1 Personnel compensation: Full-time permanent	12	11	11
12.1 Civilian personnel benefits	4	4	4
21.0 Travel and transportation of persons	1	1	1
25.1 Advisory and assistance services	2	2	2
25.2 Other services from non-Federal sources	30	27	26
25.4 Operation and maintenance of facilities	167	150	143
99.9 Total new obligations, unexpired accounts	216	195	187

Employment Summary

Identification code 089–0218–0–1–274	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	113	114	114
2001 Reimbursable civilian full-time equivalent employment	12	12	12

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, \$19,000,000 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 \$19,000,000 collected from such sale shall be deposited into the general fund of the Treasury during fiscal year 2021: 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, 2020.)*

Program and Financing (in millions of dollars)

Identification code 089–0233–0–1–274	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 SPR Petroleum Account	10	10	10
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	11	12	12
1033 Recoveries of prior year paid obligations	1		
1050 Unobligated balance (total)	12	12	12
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	10	10	
Spending authority from offsetting collections, discretionary:			
1700 Collected			19
1900 Budget authority (total)	10	10	19
1930 Total budgetary resources available	22	22	31
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	12	12	21
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	25	23	16
3010 New obligations, unexpired accounts	10	10	10
3020 Outlays (gross)	–12	–17	–20
3050 Unpaid obligations, end of year	23	16	6
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	25	23	16
3200 Obligated balance, end of year	23	16	6
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	10	10	19
Outlays, gross:			
4010 Outlays from new discretionary authority		3	4
4011 Outlays from discretionary balances	6	14	16
4020 Outlays, gross (total)	6	17	20

Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4034	Offsetting governmental collections		-19
Mandatory:			
Outlays, gross:			
4101	Outlays from mandatory balances	6	
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4123	Non-Federal sources	-1	
Additional offsets against gross budget authority only:			
4143	Recoveries of prior year paid obligations, unexpired accounts	1	
4170	Outlays, net (mandatory)	5	
4180	Budget authority, net (total)	10	10
4190	Outlays, net (total)	11	17

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 2021 Budget proposes to deposit into the SPR Petroleum Account up to \$19 million in proceeds from the proposed 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. 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 \$19 million will contribute to deficit reduction.

Object Classification (in millions of dollars)

Identification code 089-0233-0-1-274	2019 actual	2020 est.	2021 est.	
Direct obligations:				
25.2	Other services from non-Federal sources	2	2	2
25.4	Operation and maintenance of facilities	8	8	8
99.9	Total new obligations, unexpired accounts	10	10	10

ENERGY SECURITY AND INFRASTRUCTURE MODERNIZATION FUND

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5615-0-2-274	2019 actual	2020 est.	2021 est.
0100	Balance, start of year		
Receipts:			
Current law:			
1130	Proceeds from Sale of Oil, Energy Security and Infrastructure Modernization Fund	300	450
2000	Total: Balances and receipts	300	450
Appropriations:			
Current law:			
2101	Energy Security and Infrastructure Modernization Fund	-300	-450
5099	Balance, end of year		

Program and Financing (in millions of dollars)

Identification code 089-5615-0-2-274	2019 actual	2020 est.	2021 est.	
Obligations by program activity:				
0010	Energy security and infrastructure modernization	331	321	
0900	Total new obligations, unexpired accounts (object class 25.4)	331	321	
Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	52	21	150
Budget authority:				
Appropriations, discretionary:				
1101	Appropriation (special or trust)	300	450	
1900	Budget authority (total)	300	450	
1930	Total budgetary resources available	352	471	150
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	21	150	150

Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	559	814	685
3010	New obligations, unexpired accounts	331	321	
3020	Outlays (gross)	-76	-450	-561
3050	Unpaid obligations, end of year	814	685	124
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	559	814	685
3200	Obligated balance, end of year	814	685	124

Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	300	450	
Outlays, gross:				
4010	Outlays from new discretionary authority	5	22	
4011	Outlays from discretionary balances	71	428	561
4020	Outlays, gross (total)	76	450	561
4180	Budget authority, net (total)	300	450	
4190	Outlays, net (total)	76	450	561

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. The FY 2020 budget cycle concluded the four-year (2017–2020) financing structure of multi-year oil sales that support the SPR's modernization program, therefore no budget request is made for FY 2021.

ENERGY INFORMATION ADMINISTRATION

For Department of Energy expenses necessary in carrying out the activities of the Energy Information Administration, **[\$126,800,000]** \$128,710,000, to remain available until expended. (*Energy and Water Development and Related Agencies Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 089-0216-0-1-276	2019 actual	2020 est.	2021 est.	
Obligations by program activity:				
0001	Obligations by Program Activity	125	127	128
Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	2	2	2
Budget authority:				
Appropriations, discretionary:				
1100	Appropriation	125	127	129
1930	Total budgetary resources available	127	129	131
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	2	2	3

Change in obligated balance:				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	43	45	49
3010	New obligations, unexpired accounts	125	127	128
3020	Outlays (gross)	-123	-123	-128
3050	Unpaid obligations, end of year	45	49	49
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	43	45	49
3200	Obligated balance, end of year	45	49	49

Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	125	127	129
Outlays, gross:				
4010	Outlays from new discretionary authority	88	89	90
4011	Outlays from discretionary balances	35	34	38
4020	Outlays, gross (total)	123	123	128
4180	Budget authority, net (total)	125	127	129
4190	Outlays, net (total)	123	123	128

ENERGY INFORMATION ADMINISTRATION—Continued

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 2021 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	2019 actual	2020 est.	2021 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent	40	42	40
11.9 Total personnel compensation	40	42	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	54
25.3 Purchases of goods and services from Government accounts	15	15	16
25.4 Operation and maintenance of facilities	1	1	1
26.0 Pamphlets, Documents, Subscriptions and Publications	2	2	1
99.9 Total new obligations, unexpired accounts	125	127	128

Employment Summary

Identification code 089-0216-0-1-276	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	316	359	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, **[\$382,000,000] \$404,350,000**, to remain available until expended: *Provided*, That notwithstanding any other provision of law, not to exceed **[\$382,000,000] \$404,350,000** of revenues from fees and annual charges, and other services and collections in fiscal year **[2020] 2021** 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 **[2020] 2021** so as to result in a final fiscal year **[2020] 2021** appropriation from the general fund estimated at not more than \$0. (*Energy and Water Development and Related Agencies Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 089-0212-0-1-276	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0801 Ensure Just and Reasonable Rates, Terms & Conditions	169	179	182
0802 Promote Safe, Reliable, Secure & Efficient Infrastructure	128	134	143
0803 Mission Support through Organizational Excellence	74	74	79
0900 Total new obligations, unexpired accounts	371	387	404
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	32	38	33
1021 Recoveries of prior year unpaid obligations	7		
1050 Unobligated balance (total)	39	38	33
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected	370	382	404
1930 Total budgetary resources available	409	420	437

Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	38	33	33
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	96	97	43
3010 New obligations, unexpired accounts	371	387	404
3020 Outlays (gross)	-363	-441	-402
3040 Recoveries of prior year unpaid obligations, unexpired	-7		
3050 Unpaid obligations, end of year	97	43	45
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	96	97	43
3200 Obligated balance, end of year	97	43	45
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	370	382	404
Outlays, gross:			
4010 Outlays from new discretionary authority	301	344	364
4011 Outlays from discretionary balances	62	97	38
4020 Outlays, gross (total)	363	441	402
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4034 Offsetting governmental collections	-370	-382	-404
4180 Budget authority, net (total)			
4190 Outlays, net (total)	-7	59	-2
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 Com-

mission'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 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's request provides continued funding for program contracts associated with statutorily required workload associated with hydropower and natural gas infrastructure, including environmental reviews, stakeholder engagement, and construction oversight.

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 2021 request includes increased funding to advance the Commission's Part 12 inspection program and reviews of operational LNG 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. FERC promotes the reliable operation of the bulk-power system through oversight of the electric reliability organization (ERO). A Commission-certified 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 FERC-jurisdictional infrastructure. This is achieved through collaboration with federal and jurisdictional entities to identify, inform, assess, and address cyber and physical security threats

and vulnerabilities, and to promote voluntary best practices that provide an important complement to FERC's related responsibilities for both regulatory requirements and enforcement. 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 sixty-seven percent 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 challenges of new and emerging knowledge/skill demands and the loss of institutional knowledge. The Commission's overall IT infrastructure must meet the demands and keep pace with the continual changes in the technology landscape; proactively monitor and mitigate emerging cybersecurity threats; and adhere to federal requirements. In 2021, the Commission will make additional investments to continue its multi-year effort to update and modernize the Commission's information technology infrastructure and core mission and support systems to maintain a secure and reliable IT infrastructure to meet the needs of the Commission and provide innovative solutions to support employees. The Commission is also undergoing a multi-year renovation effort within its headquarters building. The renovation project will enable the agency to realize significant space savings. The FY 2021 request includes approximately \$9.1 million to cover construction costs 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. The Commission achieves this by maintaining processes and public information services that promote transparency and open communication with respect to the conduct of the Commission's business. 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	2019 actual	2020 est.	2021 est.
Reimbursable obligations:			
Personnel compensation:			
11.1 Full-time permanent	179	182	192
11.3 Other than full-time permanent	4	6	6
11.5 Other personnel compensation	3	3	5
11.9 Total personnel compensation	186	191	203
12.1 Civilian personnel benefits	60	63	68
21.0 Travel and transportation of persons	3	3	4
23.1 Rental payments to GSA	32	32	30
23.2 Rental payments to others	1	1	1
23.3 Communications, utilities, and miscellaneous charges	2	2	4
24.0 Printing and reproduction	2	2	2
25.1 Advisory and assistance services	15	10	15
25.2 Other services from non-Federal sources	12	14	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	35	34	37
26.0 Supplies and materials	4	5	5

FEDERAL ENERGY REGULATORY COMMISSION—Continued
Object Classification—Continued

Identification code 089-0212-0-1-276	2019 actual	2020 est.	2021 est.
31.0 Equipment	14	10	11
32.0 Land and structures		16	6
99.0 Reimbursable obligations	370	387	404
99.5 Adjustment for rounding	1		
99.9 Total new obligations, unexpired accounts	371	387	404

Employment Summary

Identification code 089-0212-0-1-276	2019 actual	2020 est.	2021 est.
2001 Reimbursable civilian full-time equivalent employment	1,434	1,465	1,465

CLEAN COAL TECHNOLOGY

Program and Financing (in millions of dollars)

Identification code 089-0235-0-1-271	2019 actual	2020 est.	2021 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	2019 actual	2020 est.	2021 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	4
3020 Outlays (gross)		-2	-2
3050 Unpaid obligations, end of year	6	4	2
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	6	6	4
3200 Obligated balance, end of year	6	4	2
Budget authority and outlays, net:			
Mandatory:			
Outlays, gross:			
4101 Outlays from mandatory balances		2	2
4180 Budget authority, net (total)			
4190 Outlays, net (total)		2	2

