

# 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, **[\$443,200,000]** \$464,000,000, to remain available until September 30, **[2022]** 2023, including official reception and representation expenses not to exceed \$17,000. (Energy and Water Development and Related Agencies Appropriations Act, 2021.)

#### Program and Financing (in millions of dollars)

Identification code 089-0313-0-1-053	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0010 Federal Salaries and Expenses .....	434	454	467
<b>Budgetary resources:</b>			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	25	27	16
1021 Recoveries of prior year unpaid obligations .....	1		
1050 Unobligated balance (total) .....	26	27	16
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....	435	443	464
1900 Budget authority (total) .....	435	443	464
1930 Total budgetary resources available .....	461	470	480
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	27	16	13
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	61	68	67
3010 New obligations, unexpired accounts .....	434	454	467
3020 Outlays (gross) .....	-424	-455	-466
3040 Recoveries of prior year unpaid obligations, unexpired .....	-1		
3041 Recoveries of prior year unpaid obligations, expired .....	-2		
3050 Unpaid obligations, end of year .....	68	67	68
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	61	68	67
3200 Obligated balance, end of year .....	68	67	68
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000 Budget authority, gross .....	435	443	464
Outlays, gross:			
4010 Outlays from new discretionary authority .....	351	370	388
4011 Outlays from discretionary balances .....	73	85	78
4020 Outlays, gross (total) .....	424	455	466
4180 Budget authority, net (total) .....	435	443	464
4190 Outlays, net (total) .....	424	455	466

*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	2020 actual	2021 est.	2022 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent .....	235	246	252
11.3 Other than full-time permanent .....	3	4	4
11.5 Other personnel compensation .....	8	9	9
11.9 Total personnel compensation .....	246	259	265
12.1 Civilian personnel benefits .....	80	81	82
21.0 Travel and transportation of persons .....	5	6	6

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 .....	34	35	36
25.2 Other services from non-Federal sources .....	6	7	8
25.3 Other goods and services from Federal sources .....	42	44	46
25.4 Operation and maintenance of facilities .....	17	18	19
25.6 Medical care .....	1	1	1
26.0 Supplies and materials .....	1	1	1
99.9 Total new obligations, unexpired accounts .....	434	454	467

#### Employment Summary

Identification code 089-0313-0-1-053	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	1,685	1,750	1,898

## NAVAL REACTORS

(INCLUDING **[TRANSFER]** CANCELLATION 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, **[\$1,684,000,000]** \$1,866,705,000, to remain available until expended, of which, \$91,000,000 shall be transferred to "Department of Energy—Energy Programs—Nuclear Energy", for the Advanced Test Reactor: *Provided*, That of such amount, **[\$51,700,000]** \$55,579,000 shall be available until September 30, **[2022]** 2023, for program direction: *Provided further*, That of the unobligated balances from prior year appropriations available under this heading, \$6,000,000 is hereby permanently cancelled. (Energy and Water Development and Related Agencies Appropriations Act, 2021.)

#### Program and Financing (in millions of dollars)

Identification code 089-0314-0-1-053	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 Naval Reactors (Direct) .....	1,555	1,601	1,867
<b>Budgetary resources:</b>			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	6	14	6
1021 Recoveries of prior year unpaid obligations .....	4		
1050 Unobligated balance (total) .....	10	14	6
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....	1,648	1,684	1,867
1120 Appropriations transferred to other acct [089-0319] .....	-89	-91	
1131 Unobligated balance of appropriations permanently reduced .....			-6
1160 Appropriation, discretionary (total) .....	1,559	1,593	1,861
1930 Total budgetary resources available .....	1,569	1,607	1,867
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	14	6	
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	1,009	1,078	1,162
3010 New obligations, unexpired accounts .....	1,555	1,601	1,867
3020 Outlays (gross) .....	-1,482	-1,517	-1,733
3040 Recoveries of prior year unpaid obligations, unexpired .....	-4		
3050 Unpaid obligations, end of year .....	1,078	1,162	1,296
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	1,009	1,078	1,162
3200 Obligated balance, end of year .....	1,078	1,162	1,296
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000 Budget authority, gross .....	1,559	1,593	1,861
Outlays, gross:			
4010 Outlays from new discretionary authority .....	725	796	931
4011 Outlays from discretionary balances .....	757	721	802
4020 Outlays, gross (total) .....	1,482	1,517	1,733

NAVAL REACTORS—Continued  
Program and Financing—Continued

Identification code 089-0314-0-1-053	2020 actual	2021 est.	2022 est.
4180 Budget authority, net (total) .....	1,559	1,593	1,861
4190 Outlays, net (total) .....	1,482	1,517	1,733

*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 final disposition of naval spent nuclear fuel. The program ensures the safe and reliable operation of reactor plants in nuclear-powered submarines and aircraft carriers and ensures Naval Reactors can support the operational nuclear fleet, continue research and development efforts for future generations of nuclear-powered warships, and make progress on the recapitalization of laboratory facilities and environmental remediation of legacy responsibilities. 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	2020 actual	2021 est.	2022 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent .....	33	38	38
11.3 Other than full-time permanent .....	1	1	1
11.5 Other personnel compensation .....	1	1	1
11.9 Total personnel compensation .....	35	40	40
12.1 Civilian personnel benefits .....	11	12	12
23.3 Communications, utilities, and miscellaneous charges .....	2	3	3
25.1 Advisory and assistance services .....	3	4	4
25.2 Other services from non-Federal sources .....	6	7	7
25.3 Other goods and services from Federal sources .....	3	4	4
25.4 Operation and maintenance of facilities .....	1,153	1,180	1,433
31.0 Equipment .....	9	10	10
32.0 Land and structures .....	332	340	353
41.0 Grants, subsidies, and contributions .....	1	1	1
99.9 Total new obligations, unexpired accounts .....	1,555	1,601	1,867