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 unoblig-

ated 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	2019 actual	2020 est.	2021 est.
0100 Balance, start of year			
Receipts:			
Current law:			
1110 Licenses under Federal Power Act from Public Lands and National Forests, Payment to States (37 1/2%)	4	5	5
2000 Total: Balances and receipts	4	5	5
Appropriations:			
Current law:			
2101 Payments to States under Federal Power Act	-4	-5	-5
5099 Balance, end of year			

Program and Financing (in millions of dollars)

Identification code 089-5105-0-2-806	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Payments to States under Federal Power Act (Direct)	4	5	5
0900 Total new obligations, unexpired accounts (object class 41.0)	4	5	5
Budgetary resources:			
Budget authority:			
Appropriations, mandatory:			
1201 Appropriation (special or trust fund)	4	5	5
1930 Total budgetary resources available	4	5	5
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1		4	
3010 New obligations, unexpired accounts	4	5	5
3020 Outlays (gross)		-9	-5
3050 Unpaid obligations, end of year	4		
Memorandum (non-add) entries:			
3100 Obligated balance, start of year		4	
3200 Obligated balance, end of year	4		
Budget authority and outlays, net:			
Mandatory:			
4090 Budget authority, gross	4	5	5
Outlays, gross:			
4100 Outlays from new mandatory authority		5	5
4101 Outlays from mandatory balances		4	
4110 Outlays, gross (total)		9	5
4180 Budget authority, net (total)	4	5	5
4190 Outlays, net (total)		9	5

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

NORTHEAST HOME HEATING OIL RESERVE

For Department of Energy expenses necessary for Northeast Home Heating Oil Reserve storage, operation, and management activities pursuant to the Energy Policy and Conservation Act (42 U.S.C. 6201 et seq.), \$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 ultra-low sulfur petroleum distillate from the Northeast Home Heating Oil Reserve during fiscal year 2021: 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 2021: 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, 2020.)

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5369-0-2-274	2019 actual	2020 est.	2021 est.
0100 Balance, start of year	1	1	1
Receipts:			
Current law:			
1130 Sale of Northeast Home Heating Oil Reserve			75
2000 Total: Balances and receipts	1	1	76
5099 Balance, end of year	1	1	76

Program and Financing (in millions of dollars)

Identification code 089-5369-0-2-274	2019 actual	2020 est.	2021 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	1	1	1
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	10	10	
1930 Total budgetary resources available	11	11	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	5	5	2
3010 New obligations, unexpired accounts	10	10	
3020 Outlays (gross)	-10	-13	-2
3050 Unpaid obligations, end of year	5	2	
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	5	5	2
3200 Obligated balance, end of year	5	2	

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	10	10	
Outlays, gross:			
4010 Outlays from new discretionary authority	4	8	
4011 Outlays from discretionary balances	6	5	2
4020 Outlays, gross (total)	10	13	2
4180 Budget authority, net (total)	10	10	
4190 Outlays, net (total)	10	13	2

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 in FY 2021 and 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 activities to carry out the purposes of the Nuclear Waste Policy Act of 1982, including interim storage activities, \$27,500,000, to remain available until expended, and to be derived from the Nuclear Waste Fund.

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5227-0-2-271	2019 actual	2020 est.	2021 est.
0100 Balance, start of year	38,763	40,431	42,060
Receipts:			
Current law:			
1130 Nuclear Waste Disposal Fund	145	29	377
1140 Earnings on Investments, Nuclear Waste Disposal Fund	1,527	1,604	1,674

1199 Total current law receipts	1,672	1,633	2,051
1999 Total receipts	1,672	1,633	2,051
2000 Total: Balances and receipts	40,435	42,064	44,111
Appropriations:			
Current law:			
2101 Nuclear Waste Disposal			-28
2101 Salaries and Expenses	-4	-4	-4
2199 Total current law appropriations	-4	-4	-32
Proposed:			
2201 Salaries and Expenses			-2
2999 Total appropriations	-4	-4	-34
5099 Balance, end of year	40,431	42,060	44,077

Program and Financing (in millions of dollars)

Identification code 089-5227-0-2-271	2019 actual	2020 est.	2021 est.
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Obligations by program activity:

0001 Interim Storage and Nuclear Waste Fund Oversight		3	28
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Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	7	7	4
Budget authority:			
Appropriations, discretionary:			
1101 Appropriation (special or trust)			28
1930 Total budgetary resources available	7	7	32
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	7	4	4

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	6	2	2
3010 New obligations, unexpired accounts		3	28
3020 Outlays (gross)	-4	-3	-13
3050 Unpaid obligations, end of year	2	2	17
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	6	2	2
3200 Obligated balance, end of year	2	2	17

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross			28
Outlays, gross:			
4010 Outlays from new discretionary authority			11
4011 Outlays from discretionary balances	4	3	2
4020 Outlays, gross (total)	4	3	13
4180 Budget authority, net (total)			28
4190 Outlays, net (total)	4	3	13

Memorandum (non-add) entries:

5000 Total investments, SOY: Federal securities: Par value	53,449	54,022	55,647
5001 Total investments, EOY: Federal securities: Par value	54,022	55,647	57,223

The mission of the Interim Storage and Nuclear Waste Fund Oversight program is to contribute to the safe and secure management of spent nuclear fuel and high level waste currently located at numerous sites across the United States. Activities include the development and implementation of an interim storage program that will enable near-term consolidation and temporary storage of nuclear waste. Other activities include continued oversight for the Nuclear Waste Fund which includes the fiduciary responsibility under the Nuclear Waste Policy Act of 1982, including activities such as security, maintenance, and environmental requirements for the Yucca Mountain.

Object Classification (in millions of dollars)

Identification code 089-5227-0-2-271	2019 actual	2020 est.	2021 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent			4
11.9 Total personnel compensation			4
12.1 Civilian personnel benefits			1
25.1 Advisory and assistance services		3	23

NUCLEAR WASTE DISPOSAL—Continued
Object Classification—Continued

Identification code 089-5227-0-2-271	2019 actual	2020 est.	2021 est.
99.9 Total new obligations, unexpired accounts		3	28

Employment Summary

Identification code 089-5227-0-2-271	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment			26

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, **[\$881,000,000]** \$806,244,000, to be derived from the Uranium Enrichment Decontamination and Decommissioning Fund, to remain available until expended, of which **[\$5,250,000]** \$21,284,000 shall be available in accordance with title X, subtitle A, of the Energy Policy Act of 1992. (*Energy and Water Development and Related Agencies Appropriations Act, 2020.*)

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5231-0-2-271	2019 actual	2020 est.	2021 est.
0100 Balance, start of year	2,191	1,410	550
Receipts:			
Current law:			
1140 Earnings on Investments, Decontamination and Decommissioning Fund	61	21	21
2000 Total: Balances and receipts	2,252	1,431	571
Appropriations:			
Current law:			
2101 Uranium Enrichment Decontamination and Decommissioning Fund	-841	-881	-571
5098 Rounding adjustment	-1		
5099 Balance, end of year	1,410	550	

Program and Financing (in millions of dollars)

Identification code 089-5231-0-2-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Oak Ridge	197	196	145
0002 Paducah	210	240	206
0003 Portsmouth	411	418	415
0004 Pension and Community and Regulatory Support	20	22	19
0005 Title X Uranium/Thorium Reimbursement Program	11	5	21
0900 Total new obligations, unexpired accounts	849	881	806

Budgetary resources:

1000 Unobligated balance brought forward, Oct 1	13	9	9
1021 Recoveries of prior year unpaid obligations	4		
1050 Unobligated balance (total)	17	9	9
Budget authority:			
Appropriations, discretionary:			
1101 Appropriation (special or trust)	841	881	571
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)			-1,460
1750 Spending auth from offsetting collections, disc (total)			235
1900 Budget authority (total)	841	881	806
1930 Total budgetary resources available	858	890	815
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	9	9	9

Change in obligated balance:

3000 Unpaid obligations, brought forward, Oct 1	263	282	278
3010 New obligations, unexpired accounts	849	881	806
3020 Outlays (gross)	-826	-885	-828

3040 Recoveries of prior year unpaid obligations, unexpired	-4		
3050 Unpaid obligations, end of year	282	278	256
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	263	282	278
3200 Obligated balance, end of year	282	278	256

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	841	881	806
Outlays, gross:			
4010 Outlays from new discretionary authority	624	617	564
4011 Outlays from discretionary balances	202	268	264
4020 Outlays, gross (total)	826	885	828
4180 Budget authority, net (total)	841	881	806
4190 Outlays, net (total)	826	885	828

Memorandum (non-add) entries:

5000 Total investments, SOY: Federal securities: Par value	2,468	1,689	889
5001 Total investments, EOY: Federal securities: Par value	1,689	889	1,799
5092 Unexpired unavailable balance, EOY: Offsetting collections			1,460

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	2019 actual	2020 est.	2021 est.
Direct obligations:			
25.1 Advisory and assistance services	4	4	4
25.2 Other services from non-Federal sources	24	25	23
25.4 Operation and maintenance of facilities	777	806	737
32.0 Land and structures	42	44	40
41.0 Grants, subsidies, and contributions	2	2	2
99.9 Total new obligations, unexpired accounts	849	881	806

URANIUM SALES AND REMEDIATION

Program and Financing (in millions of dollars)

Identification code 089-5530-0-2-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0010 Uranium Sales and Remediation	2		
0900 Total new obligations, unexpired accounts (object class 25.4)	2		

Budgetary resources:

1000 Unobligated balance brought forward, Oct 1	2		
1930 Total budgetary resources available	2		

Change in obligated balance:

Unpaid obligations:			
3010 New obligations, unexpired accounts	2		
3020 Outlays (gross)	-2		

Budget authority and outlays, net:

Discretionary:			
Outlays, gross:			
4011 Outlays from discretionary balances	2		
4180 Budget authority, net (total)			
4190 Outlays, net (total)	2		

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	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0801 Isotope Production and Distribution Reimbursable program	100	112	126
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	19	23	23
1021 Recoveries of prior year unpaid obligations	2		
1050 Unobligated balance (total)	21	23	23
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected	102	112	126
1930 Total budgetary resources available	123	135	149
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	23	23	23
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	85	95	92
3010 New obligations, unexpired accounts	100	112	126
3020 Outlays (gross)	-88	-115	-110
3040 Recoveries of prior year unpaid obligations, unexpired	-2		
3050 Unpaid obligations, end of year	95	92	108
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	85	95	92
3200 Obligated balance, end of year	95	92	108
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	102	112	126
Outlays, gross:			
4010 Outlays from new discretionary authority	19	34	38
4011 Outlays from discretionary balances	69	81	72
4020 Outlays, gross (total)	88	115	110
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-47	-49	-56
4033 Non-Federal sources	-55	-63	-70
4040 Offsets against gross budget authority and outlays (total)	-102	-112	-126
4080 Outlays, net (discretionary)	-14	3	-16
4180 Budget authority, net (total)			
4190 Outlays, net (total)	-14	3	-16

Object Classification (in millions of dollars)

Identification code 089-4180-0-3-271	2019 actual	2020 est.	2021 est.
Reimbursable obligations:			
25.4 Operation and maintenance of facilities	82	94	108
31.0 Equipment	14	14	14
41.0 Grants, subsidies, and contributions	4	4	4
99.9 Total new obligations, unexpired accounts	100	112	126

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, 2021. 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, 2020.)

Program and Financing (in millions of dollars)

Identification code 089-0322-0-1-272	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
Credit program obligations:			
0709 Administrative expenses	5	5	3
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	4,338	4,338	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
1900 Budget authority (total)	5	5	-4,333
1930 Total budgetary resources available	4,343	4,343	5
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	4,338	4,338	2
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	2	4	4
3010 New obligations, unexpired accounts	5	5	3
3020 Outlays (gross)	-3	-5	-3
3050 Unpaid obligations, end of year	4	4	4
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	2	4	4
3200 Obligated balance, end of year	4	4	4
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	5	5	-4,333
Outlays, gross:			
4011 Outlays from discretionary balances	3	5	3
4180 Budget authority, net (total)	5	5	-4,333
4190 Outlays, net (total)	3	5	3

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

Identification code 089-0322-0-1-272	2019 actual	2020 est.	2021 est.
Direct loan reestimates:			
135001 Direct Auto Loans	-22	-17	
Administrative expense data:			
3510 Budget authority	5		
3580 Outlays from balances	3	5	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 FY 2021 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 2021, 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	2019 actual	2020 est.	2021 est.
Direct obligations:			
11.1 Personnel compensation: Full-time permanent	1	1	1
12.1 Below threshold	1		
25.1 Advisory and assistance services	3	3	1

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING LOAN PROGRAM—Continued
Object Classification—Continued

Identification code 089-0322-0-1-272	2019 actual	2020 est.	2021 est.
25.3 Other goods and services from Federal sources		1	1
99.9 Total new obligations, unexpired accounts	5	5	3

Employment Summary

Identification code 089-0322-0-1-272	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	8	12	7

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING DIRECT LOAN FINANCING ACCOUNT

Program and Financing (in millions of dollars)

Identification code 089-4579-0-3-272	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
Credit program obligations:			
0715 Interest paid to FFB	45	32	19
0742 Downward reestimates paid to receipt accounts	18	13	
0743 Interest on downward reestimates	5	4	
0900 Total new obligations, unexpired accounts	68	49	19

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	89	68	18
1023 Unobligated balances applied to repay debt	-54	-41	-15
1050 Unobligated balance (total)	35	27	3
Financing authority:			
Borrowing authority, mandatory:			
1400 Borrowing authority			16
Spending authority from offsetting collections, mandatory:			
1800 Collected	638	590	576
1825 Spending authority from offsetting collections applied to repay debt	-537	-550	-576
1850 Spending auth from offsetting collections, mand (total)	101	40	
1900 Budget authority (total)	101	40	16
1930 Total budgetary resources available	136	67	19
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	68	18	

Change in obligated balance:

Unpaid obligations:			
3010 New obligations, unexpired accounts	68	49	19
3020 Outlays (gross)	-68	-49	-19

Financing authority and disbursements, net:

Mandatory:			
4090 Budget authority, gross	101	40	16
Financing disbursements:			
4110 Outlays, gross (total)	68	49	19
Offsets against gross financing authority and disbursements:			
Offsetting collections (collected) from:			
4122 Interest on uninvested funds	-2	-1	
4123 Non-Federal sources (interest)	-45	-30	-17
4123 Non-Federal sources (principal)	-591	-559	-559
4130 Offsets against gross budget authority and outlays (total)	-638	-590	-576
4160 Budget authority, net (mandatory)	-537	-550	-560
4170 Outlays, net (mandatory)	-570	-541	-557
4180 Budget authority, net (total)	-537	-550	-560
4190 Outlays, net (total)	-570	-541	-557

Status of Direct Loans (in millions of dollars)

Identification code 089-4579-0-3-272	2019 actual	2020 est.	2021 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	2,209	1,618	1,059

1251 Repayments: Repayments and prepayments	-591	-559	-559
1290 Outstanding, end of year	1,618	1,059	500

Balance Sheet (in millions of dollars)

Identification code 089-4579-0-3-272	2018 actual	2019 actual
ASSETS:		
Federal assets:		
1101 Fund balances with Treasury	89	68
Investments in U.S. securities:		
1106 Receivables, net		
Net value of assets related to post-1991 direct loans receivable:		
1401 Direct loans receivable, gross	2,209	1,618
1402 Interest receivable	2	1
1405 Allowance for subsidy cost (-)	-69	-52
1499 Net present value of assets related to direct loans	2,142	1,567
1999 Total assets	2,231	1,635
LIABILITIES:		
Federal liabilities:		
2101 Accounts payable		
2103 Debt	2,209	1,618
2105 Other	22	17
2999 Total liabilities	2,231	1,635
NET POSITION:		
3300 Cumulative results of operations		
4999 Total upward reestimate subsidy BA [89-0322]	2,231	1,635

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, **[\$32,000,000]** \$3,000,000 is appropriated, to remain available until September 30, **[2021]** 2022: *Provided further*, That up to **[\$32,000,000]** \$3,000,000 of fees collected in fiscal year **[2020]** 2021 pursuant to section 1702(h) of the Energy Policy Act of 2005 shall be credited as offsetting collections under this heading and used for necessary administrative expenses in this appropriation and shall remain available until September 30, **[2021]** 2022: *Provided further*, That to the extent that fees collected in fiscal year **[2020]** 2021 exceed **[\$32,000,000]** \$3,000,000, 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 **[2020]** 2021 (estimated at \$3,000,000) 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 **[2020]** 2021 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 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, 2020, 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, 2020.)

Program and Financing (in millions of dollars)

Identification code 089-0208-0-1-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
Credit program obligations:			
0703 Subsidy for modifications of direct loans	34		
0705 Reestimates of direct loan subsidy		39	
0706 Interest on reestimates of direct loan subsidy	12	27	

0707	Reestimates of loan guarantee subsidy	36	.....	.....
0708	Interest on reestimates of loan guarantee subsidy	12	.....	.....
0709	Administrative expenses	32	32	29
0900	Total new obligations, unexpired accounts	78	146	29

Budgetary resources:

Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	716	683	683
1001	Discretionary unobligated balance brought fwd, Oct 1	716	683	.....
Budget authority:				
Appropriations, discretionary:				
1100	Appropriation	10	29	.....
1131	Unobligated balance of appropriations permanently reduced .....	.....	.....	-161
1131	Unobligated balance of appropriations permanently reduced [Recovery Act Emergency Balances] .....	.....	.....	-489
1160	Appropriation, discretionary (total)	10	29	-650
Appropriations, mandatory:				
1200	Appropriation	12	114	.....
Spending authority from offsetting collections, discretionary:				
1700	Collected	21	3	3
1702	Offsetting collections (previously unavailable)	2	.....	.....
1750	Spending auth from offsetting collections, disc (total)	23	3	3
1900	Budget authority (total)	45	146	-647
1930	Total budgetary resources available	761	829	36
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	683	683	7

Change in obligated balance:

Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1	16	20	20
3010	New obligations, unexpired accounts	78	146	29
3020	Outlays (gross)	-73	-146	-32
3041	Recoveries of prior year unpaid obligations, expired	-1	.....	.....
3050	Unpaid obligations, end of year	20	20	17
Memorandum (non-add) entries:				
3100	Obligated balance, start of year	16	20	20
3200	Obligated balance, end of year	20	20	17

Budget authority and outlays, net:

Discretionary:				
4000	Budget authority, gross	33	32	-647
Outlays, gross:				
4010	Outlays from new discretionary authority .....	.....	3	3
4011	Outlays from discretionary balances	61	29	29
4020	Outlays, gross (total)	61	32	32
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4033	Non-Federal sources	-21	-3	-3
4040	Offsets against gross budget authority and outlays (total)	-21	-3	-3
Mandatory:				
4090	Budget authority, gross	12	114	.....
Outlays, gross:				
4100	Outlays from new mandatory authority	12	114	.....
4180	Budget authority, net (total)	24	143	-650
4190	Outlays, net (total)	52	143	29

Memorandum (non-add) entries:

5090	Unexpired unavailable balance, SOY: Offsetting collections	2
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Summary of Loan Levels, Subsidy Budget Authority and Outlays by Program (in millions of dollars)

Identification code 089-0208-0-1-271	2019 actual	2020 est.	2021 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)	-2.85	.....	.....
132999 Weighted average subsidy rate	-2.85	.....	.....
Direct loan subsidy budget authority:			
133001 Section 1703 FFB Loans (Self Pay)	-105	.....	.....
133999 Total subsidy budget authority	-105	.....	.....
Direct loan subsidy outlays:			
134001 Section 1703 FFB Loans (Self Pay)	-65	-45	-49
134002 Section 1705 FFB Loans	34	.....	.....
134999 Total subsidy outlays	-31	-45	-49
Direct loan reestimates:			
135001 Section 1703 FFB Loans (Self Pay)	-91	65	.....

135002	Section 1705 FFB Loans	-138	-35	.....
135999	Total direct loan reestimates	-229	30	.....
Guaranteed loan reestimates:				
235002	Section 1705 Loan Guarantees	-22	45	.....
235999	Total guaranteed loan reestimates	-22	45	.....
Administrative expense data:				
3580	Outlays from balances .....	.....	29	.....
3590	Outlays from new authority .....	.....	3	.....

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 2021 Budget maintains current Administration policy to eliminate this program, while maintaining portfolio monitoring capabilities.

The FY 2021 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 2021, 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 2021 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	2019 actual	2020 est.	2021 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	5
25.1 Advisory and assistance services	13	13	9
25.3 Other goods and services from Federal sources	2	2	2
25.7 Operation and maintenance of equipment	1	1	1
26.0 Supplies and materials	1	1	1
41.0 Grants, subsidies, and contributions	46	114	.....
99.0 Direct obligations	78	146	29
99.9 Total new obligations, unexpired accounts	78	146	29

TITLE 17 INNOVATIVE TECHNOLOGY LOAN GUARANTEE PROGRAM—Continued
Employment Summary

Identification code 089-0208-0-1-271	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	74	79	77

TITLE 17 INNOVATIVE TECHNOLOGY DIRECT LOAN FINANCING ACCOUNT

Program and Financing (in millions of dollars)

Identification code 089-4455-0-3-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
Credit program obligations:			
0710 Direct loan obligations	3,703		
0713 Payment of interest to Treasury	19	22	21
0715 Interest paid to FFB	357	388	421
0740 Negative subsidy obligations	105		
0742 Downward reestimates paid to receipt accounts	205	24	
0743 Interest on downward reestimates	35	11	
0900 Total new obligations, unexpired accounts	4,424	445	442
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	862	822	849
1023 Unobligated balances applied to repay debt	-142	-138	-205
1050 Unobligated balance (total)	720	684	644
Financing authority:			
Appropriations, mandatory:			
1200 Appropriation	2		
Borrowing authority, mandatory:			
1400 Borrowing authority	3,994	68	2
1422 Borrowing authority applied to repay debt	-5		
1440 Borrowing authority, mandatory (total)	3,989	68	2
Spending authority from offsetting collections, mandatory:			
1800 Collected	634	770	870
1825 Spending authority from offsetting collections applied to repay debt	-99	-228	-231
1850 Spending auth from offsetting collections, mand (total)	535	542	639
1900 Budget authority (total)	4,526	610	641
1930 Total budgetary resources available	5,246	1,294	1,285
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	822	849	843

Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	2,627	4,404	2,847
3010 New obligations, unexpired accounts	4,424	445	442
3020 Outlays (gross)	-2,647	-2,002	-2,104
3050 Unpaid obligations, end of year	4,404	2,847	1,185
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	2,627	4,404	2,847
3200 Obligated balance, end of year	4,404	2,847	1,185

Financing authority and disbursements, net:			
Mandatory:			
4090 Budget authority, gross	4,526	610	641
Financing disbursements:			
4110 Outlays, gross (total)	2,647	2,002	2,104
Offsets against gross financing authority and disbursements:			
Offsetting collections (collected) from:			
4120 Payment from program account	-34		
4120 Upward reestimate		-39	
4120 Interest on reestimate	-12	-27	
4122 Interest on uninvested funds	-56	-49	-44
4123 Interest payments	-303	-420	-503
4123 Principal payments	-229	-235	-323
4130 Offsets against gross budget authority and outlays (total)	-634	-770	-870
4160 Budget authority, net (mandatory)	3,892	-160	-229
4170 Outlays, net (mandatory)	2,013	1,232	1,234
4180 Budget authority, net (total)	3,892	-160	-229
4190 Outlays, net (total)	2,013	1,232	1,234

Status of Direct Loans (in millions of dollars)

Identification code 089-4455-0-3-271	2019 actual	2020 est.	2021 est.
Position with respect to appropriations act limitation on obligations:			
1121 Limitation available from carry-forward	26,125	22,422	
1143 Unobligated limitation carried forward (P.L. xx) (-)	-22,422	-22,422	
1150 Total direct loan obligations	3,703		
Cumulative balance of direct loans outstanding:			
1210 Outstanding, start of year	11,384	13,199	14,447
1231 Disbursements: Direct loan disbursements	1,965	1,512	1,613
1251 Repayments: Repayments and prepayments	-229	-235	-323
1261 Adjustments: Capitalized interest	79		
1264 Other adjustments, net (+ or -) [Payment of capitalized interest]		-29	-66
1290 Outstanding, end of year	13,199	14,447	15,671

Balance Sheet (in millions of dollars)

Identification code 089-4455-0-3-271	2018 actual	2019 actual
ASSETS:		
Federal assets:		
1101 Fund balances with Treasury	861	821
Investments in U.S. securities:		
1106 Receivables, net	23	209
1206 Non-Federal assets: Receivables, net		12
Net value of assets related to post-1991 direct loans receivable:		
1401 Direct loans receivable, gross	11,384	13,199
1402 Interest receivable	67	74
1405 Allowance for subsidy cost (-)	-475	-429
1499 Net present value of assets related to direct loans	10,976	12,844
1999 Total assets	11,860	13,886
LIABILITIES:		
Federal liabilities:		
2103 Debt	11,581	13,552
2105 Other	279	334
2999 Total liabilities	11,860	13,886
4999 Total liabilities and net position	11,860	13,886

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, \$2,000,000, to remain available until September 30, 2021】 *The unobligated balances available from amounts appropriated under this heading in prior appropriations Acts for the cost to guarantee loans are hereby permanently cancelled. (Energy and Water Development and Related Agencies Appropriations Act, 2020.)*

Program and Financing (in millions of dollars)

Identification code 089-0350-0-1-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
Credit program obligations:			
0709 Administrative expenses		2	1
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	10	11	11
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	1	2	
1131 Unobligated balance of appropriations permanently reduced			-9
1160 Appropriation, discretionary (total)	1	2	-9
1930 Total budgetary resources available	11	13	2
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	11	11	1
Change in obligated balance:			
Unpaid obligations:			
3010 New obligations, unexpired accounts		2	1
3020 Outlays (gross)		-2	

3050	Unpaid obligations, end of year			1
	Memorandum (non-add) entries:			
3200	Obligated balance, end of year			1
Budget authority and outlays, net:				
Discretionary:				
4000	Budget authority, gross	1	2	-9
Outlays, gross:				
4010	Outlays from new discretionary authority		2	
4180	Budget authority, net (total)	1	2	-9
4190	Outlays, net (total)		2	

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 2021 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 2021, LPO will stop originating loans for TELGP but will continue to monitor any loans that may close by October 1, 2020.

Object Classification (in millions of dollars)

Identification code 089-0350-0-1-271	2019 actual	2020 est.	2021 est.
Direct obligations:			
25.1	Advisory and assistance services	1	1
25.2	Other services from non-Federal sources	1	
99.0	Direct obligations	2	1
99.9	Total new obligations, unexpired accounts	2	1

Employment Summary

Identification code 089-0350-0-1-271	2019 actual	2020 est.	2021 est.
1001	Direct civilian full-time equivalent employment	5	2

TITLE 17 INNOVATIVE TECHNOLOGY GUARANTEED LOAN FINANCING ACCOUNT

Program and Financing (in millions of dollars)

Identification code 089-4577-0-3-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
Credit program obligations:			
0711	Default claim payments on principal	29	16
0712	Default claim payments on interest	6	7
0742	Downward reestimates paid to receipt accounts	18	2
0743	Interest on downward reestimates	5	1
0900	Total new obligations, unexpired accounts	23	38
Budgetary resources:			
Unobligated balance:			
1000	Unobligated balance brought forward, Oct 1	147	135
Financing authority:			
Borrowing authority, mandatory:			
1400	Borrowing authority	4	4
Spending authority from offsetting collections, mandatory:			
1800	Collected	11	63
1825	Spending authority from offsetting collections applied to repay debt		-6
1850	Spending auth from offsetting collections, mand (total)	11	63
1900	Budget authority (total)	11	67
1930	Total budgetary resources available	158	202
Memorandum (non-add) entries:			
1941	Unexpired unobligated balance, end of year	135	164
Change in obligated balance:			
Unpaid obligations:			
3010	New obligations, unexpired accounts	23	38
3020	Outlays (gross)	-23	-38
Uncollected payments:			
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-9	-9
3090	Uncollected pymts, Fed sources, end of year	-9	-9

Memorandum (non-add) entries:			
3100	Obligated balance, start of year	-9	-9
3200	Obligated balance, end of year	-9	-9

Financing authority and disbursements, net:

Mandatory:			
4090	Budget authority, gross	11	67
Financing disbursements:			
4110	Outlays, gross (total)	23	38
Offsets against gross financing authority and disbursements:			
Offsetting collections (collected) from:			
4120	Upward Reestimate		-36
4120	Interest on Reestimate		-12
4122	Interest on uninvested funds	-4	-5
4123	Principal payments		-12
4123	Interest Payments		-2
4123	Other Payments	-7	-10
4130	Offsets against gross budget authority and outlays (total)	-11	-63
4160	Budget authority, net (mandatory)	4	-2
4170	Outlays, net (mandatory)	12	-25
4180	Budget authority, net (total)	4	-2
4190	Outlays, net (total)	12	-25

Status of Guaranteed Loans (in millions of dollars)

Identification code 089-4577-0-3-271	2019 actual	2020 est.	2021 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	2,649	2,528
2231	Disbursements of new guaranteed loans		
2251	Repayments and prepayments	-121	-115
2261	Adjustments: Terminations for default that result in loans receivable		-29
2290	Outstanding, end of year	2,528	2,384
Memorandum:			
2299	Guaranteed amount of guaranteed loans outstanding, end of year	2,022	1,907

Addendum:

Cumulative balance of defaulted guaranteed loans that result in loans receivable:			
2310	Outstanding, start of year		35
2331	Disbursements for guaranteed loan claims		29
2351	Repayments of loans receivable		-15
2364	Other adjustments, net		6
2390	Outstanding, end of year	35	43

Balance Sheet (in millions of dollars)

Identification code 089-4577-0-3-271	2018 actual	2019 actual
ASSETS:		
Federal assets:		
1101	Fund balances with Treasury	138
Investments in U.S. securities:		
1106	Receivables, net	52
1501	Net value of assets related to post-1991 acquired defaulted guaranteed loans receivable: Defaulted guaranteed loans receivable, gross	
1999	Total assets	138
LIABILITIES:		
Federal liabilities:		
2101	Accounts payable	
2105	Other	22
2204	Non-Federal liabilities: Liabilities for loan guarantees	116
2999	Total liabilities	138
NET POSITION:		
3300	Cumulative results of operations	
4999	Total liabilities and net position	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, **[\$6,597,000]** \$7,246,000, 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 **[\$6,597,000]** \$7,246,000 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 **[2020]** 2021 appropriation estimated at not more than \$0: *Provided further*, That notwithstanding 31 U.S.C. 3302, up to **[\$56,000,000]** \$71,238,000 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, 2020.*)

Program and Financing (in millions of dollars)

Identification code 089-0302-0-1-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0801 Purchase Power and Wheeling	39	56	71
0802 Annual Expenses and other costs repaid in one year	7	7	7
0900 Total new obligations, unexpired accounts	46	63	78
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	14	16	16
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected	48	63	78
1900 Budget authority (total)	48	63	78
1930 Total budgetary resources available	62	79	94
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	16	16	16
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	7	6	3
3010 New obligations, unexpired accounts	46	63	78
3020 Outlays (gross)	-47	-66	-78
3050 Unpaid obligations, end of year	6	3	3
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	7	6	3
3200 Obligated balance, end of year	6	3	3
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	48	63	78
Outlays, gross:			
4010 Outlays from new discretionary authority	26	60	75
4011 Outlays from discretionary balances	21	6	3
4020 Outlays, gross (total)	47	66	78

Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4033 Non-Federal sources	-48	-63	-78
4040 Offsets against gross budget authority and outlays (total)	-48	-63	-78
4180 Budget authority, net (total)			
4190 Outlays, net (total)	-1	3	

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 56 million in 2020. As of the end of FY 2019, Southeastern's PPW reserve balance was \$14 million.