Employment Summary

Identification code 089-0314-0-1-053	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	235	246	246

WEAPONS ACTIVITIES

For Department of Energy expenses, including the purchase, construction, and acquisition of plant and capital equipment and other incidental expenses necessary for atomic energy defense weapons activities in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), including the acquisition or condemnation of any real property or any facility or for plant or facility acquisition, construction, or expansion, and the purchase of not to exceed one [aircraft, one] ambulance[, and two passenger buses], for replacement only, [\$15,345,000,000] \$15,484,295,000, to remain available until expended: *Provided*, [That of such amount, \$75,000,000 shall be available for the Uranium Reserve Program: *Provided further*,] That of such amount, [\$123,684,000] \$117,060,000 shall be available until September 30, [2022] 2023, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

Program and Financing (in millions of dollars)

Identification code 089-0240-0-1-053	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 Weapons Activities (Direct) .....	12,516	15,445	15,484
0300 Subtotal, Weapons Activities .....	12,516	15,445	15,484
0799 Total direct obligations .....	12,516	15,445	15,484

0810 Weapons Activities (Reimbursable) .....	2,017	2,050	2,081
0900 Total new obligations, unexpired accounts .....	14,533	17,495	17,565

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	113	136	36
1021 Recoveries of prior year unpaid obligations .....	144		
1033 Recoveries of prior year paid obligations .....	9		
1050 Unobligated balance (total) .....	266	136	36
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....	12,457	15,345	15,484
Spending authority from offsetting collections, discretionary:			
1700 Collected .....	2,043	2,050	2,055
1701 Change in uncollected payments, Federal sources .....	-97		
1750 Spending auth from offsetting collections, disc (total) .....	1,946	2,050	2,055
1900 Budget authority (total) .....	14,403	17,395	17,539
1930 Total budgetary resources available .....	14,669	17,531	17,575
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	136	36	10

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	10,038	10,891	12,244
3010 New obligations, unexpired accounts .....	14,533	17,495	17,565
3020 Outlays (gross) .....	-13,536	-16,142	-16,865
3040 Recoveries of prior year unpaid obligations, unexpired .....	-144		
3050 Unpaid obligations, end of year .....	10,891	12,244	12,944
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1 .....	-2,830	-2,733	-2,733
3070 Change in uncollected pymts, Fed sources, unexpired .....	97		
3090 Uncollected pymts, Fed sources, end of year .....	-2,733	-2,733	-2,733
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	7,208	8,158	9,511
3200 Obligated balance, end of year .....	8,158	9,511	10,211

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross .....	14,403	17,395	17,539
Outlays, gross:			
4010 Outlays from new discretionary authority .....	5,899	7,581	7,646
4011 Outlays from discretionary balances .....	7,637	8,561	9,219
4020 Outlays, gross (total) .....	13,536	16,142	16,865
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources .....	-1,959	-1,948	-1,951
4033 Non-Federal sources .....	-93	-102	-104
4040 Offsets against gross budget authority and outlays (total) .....	-2,052	-2,050	-2,055
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired .....	97		
4053 Recoveries of prior year paid obligations, unexpired accounts .....	9		
4060 Additional offsets against budget authority only (total) .....	106		
4070 Budget authority, net (discretionary) .....	12,457	15,345	15,484
4080 Outlays, net (discretionary) .....	11,484	14,092	14,810
4180 Budget authority, net (total) .....	12,457	15,345	15,484
4190 Outlays, net (total) .....	11,484	14,092	14,810

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 sustainment 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.**—Provides information sharing and safeguarding through secure, agile, and risk-informed information technology (IT) and cybersecurity solutions for both the unclassified and classified computing environments. The program orchestrates, provides, and directs cybersecurity across the NNSA enterprise and to its mission partners. Manages the IT portfolio, federal IT investments, services, and projects in alignment with the NNSA and Departmental strategies, as well as other national policy drivers.

**Object Classification** (in millions of dollars)

Identification code 089-0240-0-1-053	2020 actual	2021 est.	2022 est.
<b>Direct obligations:</b>			
<b>Personnel compensation:</b>			
11.1 Full-time permanent .....	47	59	49
11.5 Other personnel compensation .....	9	10	10
11.9 Total personnel compensation .....	56	69	59
12.1 Civilian personnel benefits .....	27	28	29
21.0 Travel and transportation of persons .....	5	5	5
23.1 Rental payments to GSA .....	47	50	50
23.3 Communications, utilities, and miscellaneous charges .....	26	29	29
25.1 Advisory and assistance services .....	285	297	301
25.2 Other services from non-Federal sources .....	468	480	492
25.3 Other goods and services from Federal sources .....	19	22	22
25.4 Operation and maintenance of facilities .....	9,420	11,657	11,750
25.5 Research and development contracts .....	167	178	183
25.6 Medical care .....	4	5	5
25.7 Operation and maintenance of equipment .....	1	1	1
26.0 Supplies and materials .....	10	11	11
31.0 Equipment .....	531	540	548
32.0 Land and structures .....	1,391	2,012	1,937
41.0 Grants, subsidies, and contributions .....	59	61	62
99.0 Direct obligations .....	12,516	15,445	15,484
99.0 Reimbursable obligations .....	2,017	2,050	2,081
99.9 Total new obligations, unexpired accounts .....	14,533	17,495	17,565