DISCRETIONARY PURCHASE POWER AND WHEELING, SOUTHEASTERN POWER ADMINISTRATION

	(in millions of dollars)				
	2017 Actual	2018 Actual	2019 Actual	2020 Estimate	2021 Estimate
Limitation to collect, ('up to' ceiling in appropriations language)				56	71
Actual collections	61	49	42	56	71
PPW Unobligated balance brought forward, Oct 1	21	17	12	14	14
Spending authority from offsetting collections	61	49	42	56	71
Obligations incurred	-65	-55	-40	-56	-71
PPW Unobligated balance, end of year	17	12	14	14	14

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	2019 actual	2020 est.	2021 est.
Reimbursable obligations:			
11.1 Personnel compensation: Full-time permanent	3	3	3
12.1 Civilian personnel benefits	1	1	1
25.2 Purchase Power and Wheeling	39	56	71
25.2 Other services from non-Federal sources	3	3	3

99.0	Reimbursable obligations	46	63	78
99.9	Total new obligations, unexpired accounts	46	63	78

Employment Summary

Identification code 089-0302-0-1-271	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	37	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, **[\$47,775,000]** \$47,540,000, 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 **[\$37,375,000]** \$37,140,000 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 **[2020]** 2021 appropriation estimated at not more than \$10,400,000: *Provided further*, That notwithstanding 31 U.S.C. 3302, up to **[\$43,000,000]** \$70,000,000 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, 2020.*)

Program and Financing (in millions of dollars)

Identification code 089-0303-0-1-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Systems operation and maintenance	1	2	2
0003 Construction	3	5	5
0004 Program direction	3	3	3
0200 Direct program subtotal	7	10	10
0799 Total direct obligations	7	10	10
0801 Annual expenses	32	37	37
0805 Purchase power and wheeling	19	43	70
0810 Other reimbursable activities	10	51	51
0899 Total reimbursable obligations	61	131	158
0900 Total new obligations, unexpired accounts	68	141	168
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	69	98	98
1021 Recoveries of prior year unpaid obligations	6		
1050 Unobligated balance (total)	75	98	98

Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	10	10	10
Spending authority from offsetting collections, discretionary:			
1700 Collected	81	131	158
1900 Budget authority (total)	91	141	168
1930 Total budgetary resources available	166	239	266
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	98	98	98

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	126	109	94
3010 New obligations, unexpired accounts	68	141	168
3020 Outlays (gross)	-79	-156	-182
3040 Recoveries of prior year unpaid obligations, unexpired	-6		
3050 Unpaid obligations, end of year	109	94	80
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	126	109	94
3200 Obligated balance, end of year	109	94	80

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	91	141	168
Outlays, gross:			
4010 Outlays from new discretionary authority	35	58	69
4011 Outlays from discretionary balances	44	98	113
4020 Outlays, gross (total)	79	156	182
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources		-6	-6
4033 Non-Federal sources	-81	-125	-152
4040 Offsets against gross budget authority and outlays (total)	-81	-131	-158
4070 Budget authority, net (discretionary)	10	10	10
4080 Outlays, net (discretionary)	-2	25	24
4180 Budget authority, net (total)	10	10	10
4190 Outlays, net (total)	-2	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

OPERATION AND MAINTENANCE, SOUTHWESTERN POWER ADMINISTRATION—Continued 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 2019, Southwestern's PPW reserve balance was \$86 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)				
	2017 Actual	2018 Actual	2019 Actual	2020 Estimate ¹	2021 Estimate ¹
Limitation to collect, ('up to' ceiling in appropriations language)	73	40	50	43	70
Actual collections	17	40	36	43	70
PPW Unobligated balance brought forward, Oct 1	83	85	69	86	86
Spending authority from offsetting collections	17	40	36	43	70
Obligations incurred	-15	-56	-19	-43	-70
PPW Unobligated balance, end of year	85	69	86	86	86

¹The FY 2020 and FY 2021 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	2019 actual	2020 est.	2021 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	1
25.1 Advisory and assistance services	3	6	6
25.2 Other services from non-Federal sources	1	6	6
31.0 Equipment	1	6	6
99.0 Direct obligations	7	10	10
99.0 Reimbursable obligations	61	131	158
99.9 Total new obligations, unexpired accounts	68	141	168

Employment Summary

Identification code 089-0303-0-1-271	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	10	10	10
2001 Reimbursable civilian full-time equivalent employment	155	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	2019 actual	2020 est.	2021 est.
4180 Budget authority, net (total)			

4190 Outlays, net (total)			
Memorandum (non-add) entries:			
5080 Outstanding debt, SOY	-68	-68	-68
5081 Outstanding debt, EOY	-68	-68	-68

A continuing fund, maintained from receipts from the sale and transmission of electric power in the Southwestern service area, is available permanently for emergency expenses necessary to ensure continuity of electric service and continuous operation of the facilities. The fund is also available on an ongoing basis to pay for purchase power and wheeling expenses when the Administrator determines that such expenses are necessary to meet contractual obligations for the sale and delivery of power during periods of below-average generation (16 U.S.C. 825s-1 as amended further by Public Law 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

[(INCLUDING RESCISSION OF FUNDS)]

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, [\$262,959,000] \$259,126,000, including official reception and representation expenses in an amount not to exceed \$1,500, to remain available until expended, of which [\$262,959,000] \$259,126,000 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 [\$173,587,000] \$169,754,000 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 [2020] 2021 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 [\$227,000,000] \$227,043,000 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, 2020.)

Program and Financing (in millions of dollars)

Identification code 089-5068-0-2-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Systems operation and maintenance	42	46	43
0004 Program direction	42	49	40
0091 Direct Program by Activities - Subtotal (1 level)	84	95	83
0100 Total operating expenses	84	95	83
0101 Capital investment	7	6	6
0799 Total direct obligations	91	101	89
0802 Purchase Power and Wheeling	146	227	227
0803 Annual Expenses	173	178	185
0804 Other Reimbursable	259	745	748
0809 Reimbursable program activities, subtotal	578	1,150	1,160
0899 Total reimbursable obligations	578	1,150	1,160
0900 Total new obligations, unexpired accounts	669	1,251	1,249
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	562	688	671

1021	Recoveries of prior year unpaid obligations	2		
1050	Unobligated balance (total)	564	688	671
	Budget authority:			
	Appropriations, discretionary:			
1101	Appropriation (special or trust)	89	89	89
	Spending authority from offsetting collections, discretionary:			
1700	Collected	706	1,145	1,145
1701	Change in uncollected payments, Federal sources	-2		
1750	Spending auth from offsetting collections, disc (total)	704	1,145	1,145
1900	Budget authority (total)	793	1,234	1,234
1930	Total budgetary resources available	1,357	1,922	1,905
	Memorandum (non-add) entries:			
1941	Unexpired unobligated balance, end of year	688	671	656
	Change in obligated balance:			
	Unpaid obligations:			
3000	Unpaid obligations, brought forward, Oct 1	301	266	743
3010	New obligations, unexpired accounts	669	1,251	1,249
3020	Outlays (gross)	-702	-774	-977
3040	Recoveries of prior year unpaid obligations, unexpired	-2		
3050	Unpaid obligations, end of year	266	743	1,015
	Uncollected payments:			
3060	Uncollected pymts, Fed sources, brought forward, Oct 1	-31	-29	-29
3070	Change in uncollected pymts, Fed sources, unexpired	2		
3090	Uncollected pymts, Fed sources, end of year	-29	-29	-29
	Memorandum (non-add) entries:			
3100	Obligated balance, start of year	270	237	714
3200	Obligated balance, end of year	237	714	986
	Budget authority and outlays, net:			
	Discretionary:			
4000	Budget authority, gross	793	1,234	1,234
	Outlays, gross:			
4010	Outlays from new discretionary authority	218	384	384
4011	Outlays from discretionary balances	484	390	593
4020	Outlays, gross (total)	702	774	977
	Offsets against gross budget authority and outlays:			
	Offsetting collections (collected) from:			
4030	Federal sources	-152	-242	-354
4033	Non-Federal sources	-554	-903	-791
4040	Offsets against gross budget authority and outlays (total) ...	-706	-1,145	-1,145
	Additional offsets against gross budget authority only:			
4050	Change in uncollected pymts, Fed sources, unexpired	2		
4070	Budget authority, net (discretionary)	89	89	89
4080	Outlays, net (discretionary)	-4	-371	-168
4180	Budget authority, net (total)	89	89	89
4190	Outlays, net (total)	-4	-371	-168
	Memorandum (non-add) entries:			
5080	Outstanding appropriated debt, SOY	-11,263	-11,263	-11,263
5081	Outstanding appropriated debt, EOY	-11,452	-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 2019, WAPA's PPW reserve balance was \$362 million.

DISCRETIONARY PURCHASE POWER AND WHEELING, WESTERN AREA POWER ADMINISTRATION¹

	(in millions of dollars)				
	2017 Actual	2018 Actual	2019 Actual	2020 Estimate	2021 Estimate
Limitation to collect, ('up to' ceiling in appropriations language)	367	209	225	227	227
Actual collections	209	209	225	227	227
PPW Unobligated balance brought forward, Oct 1	190	239	282	362	362
Spending authority from offsetting collections	209	209	225	227	227
Obligations incurred	-160	-166	-145	-227	-227
PPW Unobligated balance, end of year	239	282	362	362	362

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.

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

Object Classification (in millions of dollars)

Identification code 089-5068-0-2-271	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	13	22	19
11.3 Other than full-time permanent	2		
11.5 Other personnel compensation	3	3	2
11.9 Total personnel compensation	18	25	21
12.1 Civilian personnel benefits	5	6	8
21.0 Travel and transportation of persons	1	2	2
22.0 Transportation of things	1		
23.1 Rental payments to GSA		1	
23.3 Communications, utilities, and miscellaneous charges	7	5	
25.1 Advisory and assistance services	6	8	8
25.2 Other services from non-Federal sources	9	6	9
25.7 Operation and maintenance of equipment		1	1
26.0 Supplies and materials	3	3	2
31.0 Equipment	16	21	20
32.0 Land and structures	25	23	18
99.0 Direct obligations	91	101	89
99.0 Reimbursable obligations	578	1,150	1,160
99.9 Total new obligations, unexpired accounts	669	1,251	1,249

Employment Summary

Identification code 089-5068-0-2-271	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	130	178	180
2001 Reimbursable civilian full-time equivalent employment	1,047	1,032	1,036

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	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0102 Transmission Infrastructure Program Projects		725	960
0811 Western Area Power Administration, Borrowing Authority, Recovery (Reimbursable)	7	52	49
0900 Total new obligations, unexpired accounts	7	777	1,009

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	12	13	13
1001 Discretionary unobligated balance brought fwd, Oct 1	6	5	
1021 Recoveries of prior year unpaid obligations	4		
1023 Unobligated balances applied to repay debt	-21		
1024 Unobligated balance of borrowing authority withdrawn	-4		
1033 Recoveries of prior year paid obligations	21		
1050 Unobligated balance (total)	12	13	13
Budget authority:			
Borrowing authority, mandatory:			
1400 Borrowing authority		725	960
Spending authority from offsetting collections, discretionary:			
1700 Collected	3	47	44
Spending authority from offsetting collections, mandatory:			
1800 Collected	5	5	205
1825 Spending authority from offsetting collections applied to repay debt			-200
1850 Spending auth from offsetting collections, mand (total)	5	5	5
1900 Budget authority (total)	8	777	1,009
1930 Total budgetary resources available	20	790	1,022

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	25	21	451
3010 New obligations, unexpired accounts	7	777	1,009
3020 Outlays (gross)	-7	-347	-959
3040 Recoveries of prior year unpaid obligations, unexpired	-4		
3050 Unpaid obligations, end of year	21	451	501
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	25	21	451
3200 Obligated balance, end of year	21	451	501