**Employment Summary**

Identification code 089-0240-0-1-053	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	521	552	574

**DEFENSE NUCLEAR NONPROLIFERATION**

(INCLUDING CANCELLATION OF FUNDS)

For Department of Energy expenses, including the purchase, construction, and acquisition of plant and capital equipment and other incidental expenses necessary for defense nuclear nonproliferation activities, in carrying out the purposes of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), including the acquisition or condemnation of any real property or any facility or for plant or facility acquisition, construction, or expansion, **【\$2,260,000,000】** \$2,264,000,000, to remain available until expended: *Provided, That of the unobligated balances from prior year appropriations available under this heading specified as for "99-D-143 Mixed Oxide (MOX) Fuel Fabrication Facility, SRS" in the "Final Bill" column in the "Department of Energy" tables included under the heading "Title III-Department of Energy" in the explanatory statements accompanying prior appropriations Acts, \$330,000,000 is hereby permanently cancelled. (Energy and Water Development and Related Agencies Appropriations Act, 2021.)*

**Program and Financing** (in millions of dollars)

Identification code 089-0309-0-1-053	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 Defense Nuclear Nonproliferation (Direct) .....	2,084	2,381	2,264
0100 Subtotal, obligations by program activity .....	2,084	2,381	2,264
0799 Total direct obligations .....	2,084	2,381	2,264
0801 Global material security .....	13		
0899 Total reimbursable obligations .....	13		
0900 Total new obligations, unexpired accounts .....	2,097	2,381	2,264
<b>Budgetary resources:</b>			
<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1 .....	261	451	330
1021 Recoveries of prior year unpaid obligations .....	121		
1050 Unobligated balance (total) .....	382	451	330
<b>Budget authority:</b>			
<b>Appropriations, discretionary:</b>			
1100 Appropriation .....	2,164	2,260	2,264
1120 Appropriations transferred to other acts [089-0222] .....	-11		
1131 Unobligated balance of appropriations permanently reduced .....			-330
1160 Appropriation, discretionary (total) .....	2,153	2,260	1,934
<b>Spending authority from offsetting collections, discretionary:</b>			
1700 Collected .....	13		
1900 Budget authority (total) .....	2,166	2,260	1,934
1930 Total budgetary resources available .....	2,548	2,711	2,264
<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year .....	451	330	
<b>Change in obligated balance:</b>			
<b>Unpaid obligations:</b>			
3000 Unpaid obligations, brought forward, Oct 1 .....	1,548	1,463	1,745
3010 New obligations, unexpired accounts .....	2,097	2,381	2,264
3020 Outlays (gross) .....	-2,061	-2,099	-2,187
3040 Recoveries of prior year unpaid obligations, unexpired .....	-121		
3050 Unpaid obligations, end of year .....	1,463	1,745	1,822
<b>Memorandum (non-add) entries:</b>			
3100 Obligated balance, start of year .....	1,548	1,463	1,745
3200 Obligated balance, end of year .....	1,463	1,745	1,822
<b>Budget authority and outlays, net:</b>			
<b>Discretionary:</b>			
4000 Budget authority, gross .....	2,166	2,260	1,934
<b>Outlays, gross:</b>			
4010 Outlays from new discretionary authority .....	862	1,085	929
4011 Outlays from discretionary balances .....	1,199	1,014	1,258
4020 Outlays, gross (total) .....	2,061	2,099	2,187
<b>Offsets against gross budget authority and outlays:</b>			
<b>Offsetting collections (collected) from:</b>			
4034 Offsetting governmental collections .....	-13		
4040 Offsets against gross budget authority and outlays (total) ...	-13		
4180 Budget authority, net (total) .....	2,153	2,260	1,934
4190 Outlays, net (total) .....	2,048	2,099	2,187

Programs funded within the Defense Nuclear Nonproliferation (DNN) appropriation help keep America safe by preventing adversaries from ac-

DEFENSE NUCLEAR NONPROLIFERATION—Continued

quiring 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 (M<sup>3</sup>).**—M<sup>3</sup> 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 domestically and with partner countries to improve the security of vulnerable materials and facilities and to build partners' sustainable capacity to deter, detect, and investigate illicit trafficking of these materials through critical pathways. 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 programs strengthen the nonproliferation and arms control regimes through innovative policy development and implementation to prevent proliferation, ensure peaceful nuclear uses, and enable verifiable nuclear reductions. To advance this mission, NPAC builds the capacity of the IAEA and partner countries to implement international safeguards obligations; build domestic and international capacity to implement export control obligations; supports the negotiation and implementation of agreements and associated monitoring regimes to verifiably reduce nuclear weapons and nuclear programs; and develops approaches and strategies to address emerging nonproliferation and arms control challenges and opportunities.

**Defense Nuclear Nonproliferation Research and Development (DNN R&D).**—DNN R&D drives the innovation of unilateral and multi-lateral technical capabilities to detect nuclear detonations; foreign nuclear weapons programs' activities; and the presence, movement, or diversion of special nuclear materials. The program also sustains and develops foundational nonproliferation technical competencies that ensure the technical agility needed to support a broad spectrum of U.S. nonproliferation missions and anticipate threats. 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. The FY 2022 request transfers the National Nuclear Technical Forensics R&D program to a new subprogram within DNN R&D, to continue developing and maintaining advanced technical nuclear forensics analysis capabilities at the National Laboratories.

**Nonproliferation Construction.**—This program supports the construction of projects to support 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 design for the Surplus Plutonium Disposition (SPD) project, as well as long-lead procurements and early site preparations. With available prior year balances,

physical termination activities for the Mixed Oxide Fuel Fabrication project will be completed in FY 2021 and closeout activities will be completed in FY 2022.

**Nuclear Counterterrorism and Incident Response (NCTIR).**—The NCTIR Program 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 and overseas. To that end, NCTIR provides scientific understanding of nuclear threat devices and potential terrorist and proliferant state nuclear capabilities, informs U.S. policies, regulations, and interagency and international partners on terrorist and proliferant state nuclear threats and related planning, sustains Nuclear Emergency Support Team (NEST) readiness to respond to nuclear and radiological incidents and accidents at home and overseas, and provides targeted training to domestic and international partners on nuclear and radiological emergency preparedness and response. NCTIR also provides both the structure and processes to ensure a comprehensive and integrated approach to emergency management and continuity of operations, thereby safeguarding the health and safety of workers and the public, protecting the environment, and enhancing the resilience of the Department and the Nation.

Object Classification (in millions of dollars)

Identification code 089-0309-0-1-053	2020 actual	2021 est.	2022 est.
<b>Direct obligations:</b>			
25.1 Advisory and assistance services .....	168	185	175
25.2 Other services from non-Federal sources .....	67	74	70
25.3 Other goods and services from Federal sources .....	10	11	11
25.4 Operation and maintenance of facilities .....	1,649	1,899	1,809
25.7 Operation and maintenance of equipment .....	1	1	1
31.0 Equipment .....	52	58	54
32.0 Land and structures .....	120	134	127
41.0 Grants, subsidies, and contributions .....	17	19	17
99.0 Direct obligations .....	2,084	2,381	2,264
99.0 Reimbursable obligations .....	13		
99.9 Total new obligations, unexpired accounts .....	2,097	2,381	2,264

ENVIRONMENTAL AND OTHER DEFENSE ACTIVITIES

Federal Funds

DEFENSE ENVIRONMENTAL CLEANUP

(INCLUDING TRANSFER 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 1 passenger minivan for replacement only, **[\$6,426,000,000] \$6,841,670,000**, to remain available until expended, of which \$415,670,000 shall be transferred to the "Uranium Enrichment Decontamination and Decommissioning Fund". Provided, That of such amount, **[\$289,000,000] \$293,106,000** shall be available until September 30, **[2022] 2023**, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

Program and Financing (in millions of dollars)

Identification code 089-0251-0-1-053	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 Closure Sites .....	4	5	4
0002 Hanford Site .....	875	926	926
0003 River Protection - Tank Farm .....	867	784	825
0004 River Protection - Waste Treatment Plant .....	718	861	716
0006 Idaho .....	439	434	370
0007 NNSA Sites .....	347	328	436
0008 Oak Ridge .....	492	475	424
0009 Savannah River .....	1,467	1,532	1,582
0010 Waste Isolation Pilot Plant .....	399	413	430
0011 Program Support .....	24	13	63
0012 Safeguards & Security .....	320	321	317

0013	Technology Development & Demonstration .....	22	30	25
0014	Program Direction .....	279	289	293
0015	UED&D Fund Contribution .....			416
0020	SPRU .....		15	15
0900	Total new obligations, unexpired accounts .....	6,253	6,426	6,842
<b>Budgetary resources:</b>				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1 .....	429	451	463
1021	Recoveries of prior year unpaid obligations .....	21	12	12
1050	Unobligated balance (total) .....	450	463	475
Budget authority:				
Appropriations, discretionary:				
1100	Appropriation .....	6,255	6,426	6,842
1120	Appropriations transferred to other accts [089-0222] .....	-1		
1160	Appropriation, discretionary (total) .....	6,254	6,426	6,842
1930	Total budgetary resources available .....	6,704	6,889	7,317
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year .....	451	463	475
<b>Change in obligated balance:</b>				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1 .....	2,782	3,032	4,253
3010	New obligations, unexpired accounts .....	6,253	6,426	6,842
3020	Outlays (gross) .....	-5,981	-5,193	-8,220
3040	Recoveries of prior year unpaid obligations, unexpired .....	-21	-12	-12
3041	Recoveries of prior year unpaid obligations, expired .....	-1		
3050	Unpaid obligations, end of year .....	3,032	4,253	2,863
Memorandum (non-add) entries:				
3100	Obligated balance, start of year .....	2,782	3,032	4,253
3200	Obligated balance, end of year .....	3,032	4,253	2,863
<b>Budget authority and outlays, net:</b>				
Discretionary:				
4000	Budget authority, gross .....	6,254	6,426	6,842
Outlays, gross:				
4010	Outlays from new discretionary authority .....	3,527	4,498	4,914
4011	Outlays from discretionary balances .....	2,454	695	3,306
4020	Outlays, gross (total) .....	5,981	5,193	8,220
4180	Budget authority, net (total) .....	6,254	6,426	6,842
4190	Outlays, net (total) .....	5,981	5,193	8,220

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 by the Environmental Management program for Lawrence Livermore and Los Alamos National Laboratories.

**Oak Ridge.**—Funds defense-related cleanup of the three facilities that make up the Oak Ridge site: 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 operation of the Salt Waste Processing Facility, which separates various tank waste components and treats and disposes the low activity liquid waste stream.