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	3	47	44
Outlays, gross:			
4010 Outlays from new discretionary authority		47	44
4011 Outlays from discretionary balances	3	5	
4020 Outlays, gross (total)	3	52	44
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-3	-3	-3
4033 Non-Federal sources		-44	-41
4040 Offsets against gross budget authority and outlays (total)	-3	-47	-44
4080 Outlays, net (discretionary)		5	
Mandatory:			
4090 Budget authority, gross	5	730	965
Outlays, gross:			
4100 Outlays from new mandatory authority		280	640
4101 Outlays from mandatory balances	4	15	275
4110 Outlays, gross (total)	4	295	915
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4123 Non-Federal sources	-26	-5	-205
Additional offsets against gross budget authority only:			
4143 Recoveries of prior year paid obligations, unexpired accounts	21		
4160 Budget authority, net (mandatory)		725	760
4170 Outlays, net (mandatory)	-22	290	710
4180 Budget authority, net (total)		725	760
4190 Outlays, net (total)	-22	295	710

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

	2019 actual	2020 est.	2021 est.
Enacted/requested:			
Budget Authority		725	760
Outlays	-22	295	710
Legislative proposal, subject to PAYGO:			
Budget Authority			-760
Outlays			-710
Total:		725	
Budget Authority		725	
Outlays	-22	295	

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	2019 actual	2020 est.	2021 est.
25.2 Direct obligations: Other services from non-Federal sources		725	960
99.0 Direct obligations		725	960

Reimbursable obligations:				
11.1	Personnel compensation: Full-time permanent	1	2	1
25.1	Advisory and assistance services		6	3
25.2	Other services from non-Federal sources	3	3	3
43.0	Interest and dividends	3	41	42
99.0	Reimbursable obligations	7	52	49
99.9	Total new obligations, unexpired accounts	7	777	1,009

Employment Summary

Identification code 089-4404-0-3-271		2019 actual	2020 est.	2021 est.
2001	Reimbursable civilian full-time equivalent employment	4	15	11

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		2019 actual	2020 est.	2021 est.
Obligations by program activity:				
0102	Transmission Infrastructure Program Projects			-960
0900	Total new obligations, unexpired accounts (object class 25.2)			-960
Budgetary resources:				
Budget authority:				
Borrowing authority, mandatory:				
1400	Borrowing authority			-960
Spending authority from offsetting collections, mandatory:				
1800	Collected			-200
1825	Spending authority from offsetting collections applied to repay debt			200
1900	Budget authority (total)			-960
1930	Total budgetary resources available			-960
Change in obligated balance:				
Unpaid obligations:				
3010	New obligations, unexpired accounts			-960
3020	Outlays (gross)			910
3050	Unpaid obligations, end of year			-50
Memorandum (non-add) entries:				
3200	Obligated balance, end of year			-50
Budget authority and outlays, net:				
Mandatory:				
4090	Budget authority, gross			-960
Outlays, gross:				
4100	Outlays from new mandatory authority			-635
4101	Outlays from mandatory balances			-275
4110	Outlays, gross (total)			-910
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4123	Non-Federal sources			200
4180	Budget authority, net (total)			-760
4190	Outlays, net (total)			-710

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		2019 actual	2020 est.	2021 est.
Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	1	1	1
1930	Total budgetary resources available	1	1	1
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year	1	1	1
4180	Budget authority, net (total)			

4190	Outlays, net (total)			
Memorandum (non-add) entries:				
5080	Outstanding debt, SOY	-55	-55	-55
5081	Outstanding debt, EOY	-55	-55	-55

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

FALCON AND AMISTAD OPERATING AND MAINTENANCE FUND

For operation, maintenance, and emergency costs for the hydroelectric facilities at the Falcon and Amistad Dams, **[\$3,160,000] \$5,776,000**, 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 **[\$2,932,000] \$5,548,000** 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 **[2020] 2021** 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 **[2020] 2021**, the Administrator of the Western Area Power Administration may accept up to **[\$1,187,000] \$1,526,000** 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, 2020.*)

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5178-0-2-271		2019 actual	2020 est.	2021 est.
0100	Balance, start of year	9	11	13
Receipts:				
Current law:				
1130	Falcon and Amistad Operating and Maintenance Fund Receipts	2	2	2
2000	Total: Balances and receipts	11	13	15
5099	Balance, end of year	11	13	15

Program and Financing (in millions of dollars)

Identification code 089-5178-0-2-271		2019 actual	2020 est.	2021 est.
Obligations by program activity:				
0801	Reimbursable program activity - Annual expenses	2	5	5
0802	Reimbursable program activity - Alternative Financing		1	2
0900	Total new obligations, unexpired accounts (object class 25.3)	2	6	7
Budgetary resources:				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1	3	3	1
Budget authority:				
Spending authority from offsetting collections, discretionary:				
1700	Offsetting collections	2	4	7
1930	Total budgetary resources available	5	7	8

FALCON AND AMISTAD OPERATING AND MAINTENANCE FUND—Continued
Program and Financing—Continued

Identification code 089-5178-0-2-271	2019 actual	2020 est.	2021 est.
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	3	1	1
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	6	4	3
3010 New obligations, unexpired accounts	2	6	7
3020 Outlays (gross)	-4	-7	-8
3050 Unpaid obligations, end of year	4	3	2
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	6	4	3
3200 Obligated balance, end of year	4	3	2
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	2	4	7
Outlays, gross:			
4010 Outlays from new discretionary authority	3	5	5
4011 Outlays from discretionary balances	4	4	3
4020 Outlays, gross (total)	4	7	8
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4033 Non-Federal sources	-2	-4	-7
4180 Budget authority, net (total)			
4190 Outlays, net (total)	2	3	1

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	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0801 Program direction	65	67	70
0802 Equipment, Contracts and Related Expenses	111	153	175
0900 Total new obligations, unexpired accounts	176	220	245
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	139	155	155
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected	192	262	266
1710 Spending authority from offsetting collections transferred to other accounts [014-4081]		-21	
1720 Capital transfer of spending authority from offsetting collections to general fund		-21	-21
1750 Spending auth from offsetting collections, disc (total)	192	220	245
1930 Total budgetary resources available	331	375	400
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	155	155	155
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	42	52	45

3010 New obligations, unexpired accounts	176	220	245
3020 Outlays (gross)	-166	-227	-237
3050 Unpaid obligations, end of year	52	45	53
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	41	51	44
3200 Obligated balance, end of year	51	44	52
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	192	220	245
Outlays, gross:			
4010 Outlays from new discretionary authority		49	55
4011 Outlays from discretionary balances	166	178	182
4020 Outlays, gross (total)	166	227	237
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-3	-5	-5
4033 Non-Federal sources	-189	-257	-261
4040 Offsets against gross budget authority and outlays (total)	-192	-262	-266
4070 Budget authority, net (discretionary)		-42	-21
4080 Outlays, net (discretionary)	-26	-35	-29
4180 Budget authority, net (total)		-42	-21
4190 Outlays, net (total)	-26	-35	-29

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	2019 actual	2020 est.	2021 est.
Reimbursable obligations:			
Personnel compensation:			
11.1 Full-time permanent	31	31	32
11.5 Other personnel compensation	4	4	5
11.9 Total personnel compensation	35	35	37
12.1 Civilian personnel benefits	12	12	12
21.0 Travel and transportation of persons	2	2	4
22.0 Transportation of things	1	1	1
23.1 Rental payments to GSA	1	1	1
23.3 Communications, utilities, and miscellaneous charges	1	1	2
25.1 Advisory and assistance services	6	8	7
25.2 Other services from non-Federal sources	84	107	120
25.3 Other goods and services from Federal sources	12	28	28
25.7 Operation and maintenance of equipment	4	3	9
26.0 Supplies and materials	2	3	3
31.0 Equipment	3	4	6
32.0 Land and structures	13	9	12
43.0 Interest and dividends .....	.....	6	3
99.9 Total new obligations, unexpired accounts	176	220	245

Employment Summary

Identification code 089-4452-0-3-271	2019 actual	2020 est.	2021 est.
2001 Reimbursable civilian full-time equivalent employment	280	296	294

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 [2020] 2021, no new direct loan obligations may be made [*Provided further*, Expenditures from the Bonneville Power Administration Fund, established pursuant to Public Law 93-454 are authorized and approved, without fiscal year limitation, for the cost of current and future year purchases or payments of emissions expenses associated with Bonneville Power Administration power and transmission operations in states with clean energy programs: *Provided further*, This expenditure authorization is limited solely to Bonneville Power Administration's voluntary purchase or payments made in conjunction with state clean energy programs and is not a broader waiver of Bonneville Power Administration's sovereign immunity]. (*Energy and Water Development and Related Agencies Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 089-4045-0-3-271	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0801 Power business line	1,134	1,089	1,127
0802 Residential exchange	241	257	255
0803 Bureau of Reclamation	161	154	152
0804 Corp of Engineers	253	253	253
0805 Colville settlement	20	23	23
0806 U.S. Fish & Wildlife	27	30	30
0807 Planning council	11	12	12
0808 Fish and Wildlife	228	249	249
0809 Reimbursable program activities, subtotal	2,075	2,067	2,101
0811 Transmission business line	478	480	482
0812 Conservation and energy efficiency	142	158	157
0813 Interest	232	177	198
0814 Pension and health benefits	41	38	40
0819 Reimbursable program activities, subtotal	893	853	877
0821 Power business line	200	238	256
0822 Transmission services	192	469	474
0824 Fish and Wildlife	22	47	47
0825 Capital Equipment	10	22	22
0826 Projects funded in advance	239	86	66
0829 Reimbursable program activities, subtotal	663	862	865
0900 Total new obligations, unexpired accounts	3,631	3,782	3,843
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	12	11	599

1020 Adjustment of unobligated bal brought forward, Oct 1	10	.....	.....
1023 Unobligated balances applied to repay debt .....	.....	-1	-591
1050 Unobligated balance (total)	22	10	8
Budget authority:			
Borrowing authority, mandatory:			
1400 Borrowing authority	255	776	800
Contract authority, mandatory:			
1600 Contract authority	2,850	.....	.....
Spending authority from offsetting collections, mandatory:			
1800 Collected	3,657	3,946	3,954
1801 Change in uncollected payments, Federal sources	-33	.....	.....
1802 Offsetting collections (previously unavailable)	10	.....	8
1823 New and/or unobligated balance of spending authority from offsetting collections temporarily reduced	-9	.....	.....
1825 Spending authority from offsetting collections applied to repay debt	-506	-351	-402
1826 Spending authority from offsetting collections applied to liquidate contract authority	-2,604	.....	.....
1850 Spending auth from offsetting collections, mand (total)	515	3,595	3,560
1900 Budget authority (total)	3,620	4,371	4,360
1930 Total budgetary resources available	3,642	4,381	4,368
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	11	599	525

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	3,462	3,369	3,368
3010 New obligations, unexpired accounts	3,631	3,782	3,843
3020 Outlays (gross)	-3,724	-3,783	-3,844
3050 Unpaid obligations, end of year	3,369	3,368	3,367
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-366	-333	-333
3070 Change in uncollected pymts, Fed sources, unexpired	33	.....	.....
3090 Uncollected pymts, Fed sources, end of year	-333	-333	-333
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	3,096	3,036	3,035
3200 Obligated balance, end of year	3,036	3,035	3,034

Budget authority and outlays, net:

Mandatory:			
4090 Budget authority, gross	3,620	4,371	4,360
Outlays, gross:			
4100 Outlays from new mandatory authority	3,539	3,683	3,744
4101 Outlays from mandatory balances	185	100	100
4110 Outlays, gross (total)	3,724	3,783	3,844
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4120 Federal sources	-54	-90	-90
4121 Interest on Federal securities	-9	.....	.....
4123 Non-Federal sources	-3,594	-3,856	-3,864
4130 Offsets against gross budget authority and outlays (total)	-3,657	-3,946	-3,954
Additional offsets against gross budget authority only:			
4140 Change in uncollected pymts, Fed sources, unexpired	33	.....	.....
4160 Budget authority, net (mandatory)	-4	425	406
4170 Outlays, net (mandatory)	67	-163	-110
4180 Budget authority, net (total)	-4	425	406
4190 Outlays, net (total)	67	-163	-110

Memorandum (non-add) entries:

5000 Total investments, SOY: Federal securities: Par value	455	137	137
5001 Total investments, EOY: Federal securities: Par value	137	137	137
5052 Obligated balance, SOY: Contract authority	2,604	2,860	2,860
5053 Obligated balance, EOY: Contract authority	2,860	2,860	2,860
5090 Unexpired unavailable balance, SOY: Offsetting collections	10	9	9
5092 Unexpired unavailable balance, EOY: Offsetting collections	9	9	1

Status of Direct Loans (in millions of dollars)

Identification code 089-4045-0-3-271	2019 actual	2020 est.	2021 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

BONNEVILLE POWER ADMINISTRATION FUND—Continued

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 \$4.3 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 2021.