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

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

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

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

**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	2020 actual	2021 est.	2022 est.	
<b>Direct obligations:</b>				
<b>Personnel compensation:</b>				
11.1	Full-time permanent .....	149	153	153
11.3	Other than full-time permanent .....	2	2	2
11.5	Other personnel compensation .....	4	4	4
11.9	Total personnel compensation .....	155	159	159
12.1	Civilian personnel benefits .....	55	57	57
21.0	Travel and transportation of persons .....	2	2	2
23.1	Rental payments to GSA .....	10	10	10
23.2	Rental payments to others .....	1	1	1
23.3	Communications, utilities, and miscellaneous charges .....	9	9	9

DEFENSE ENVIRONMENTAL CLEANUP—Continued  
Object Classification—Continued

Identification code 089-0251-0-1-053	2020 actual	2021 est.	2022 est.
25.1 Advisory and assistance services .....	818	841	841
25.2 Other services from non-Federal sources .....	461	474	474
25.3 Other goods and services from Federal sources .....	51	52	52
25.4 Operation and maintenance of facilities .....	3,552	3,650	4,066
25.5 Research and development contracts .....	5	5	5
25.6 Medical care .....	19	20	20
26.0 Supplies and materials .....	2	2	2
31.0 Equipment .....	79	81	81
32.0 Land and structures .....	963	990	990
41.0 Grants, subsidies, and contributions .....	71	73	73
99.9 Total new obligations, unexpired accounts .....	6,253	6,426	6,842

Employment Summary

Identification code 089-0251-0-1-053	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	1,182	1,275	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, **[\$920,000,000]** \$1,170,000,000, to remain available until expended: *Provided*, That of such amount, **[\$334,948,000]** \$319,559,000 shall be available until September 30, **[2022]** 2023, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

Program and Financing (in millions of dollars)

Identification code 089-0243-0-1-999	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0008 Environment, Health, Safety, and Security Mission Support .....	212	217	206
0009 Independent Enterprise Assessments .....	85	85	83
0015 Specialized security activities .....	278	284	284
0020 Legacy management .....	172	173	429
0030 Defense related administrative support .....	181	181	164
0060 Hearings and Appeals .....	4	5	4
0100 Subtotal, Direct program activities .....	932	945	1,170
0799 Total direct obligations .....	932	945	1,170
0810 Other Defense Activities (Reimbursable) .....	2,011	2,000	1,968
0819 Reimbursable program activities, subtotal .....	2,011	2,000	1,968
0900 Total new obligations, unexpired accounts .....	2,943	2,945	3,138

Budgetary resources:

<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1 .....	65	57	
1011 Unobligated balance transfer from other acct [047-0616] .....	2		
1021 Recoveries of prior year unpaid obligations .....	57		
1033 Recoveries of prior year paid obligations .....	2		
1050 Unobligated balance (total) .....	126	57	
<b>Budget authority:</b>			
<b>Appropriations, discretionary:</b>			
1100 Appropriation .....	906	920	1,170
<b>Spending authority from offsetting collections, discretionary:</b>			
1700 Collected .....	1,854	1,968	1,968
1701 Change in uncollected payments, Federal sources .....	114		
1750 Spending auth from offsetting collections, disc (total) .....	1,968	1,968	1,968
1900 Budget authority (total) .....	2,874	2,888	3,138
1930 Total budgetary resources available .....	3,000	2,945	3,138
<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year .....	57		

Change in obligated balance:

<b>Unpaid obligations:</b>			
3000 Unpaid obligations, brought forward, Oct 1 .....	1,941	2,051	2,090

3010 New obligations, unexpired accounts .....	2,943	2,945	3,138
3020 Outlays (gross) .....	-2,775	-2,906	-3,269
3040 Recoveries of prior year unpaid obligations, unexpired .....	-57		
3041 Recoveries of prior year unpaid obligations, expired .....	-1		
3050 Unpaid obligations, end of year .....	2,051	2,090	1,959
<b>Uncollected payments:</b>			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1 .....	-1,448	-1,562	-1,562
3070 Change in uncollected pymts, Fed sources, unexpired .....	-114		
3090 Uncollected pymts, Fed sources, end of year .....	-1,562	-1,562	-1,562
<b>Memorandum (non-add) entries:</b>			
3100 Obligated balance, start of year .....	493	489	528
3200 Obligated balance, end of year .....	489	528	397

Budget authority and outlays, net:

<b>Discretionary:</b>			
4000 Budget authority, gross .....	2,874	2,888	3,138
<b>Outlays, gross:</b>			
4010 Outlays from new discretionary authority .....	1,263	1,517	1,705
4011 Outlays from discretionary balances .....	1,512	1,389	1,564
4020 Outlays, gross (total) .....	2,775	2,906	3,269
<b>Offsets against gross budget authority and outlays:</b>			
<b>Offsetting collections (collected) from:</b>			
4030 Federal sources .....	-1,775	-1,887	-1,887
4033 Non-Federal sources .....	-81	-81	-81
4040 Offsets against gross budget authority and outlays (total) .....	-1,856	-1,968	-1,968
<b>Additional offsets against gross budget authority only:</b>			
4050 Change in uncollected pymts, Fed sources, unexpired .....	-114		
4053 Recoveries of prior year paid obligations, unexpired accounts .....	2		
4060 Additional offsets against budget authority only (total) .....	-112		
4070 Budget authority, net (discretionary) .....	906	920	1,170
4080 Outlays, net (discretionary) .....	919	938	1,301
4180 Budget authority, net (total) .....	906	920	1,170
4190 Outlays, net (total) .....	919	938	1,301

*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. 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. Funding will also support Long-Term Surveillance and Maintenance core activities related to Environmental Justice priorities that provide support to historically disadvantaged communities. In addition, Legacy Management funds the post-retirement benefits for former contractor employees. In 2022, the requested funding supports the administration of the Formerly Utilized Sites Remedial Action Program, which includes funding cleanup activities performed by the U.S. Army Corps of Engineers.

*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	2020 actual	2021 est.	2022 est.
<b>Direct obligations:</b>			
<b>Personnel compensation:</b>			
11.1 Full-time permanent .....	108	110	108
11.3 Other than full-time permanent .....	2	2	2
11.5 Other personnel compensation .....	4	4	4
11.9 Total personnel compensation .....	114	116	114
12.1 Civilian personnel benefits .....	39	40	39
13.0 Benefits for former personnel .....	3	3	3
21.0 Travel and transportation of persons .....	3	3	3
23.1 Rental payments to GSA .....	5	5	5
23.2 Rental payments to others .....	2	2	2
23.3 Communications, utilities, and miscellaneous charges .....	29	30	29
25.1 Advisory and assistance services .....	354	339	340
25.2 Other services from non-Federal sources .....	89	92	89
25.3 Other goods and services from Federal sources .....	45	55	278
25.4 Operation and maintenance of facilities .....	197	200	223
25.7 Operation and maintenance of equipment .....	5	5	5
26.0 Supplies and materials .....	1	1	1
31.0 Equipment .....	5	5	5
32.0 Land and structures .....	4	4	4
41.0 Grants, subsidies, and contributions .....	37	45	30
99.0 Direct obligations .....	932	945	1,170
99.0 Reimbursable obligations .....	2,011	2,000	1,968
99.9 Total new obligations, unexpired accounts .....	2,943	2,945	3,138

Employment Summary			
Identification code 089-0243-0-1-999	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	769	905	1,018

DEFENSE NUCLEAR WASTE DISPOSAL

Program and Financing (in millions of dollars)			
Identification code 089-0244-0-1-053	2020 actual	2021 est.	2022 est.
<b>Budgetary resources:</b>			
<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1 .....	2	2	2
1930 Total budgetary resources available .....	2	2	2
<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year .....	2	2	2
<b>Change in obligated balance:</b>			
<b>Unpaid obligations:</b>			
3000 Unpaid obligations, brought forward, Oct 1 .....	4	2	2
3020 Outlays (gross) .....	-2		
3050 Unpaid obligations, end of year .....	2	2	2
<b>Memorandum (non-add) entries:</b>			
3100 Obligated balance, start of year .....	4	2	2
3200 Obligated balance, end of year .....	2	2	2
<b>Budget authority and outlays, net:</b>			
<b>Discretionary:</b>			
<b>Outlays, gross:</b>			
4011 Outlays from discretionary balances .....	2		
4180 Budget authority, net (total) .....			
4190 Outlays, net (total) .....	2		

The Defense Nuclear Waste Disposal appropriation was established by the Congress as part of the 1993 Energy and Water Development Approp-

riation (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 35 passenger motor vehicles for replacement only, **[\$7,026,000,000] \$7,440,000,000**, to remain available until expended: **Provided**, That of such amount, **[\$192,000,000] \$202,000,000** shall be available until September 30, **[2022] 2023**, for program direction: **Provided further**, That of the amount provided under this heading in this Act, \$2,300,000,000 is designated by the Congress as being for an emergency requirement pursuant to section 251(b)(2)(A)(i) of the Balanced Budget and Emergency Deficit Control Act of 1985. *(Energy and Water Development and Related Agencies Appropriations Act, 2021.)*

Program and Financing (in millions of dollars)

Identification code 089-0222-0-1-251	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 Basic Energy Sciences .....	2,179	2,245	2,300
0002 Advanced Scientific Computing Research .....	988	1,015	1,040
0003 Biological and Environmental Research .....	767	753	828
0004 High Energy Physics .....	1,022	1,046	1,061
0005 Nuclear Physics .....	698	713	720
0006 Fusion Energy Sciences .....	643	672	675
0007 Science Laboratories Infrastructure .....	302	240	295
0008 Science Program Direction .....	186	192	202
0009 Workforce Development for Teachers and Scientists .....	28	29	35
0010 Safeguards and Security .....	113	121	170
0011 Small Business Innovation Research .....	279		
0012 Small Business Technology Transfer .....	37		
0013 Isotope R&D and Production .....			90
0014 Accelerator R&D and Production .....			24
0799 Total direct obligations .....	7,242	7,026	7,440
0801 Science (Reimbursable) .....	592	608	624
0900 Total new obligations, unexpired accounts .....	7,834	7,634	8,064

Budgetary resources:

<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1 .....	48	67	67
1011 Unobligated balance transfer from other acct [089-0321] .....	1		
1021 Recoveries of prior year unpaid obligations .....	58		
1050 Unobligated balance (total) .....	107	67	67
<b>Budget authority:</b>			
<b>Appropriations, discretionary:</b>			
1100 Appropriation .....	7,000	4,726	7,440
1100 Appropriation[CARES Act Supplemental P.L. 116-136] .....	100		
1100 Appropriation[P.L. 116-68 Emergency requirement] .....		2,300	
1121 Appropriations transferred from other acct [089-0319] .....	22		
1121 Appropriations transferred from other acct [089-0309] .....	11		
1121 Appropriations transferred from other acct [089-0213] .....	16		
1121 Appropriations transferred from other acct [089-0251] .....	1		
1121 Appropriations transferred from other acct [089-2250] .....	1		
1121 Appropriations transferred from other acct [089-0321] .....	77		
1121 Appropriations transferred from other acct [089-0318] .....	5		
1160 Appropriation, discretionary (total) .....	7,233	7,026	7,440
<b>Spending authority from offsetting collections, discretionary:</b>			
1700 Collected .....	513	608	614
1701 Change in uncollected payments, Federal sources .....	48		
1750 Spending auth from offsetting collections, disc (total) .....	561	608	614
1900 Budget authority (total) .....	7,794	7,634	8,054
1930 Total budgetary resources available .....	7,901	7,701	8,121
<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year .....	67	67	57