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 2021 capital obligations are estimated to be \$799.7 million.

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

Financing.—The Transmission Act provides for the use by BPA of all receipts, collections, and recoveries in cash from all sources, including the sale of bonds, to finance the annual budget programs of BPA. These receipts result primarily from the sale of power and transmission services. The Transmission Act also provides for authority to borrow from the U.S. Treasury at rates comparable to borrowings at open market rates for similar issues. BPA has \$7.70 billion of U.S. Treasury borrowing authority provided by the Transmission Act; the Pacific Northwest Power Act for energy conservation, renewable energy resources, capital fish facilities, and other purposes; the American Recovery and Reinvestment Act of 2009; and other legislation. At the end of 2019, BPA had outstanding bonds with the U.S. Treasury of \$5,280 million. At the end of 2019, BPA also had \$7,593.3 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 2019, BPA made payments to the Treasury of \$1,064 million and also expects to make payments of \$624 million in 2020 and \$689 million in 2021. The 2021 payment is expected to be distributed as follows: interest on bonds and appropriations (\$232 million), amortization (\$402 million), and other (\$55 million). BPA also received credits totaling approximately \$124 million applied against its Treasury payments in 2019 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 2021, no new direct loan obligations may be made.

Operating Results.—Total revenues are forecast at approximately \$3.9 billion in 2021.

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	2018 actual	2019 actual
ASSETS:		
Federal assets:		
1101 Fund balances with Treasury	90	84
Investments in U.S. securities:		
1106 Receivables, net	454	138
1206 Non-Federal assets: Receivables, net	366	332
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	109	106
1803 Property, plant and equipment, net	7,295	7,455
1901 Other assets	14,064	14,094
1999 Total assets	22,378	22,209
LIABILITIES:		
Federal liabilities:		
2102 Interest payable	94	88
2103 Debt	8,040	7,552
Non-Federal liabilities:		
2201 Accounts payable	367	408
2203 Debt	5,533	5,429
2207 Other	8,344	8,732
2999 Total liabilities	22,378	22,209
NET POSITION:		
3300 Cumulative results of operations		
4999 Total liabilities and net position	22,378	22,209

Object Classification (in millions of dollars)

Identification code 089-4045-0-3-271	2019 actual	2020 est.	2021 est.
Reimbursable obligations:			
11.1 Personnel compensation: Full-time permanent	342	356	362
12.1 Civilian personnel benefits	159	166	168
21.0 Travel and transportation of persons	5	5	5
22.0 Transportation of things	1	1	1
23.2 Rental payments to others	37	39	39
23.3 Communications, utilities, and miscellaneous charges	11	11	12
25.1 Advisory and assistance services	98	102	104
25.2 Other services from non-Federal sources	2,297	2,393	2,431
25.5 Research and development contracts	4	5	5
26.0 Supplies and materials	35	36	37
31.0 Equipment	176	183	186
32.0 Land and structures	117	122	124
41.0 Grants, subsidies, and contributions	48	50	51
43.0 Interest and dividends	301	313	318
99.9 Total new obligations, unexpired accounts	3,631	3,782	3,843

Employment Summary

Identification code 089-4045-0-3-271	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	2,727	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.), **[\$254,378,000]** \$229,472,000, to remain available until September 30, **[2021]** 2022, 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 \$93,378,000 in fiscal year **[2020]** 2021 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 **[2020]** 2021 appropriation from the general fund estimated at not more than **[\$161,000,000]** \$136,094,000. (*Energy and Water Development and Related Agencies Appropriations Act, 2020.*)

Program and Financing (in millions of dollars)

Identification code 089-0228-0-1-276	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0003 Office of the Secretary	6	6	5
0004 Office of Congressional and Intergovernmental Affairs	6	6	6
0005 Office of Public Affairs	6	6	5
0006 General Counsel	33	34	35
0008 Economic Impact and Diversity	7	10	10
0009 Chief Financial Officer	38	42	46
0011 Human Capital Management	26	28	26
0012 Indian Energy Policy	18		
0013 Office of Policy	8	8	8
0014 International Affairs	24	31	
0015 Office of Small and Disadvantaged Business Utilization	5	4	3
0018 Management	58	58	57
0020 Project Management Oversight and Assessment	13		
0025 Office of Technology Transitions	8	14	13
0030 Artificial Intelligence Technology Office		3	
0045 Strategic partnership projects	24	26	26
0799 Total direct obligations	280	276	240
0801 Departmental Administration (Reimbursable)	4	4	4
0900 Total new obligations, unexpired accounts	284	280	244
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	107	89	63
1020 Adjustment of unobligated bal brought forward, Oct 1	6		
1021 Recoveries of prior year unpaid obligations	2		
1050 Unobligated balance (total)	115	89	63
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	186	161	136
Spending authority from offsetting collections, discretionary:			
1700 Collected	80	93	93
1701 Change in uncollected payments, Federal sources	-2		
1750 Spending auth from offsetting collections, disc (total)	78	93	93
1900 Budget authority (total)	264	254	229
1930 Total budgetary resources available	379	343	292
Memorandum (non-add) entries:			
1940 Unobligated balance expiring	-6		
1941 Unexpired unobligated balance, end of year	89	63	48
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	102	111	137
3010 New obligations, unexpired accounts	284	280	244
3020 Outlays (gross)	-270	-254	-234
3040 Recoveries of prior year unpaid obligations, unexpired	-2		
3041 Recoveries of prior year unpaid obligations, expired	-3		
3050 Unpaid obligations, end of year	111	137	147
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1	-8	-9	-9
3061 Adjustments to uncollected pymts, Fed sources, brought forward, Oct 1	-4		
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	-9	-9	-9
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	90	102	128
3200 Obligated balance, end of year	102	128	138

DEPARTMENTAL ADMINISTRATION—Continued
Program and Financing—Continued

Identification code 089-0228-0-1-276	2019 actual	2020 est.	2021 est.
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	264	254	229
Outlays, gross:			
4010 Outlays from new discretionary authority	150	111	96
4011 Outlays from discretionary balances	120	143	138
4020 Outlays, gross (total)	270	254	234
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-38	-40	-40
4033 Non-Federal sources	-43	-53	-53
4040 Offsets against gross budget authority and outlays (total)	-81	-93	-93
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired	2	.....	.....
4052 Offsetting collections credited to expired accounts	1	.....	.....
4060 Additional offsets against budget authority only (total)	3	.....	.....
4070 Budget authority, net (discretionary)	186	161	136
4080 Outlays, net (discretionary)	189	161	141
4180 Budget authority, net (total)	186	161	136
4190 Outlays, net (total)	189	161	141

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 2021 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 Management's portfolio of capital asset projects that are \$100 million or greater, including all activities involved with on-site cost, schedule, technical and management status reviews, as well as analyzing and reporting performance progress of the projects. PM will also provide cost estimating and program evaluation.

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

Office of Technology Transitions (OTT).—Facilitates accessibility of DOE's capabilities and technologies for private sector commercialization. OTT serves a multi-disciplinary role, providing management of DOE's ongoing tech-to-market activities, including the statutory Technology Commercialization Fund. OTT coordinates DOE technology transition activities, including policy reform, data collection and analyses, industry stakeholder convenings, and amplification of DOE technology transfer success stories across the DOE—including programs, field offices, and the National Labs and Production Facilities—as well as engaging with other Federal agencies to improve awareness of the benefits of engaging the DOE research enterprise.

Object Classification (in millions of dollars)

Identification code 089-0228-0-1-276	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	98	114	106
11.3 Other than full-time permanent	13	13	8
11.5 Other personnel compensation	2	2	3
11.9 Total personnel compensation	113	129	117
12.1 Civilian personnel benefits	33	34	32
21.0 Travel and transportation of persons	5	5	5
23.3 Communications, utilities, and miscellaneous charges	7	7	7

24.0	Pamphlets, Documents, Subscriptions and Publications	1	1	
25.1	Advisory and assistance services	29	29	19
25.2	Other services from non-Federal sources	14	12	10
25.3	Other goods and services from Federal sources	41	25	25
25.4	Operation and maintenance of facilities	15	22	15
26.0	Other Services	1	1	1
31.0	Equipment	1	1	1
41.0	Grants, subsidies, and contributions	13	9	6
44.0	Non-Capitalized Personal Property	1	1	1
44.0	Refunds	7		
99.0	Direct obligations	280	276	240
99.0	Reimbursable obligations	4	4	4
99.9	Total new obligations, unexpired accounts	284	280	244

Employment Summary

Identification code 089-0228-0-1-276	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	823	978	904

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.), \$32,959,000, to remain available until expended: Provided, That \$22,575,000 shall be available until September 30, 2022, for program direction.

Program and Financing (in millions of dollars)

Identification code 089-0351-0-1-276	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0010 International affairs			33
Budgetary resources:			
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation			33
1930 Total budgetary resources available			33
Change in obligated balance:			
Unpaid obligations:			
3010 New obligations, unexpired accounts			33
3020 Outlays (gross)			-25
3050 Unpaid obligations, end of year			8
Memorandum (non-add) entries:			
3200 Obligated balance, end of year			8
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross			33
Outlays, gross:			
4010 Outlays from new discretionary authority			25
4180 Budget authority, net (total)			33
4190 Outlays, net (total)			25

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	2019 actual	2020 est.	2021 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent			11
11.9 Total personnel compensation			11

12.1	Civilian personnel benefits			3
21.0	Travel and transportation of persons			1
25.1	Advisory and assistance services			2
25.2	Other services from non-Federal sources			2
25.3	Other goods and services from Federal sources			2
25.4	Operation and maintenance of facilities			4
41.0	Grants, subsidies, and contributions			8
99.9	Total new obligations, unexpired accounts			33

Employment Summary

Identification code 089-0351-0-1-276	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment			85

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, [\$54,215,000] \$57,739,000, to remain available until September 30, [2021] 2022. (Energy and Water Development and Related Agencies Appropriations Act, 2020.)