Change in obligated balance:

<b>Unpaid obligations:</b>			
3000 Unpaid obligations, brought forward, Oct 1 .....	7,120	8,327	8,131

SCIENCE—Continued  
Program and Financing—Continued

Identification code 089–0222–0–1–251		2020 actual	2021 est.	2022 est.
3010	New obligations, unexpired accounts .....	7,834	7,634	8,064
3020	Outlays (gross) .....	–6,569	–7,830	–8,334
3040	Recoveries of prior year unpaid obligations, unexpired .....	–58	.....	.....
3050	Unpaid obligations, end of year .....	8,327	8,131	7,861
Uncollected payments:				
3060	Uncollected pymts, Fed sources, brought forward, Oct 1 .....	–472	–520	–520
3070	Change in uncollected pymts, Fed sources, unexpired .....	–48	.....	.....
3090	Uncollected pymts, Fed sources, end of year .....	–520	–520	–520
Memorandum (non-add) entries:				
3100	Obligated balance, start of year .....	6,648	7,807	7,611
3200	Obligated balance, end of year .....	7,807	7,611	7,341
<b>Budget authority and outlays, net:</b>				
Discretionary:				
4000	Budget authority, gross .....	7,794	7,634	8,054
Outlays, gross:				
4010	Outlays from new discretionary authority .....	1,557	2,689	2,836
4011	Outlays from discretionary balances .....	5,012	5,141	5,498
4020	Outlays, gross (total) .....	6,569	7,830	8,334
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources .....	–345	–369	–377
4033	Non-Federal sources .....	–168	–239	–237
4040	Offsets against gross budget authority and outlays (total) ....	–513	–608	–614
Additional offsets against gross budget authority only:				
4050	Change in uncollected pymts, Fed sources, unexpired .....	–48	.....	.....
4060	Additional offsets against budget authority only (total) .....	–48	.....	.....
4070	Budget authority, net (discretionary) .....	7,233	7,026	7,440
4080	Outlays, net (discretionary) .....	6,056	7,222	7,720
4180	Budget authority, net (total) .....	7,233	7,026	7,440
4190	Outlays, net (total) .....	6,056	7,222	7,720

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

	2020 actual	2021 est.	2022 est.
Enacted/requested:			
Budget Authority .....	7,233	7,026	7,440
Outlays .....	6,056	7,222	7,720
Legislative proposal, subject to PAYGO:			
Budget Authority .....	.....	.....	150
Outlays .....	.....	.....	30
Total:			
Budget Authority .....	7,233	7,026	7,590
Outlays .....	6,056	7,222	7,750

The Office of Science (SC) is the nation's largest Federal supporter of basic research in the physical sciences. The SC portfolio has two principal thrusts: direct support of scientific research and direct support of the design, development, construction, and operation of unique, open-access scientific user facilities. A new SC-wide activity, Reaching a New Energy Sciences Workforce (RENEW), targets efforts to increase participation and retention of underrepresented groups in SC research activities. The request also supports ongoing investments in priority areas including new clean energy technologies, foundational climate science research, microelectronics, critical materials, stable isotopes, quantum information science (QIS), artificial intelligence (AI) and machine learning (ML), and exascale computing.

**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 SC programs to advance the use of its high performance

computers to drive scientific advances for the Nation in areas such as clean energy and earth systems modeling. 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.

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 the Nation's first exascale system in calendar year 2021. 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, AI, 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 to provide the foundations for new energy technologies and to support DOE missions in energy, environment, and national security. The research disciplines that BES supports—condensed matter and materials physics, chemistry, geosciences, and aspects of bio-sciences—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 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. On behalf of DOE, BES manages the DOE Established Program to Stimulate Competitive Research (EPSCoR), which supports early-stage energy research in U.S. states and territories that are historically under-represented in federally-supported research.

BES supports twelve 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 and chemical systems with ultrahigh spatial, temporal, and energy resolutions to investigate the critical functions of matter and tackle some of the most challenging science questions and urgent national priorities such as the COVID-19 pandemic response. 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 to understand complex biological, biogeochemical, and physical principles of natural systems at scales extending from the genome of microbes and plants to the environmental and ecological processes at the scale of the planet Earth. BER's support of basic research will contribute to a future of stable, reliable, and resilient energy sources and infrastructures, that will lead to climate change solutions, strengthen economic prosperity and address environmental justice. BER research in biological systems science uses approaches such as genome sequencing, secure biodesign, proteomics, metabolomics, structural biology, high-resolution imaging and characterization. Integration of this experimental biological information into computational models for iterative testing and validation advances a predictive understanding of biological systems for use in secure, clean, affordable, and reliable energy for adaptation to industry. New efforts in clean energy bio-based materials and foundational bioenergy research underpin new biotechnology and the bioeconomy.



BER research in Earth and environmental systems science is focused on scientific analysis and modeling of the sensitivity and uncertainty of Earth system predictions to atmospheric, cryospheric, oceanic, and biogeochemical processes, with continued support of the Energy Exascale Earth System Model. New Urban Integrated Field Laboratories combine modeling and observations of emerging energy technologies in urban regions, enabling the evaluation of the societal and environmental impacts of current and future energy policies. Planning begins for the National Climate Laboratory or Center affiliated with a Historically Black College or University. Operations and equipment refresh continue at the three BER scientific user facilities: the Joint Genome Institute, the Atmospheric Radiation Measurement Research Facility, and the Environmental Molecular Sciences Laboratory.