Program and Financing (in millions of dollars)

Identification code 089-0236-0-1-276	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0001 Office of the Inspector General	50	58	58
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	3	4	
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation	51	54	58
1930 Total budgetary resources available	54	58	58
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	4	4	8
3010 New obligations, unexpired accounts	50	58	58
3020 Outlays (gross)	-50	-54	-57
3050 Unpaid obligations, end of year	4	8	9
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	4	4	8
3200 Obligated balance, end of year	4	8	9
Budget authority and outlays, net:			
Discretionary:			
4000 Budget authority, gross	51	54	58
Outlays, gross:			
4010 Outlays from new discretionary authority	43	46	49
4011 Outlays from discretionary balances	7	8	8
4020 Outlays, gross (total)	50	54	57
4180 Budget authority, net (total)	51	54	58
4190 Outlays, net (total)	50	54	57

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 prosec-

OFFICE OF THE INSPECTOR GENERAL—Continued

utions; and identifies ways to make Departmental programs safer and more secure.

Object Classification (in millions of dollars)

Identification code 089-0236-0-1-276	2019 actual	2020 est.	2021 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent	28	32	33
11.5 Other personnel compensation	2	2	2
11.9 Total personnel compensation	30	34	35
12.1 Civilian personnel benefits	12	14	14
21.0 Travel and transportation of persons	2	2	2
25.1 Advisory and assistance services	1	2	1
25.2 Other services from non-Federal sources	1	2	2
25.3 Other goods and services from Federal sources	3	4	4
99.0 Direct obligations	49	58	58
99.5 Adjustment for rounding	1		
99.9 Total new obligations, unexpired accounts	50	58	58

Employment Summary

Identification code 089-0236-0-1-276	2019 actual	2020 est.	2021 est.
1001 Direct civilian full-time equivalent employment	252	291	303

WORKING CAPITAL FUND

Program and Financing (in millions of dollars)

Identification code 089-4563-0-4-276	2019 actual	2020 est.	2021 est.
Obligations by program activity:			
0802 Project management and career development program	2	2	2
0810 Supplies	1	2	2
0812 Copying Services	3	4	4
0813 Printing and graphics	3	5	5
0814 Building Occupancy (Rent, Operations & Maintenance)	119	113	117
0815 Corporate Business Systems	44	47	49
0816 Mail and Transportation Services	3	4	4
0817 Financial Statement Audits	10	12	12
0818 Procurement Management	9	16	16
0820 Telecommunication	29	37	38
0821 Overseas Presence	10	16	16
0822 Interagency Transfers	8	9	9
0823 Health Services	1	2	2
0825 Corporate Training Services	2	3	3
0826 A-123 / Internal Controls	1	3	2
0827 Pension Studies	1	1	1
0900 Total new obligations, unexpired accounts	246	276	282
Budgetary resources:			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1	65	50	50
1021 Recoveries of prior year unpaid obligations	2		
1050 Unobligated balance (total)	67	50	50
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected	229	276	276
1930 Total budgetary resources available	296	326	326
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year	50	50	44
Change in obligated balance:			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1	133	126	67
3010 New obligations, unexpired accounts	246	276	282
3020 Outlays (gross)	-251	-335	-336
3040 Recoveries of prior year unpaid obligations, unexpired	-2		
3050 Unpaid obligations, end of year	126	67	13
Memorandum (non-add) entries:			
3100 Obligated balance, start of year	133	126	67
3200 Obligated balance, end of year	126	67	13

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross	229	276	276
Outlays, gross:			
4010 Outlays from new discretionary authority	102	265	265
4011 Outlays from discretionary balances	149	70	71
4020 Outlays, gross (total)	251	335	336
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources	-229	-276	-276
4180 Budget authority, net (total)			
4190 Outlays, net (total)	22	59	60

The Department's Working Capital Fund (WCF) provides the following shared services: rent and building operations, telecommunications, cyber-security, 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.

Object Classification (in millions of dollars)

Identification code 089-4563-0-4-276	2019 actual	2020 est.	2021 est.
Reimbursable obligations:			
Personnel compensation:			
11.1 Full-time permanent	11	13	13
11.5 Other personnel compensation	1	1	1
11.8 Special personal services payments	1	1	1
11.9 Total personnel compensation	13	15	15
12.1 Civilian personnel benefits	4	5	5
21.0 Travel and transportation of persons	1	1	1
22.0 Transportation of things	2	2	2
23.1 Rental payments to GSA	46	52	53
23.2 Rental payments to others	1	1	1
23.3 Communications, utilities, and miscellaneous charges	20	22	23
24.0 Printing and reproduction	1	1	1
25.1 Advisory and assistance services	41	46	47
25.2 Other services from non-Federal sources	17	19	20
25.3 Other goods and services from Federal sources	45	51	52
25.4 Operation and maintenance of facilities	43	48	49
26.0 Supplies and materials	1	1	1
31.0 Equipment	1	1	1
32.0 Land and structures	8	9	9
99.0 Reimbursable obligations	244	274	280
99.5 Adjustment for rounding	2	2	2
99.9 Total new obligations, unexpired accounts	246	276	282

Employment Summary

Identification code 089-4563-0-4-276	2019 actual	2020 est.	2021 est.
2001 Reimbursable civilian full-time equivalent employment	99	107	107

GENERAL FUND RECEIPT ACCOUNTS

(in millions of dollars)

	2019 actual	2020 est.	2021 est.
Offsetting receipts from the public:			
089-089400 Fees and Recoveries, Federal Energy Regulatory Commission	9	16	9
089-223400 Sale of Strategic Petroleum Reserve Oil	752	272	1,110
089-224500 Sale and Transmission of Electric Energy, Falcon Dam	1		
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	6	6
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	183	177	178

089-224800	Sale and Transmission of Electric Energy, Southeastern Power Administration: Legislative proposal, subject to PAYGO			4
089-224900	Sale of Power and Other Utilities, not Otherwise Classified	10	30	30
089-224900	Sale of Power and Other Utilities, not Otherwise Classified: Legislative proposal, subject to PAYGO			563
089-267910	Title 17 Innovative Technology Loan Guarantees, Negative Subsidies	65	45	49
089-279530	DOE ATM Direct Loans Downward Reestimate Account	22	17	
089-279730	DOE Loan Guarantees Downward Reestimate Account	263	38	
089-288900	Repayments on Miscellaneous Recoverable Costs, not Otherwise Classified	41	38	40
089-322000	All Other General Fund Proprietary Receipts Including Budget Clearing Accounts	22	22	18
General Fund Offsetting receipts from the public		1,374	661	2,027

GENERAL PROVISIONS—DEPARTMENT OF ENERGY

(INCLUDING TRANSFER AND CANCELLATION 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), and (h), the amounts made available by this title shall be expended as authorized by law for the programs, projects, and activities specified in the "Final Bill" column in the "Department of Energy" table included under the heading "Title III-Department of Energy" in the explanatory statement described in section 4 (in the matter preceding division A of this consolidated 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) EXCLUSIONS.—Subsections (d), (e), and (f) shall not apply to applied energy program funds transferred or reprogrammed under—

(1) the small business innovation research program under section 9 of the Small Business Act (15 U.S.C 638); or

(2) the small business technology transfer program under that section.

(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 [2020] 2021 until the enactment of the Intelligence Authorization Act for fiscal year [2020] 2021.

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. (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. 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. Of the offsetting collections, including unobligated balances of such collections, in the "Department of Energy-Power Marketing Administration-Colorado River Basins Power Marketing Fund, Western Area Power Administration", \$21,400,000 shall be transferred to the "Department of Interior-Bureau of Reclamation-Upper Colorado River Basin Fund" for the Bureau of Reclamation to carry out environmental stewardship and endangered species recovery efforts.]

SEC. 308. (a) Of the unobligated balances available from amounts appropriated in prior Acts under the heading "Title III-Department of Energy-Energy Programs", \$12,723,000 is hereby rescinded.

(b) No amounts may be rescinded under (a) from amounts that were designated by the Congress as an emergency requirement pursuant to a concurrent resolution on the budget or the Balanced Budget and Emergency Deficit Control Act of 1985.】

【SEC. 309. Beginning in fiscal year 2021 and for each fiscal year thereafter, fees collected pursuant to subsection (b)(1) of section 6939f of title 42, United States Code, shall be deposited in "Department of Energy-Energy Programs-Non-Defense Environmental Cleanup" as discretionary offsetting collections.】

【SEC. 310. During fiscal year 2020 and each fiscal year thereafter, notwithstanding any provision of title 5, United States Code, relating to classification or rates of pay, the Southeastern Power Administration shall pay any power system dispatcher employed by the Administration a rate of basic pay and premium pay based on those prevailing for similar occupations in the electric power industry. Basic pay and premium pay may not be paid under this section to any individual during a calendar year so as to result in a total rate in excess of the rate of basic pay for level V of the Executive Schedule (section 5316 of such title).】

SEC. 307. 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) in the matter preceding paragraph (1), 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 2021, 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 remediation functions and activities described in subsections (a)(1) through (a)(6)."

SEC. 308. Section 2307 of the Energy Policy Act of 1992 (42 U.S.C 13526) is repealed.

SEC. 309. Notwithstanding section 161 of the Energy Policy and Conservation Act (42 U.S.C. 6241), the Secretary of Energy shall draw down and sell 15 million barrels of refined petroleum product from the Strategic Petroleum Reserve during fiscal year 2021. Proceeds from sales under this section shall be deposited into the general fund of the Treasury during fiscal year 2021, with the exception of \$242,000,000 from such proceeds to be deposited in the "Naval Petroleum and Oil Shale Reserves" account for comprehensive remediation of the Naval Petroleum Reserve–1 site near Elk Hills, California, to remain available until expended.

SEC. 310. 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) of this section, 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. 311. Pursuant to a request by the Secretary of Defense, and upon determination by the Director of the Office of Management and Budget in consultation with the Secretary of Energy that such action is necessary, the Secretary of Energy may, with the approval of the Office of Management and Budget, transfer not to exceed \$2,500,000,000 of funds made available in this Act to the Department of Energy for National Nuclear Security Administration functions to the Department of Defense, to be merged with and to be available for the same purposes, and for the same time period, as the appropriation or fund to which transferred: Provided, That the Secretary of Energy shall notify the Congress promptly of all transfers made pursuant to this authority or any other authority in this Act: Provided further, That this transfer authority is in addition to any other transfer authority provided in this Act. (Energy and Water Development and Related Agencies Appropriations Act, 2020.)

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 explanatory statement described in section 4 (in the matter preceding division A of this consolidated 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 explanatory statement described in section 4 (in the matter preceding division A of this consolidated 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】502. None of the funds made available by this Act may be used in contravention of Executive Order No. 12898 of February 11, 1994 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations).

SEC. 【504】503. (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.

(Energy and Water Development and Related Agencies Appropriations Act, 2020.)