*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. High-temperature fusion plasmas at hundreds of millions of degrees are being exploited in the laboratory to become the basis for a future clean energy source. Once developed, fusion energy will provide a clean energy source that is well-suited for baseload electricity production, supplementing intermittent renewables and fission.

The FES program has four 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 (currently under repair), which are national SC user facilities. Fusion theory and simulation activities predict and interpret the complex behavior of magnetically-confined plasmas. The element also supports partnerships with the private sector through the Innovation Network for Fusion Energy (INFUSE) program; 2) Burning Plasma Science: Long Pulse—U.S. scientists take advantage of international partnerships to conduct research on overseas tokamaks and stellarators with unique capabilities. The element also supports research to develop the nuclear science and novel materials that can harness the power from a burning plasma and withstand the extreme fusion environment; 3) Burning Plasma Science: High Power—This element supports the U.S. Contributions to the ITER Project, the world's first burning plasma experiment, and the initiation of an ITER Research program; and 4) Discovery Plasma Science—This element supports research in Plasma Science & Technology, including plasma astrophysics, high-energy-density laboratory plasmas (HEDLP), and low-temperature plasmas. Besides ITER, FES 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 several areas. These include the Materials Plasma Exposure eXperiment (MPEX) for fusion materials science and the Matter in Extreme Conditions (MEC) Petawatt Upgrade at SLAC for HEDLP science.

*High Energy Physics.*—The High Energy Physics (HEP) program supports fundamental research to understand how the universe works by discovering the elementary constituents of matter and energy, probing the interactions among them, and exploring the basic nature of space and time. A worldwide 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: 1) The Energy Frontier, where researchers accelerate particles to the highest energies and collide them to produce and study the fundamental constituents of matter; 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. Advanced Technology R&D fosters fundamental and innovative research into particle acceleration and detection techniques and instrumentation, supporting the frontiers and enabling future discovery experiments. HEP supports two particle accelerator scientific user facilities. HEP also manages construction projects to build new or upgrade existing facilities, providing world-leading tools and instruments to the particle physics scientific community.

*Nuclear Physics.*—The mission of the Nuclear Physics (NP) program is to solve an enduring mystery of the universe—what are the basic constituents of matter and how do they interact to form the elements and the properties we observe? NP supports research to discover, explore, and understand all forms of nuclear matter—including exotic forms that existed in the first moments after the Big Bang. The goal is new knowledge that can benefit commerce, medicine, and national security. NP provides ~95% of the support for basic nuclear physics research in the United States. Experimental approaches use large accelerators at national scientific user facilities to collide particles at nearly the speed of light, producing short-lived forms of nuclear matter for investigation. NP currently operates three national user facilities: the Relativistic Heavy Ion Collider, the Continuous Electron Beam Accelerator Facility, and the Argonne Tandem Linac Accelerator Facility—three powerful "microscopes" with complementary "resolving powers", which also produce advanced accelerator technology. Other research seeks to understand the theory of the strong nuclear force via Quantum Chromodynamics (QCD). An exciting vision to which NP researchers are making seminal contributions is quantum computing - future computers capable of solving QCD problems intractable with today's capabilities. To maintain U.S. leadership, the Facility for Rare Isotope Beams (FRIB) is initiating full operations and the Electron-Ion Collider (EIC) construction is underway. Beginning in FY 2022, FRIB will uniquely afford access to 80% of all isotopes predicted to possibly exist in nature, including over 1000 never produced on earth. When completed in the next decade, the EIC will provide unprecedented capability to discover how the mass of everyday objects is dynamically generated by the interaction of quarks and gluons. A targeted program of fundamental symmetries experiments is ongoing, including transformative research to determine whether the elusive neutrino particle is its own anti-particle. The National Nuclear Data Center is supported to collect, evaluate, curate, and disseminate nuclear physics data for basic nuclear physics research and applied nuclear technologies.

*Isotope R&D and Production.*—The DOE Isotope R&D and Production program (DOE IP) produces critical radioactive and stable isotopes in short supply in the Nation that no domestic entity has the infrastructure or core competency to produce. These isotopes are high-priority commodities of strategic importance for the Nation and are essential in medical diagnosis and treatment, discovery science, national security and preparedness, industrial processes and manufacturing, space exploration and communications, biology, archeology, quantum science, clean energy, environmental science, and other fields. The DOE IP supports high-priority research on innovative and transformative approaches to isotopes production and processing, such as advanced manufacturing, artificial intelligence and machine learning, and robotics. The DOE IP promotes the development of robust, domestic supply chains of strategic isotopes and ensures national preparedness of critical infrastructure to mitigate risks in supply. The program provides mission readiness for the production and processing of radioactive and stable isotopes that are vital to the missions of many Federal agencies including the National Institutes of Health, the National Institute of Standards

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and Technology, the Department of Agriculture, Department of Defense, Department of Homeland Security, NNSA, and DOE SC programs. DOE IP 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. Construction continues for the Stable Isotope Production and Research Center to expand the stable isotope production capability to meet the National demand and mitigate dependency on stable isotope supply chains from foreign countries. Investments in QIS and Climate/Clean Energy support technology development for isotopes of interest. The DOE Isotope Traineeship advances workforce development in the field of isotope production and processing.

**Accelerator R&D and Production.**—Accelerator R&D and Production (ARDAP) supports cross-cutting basic R&D in accelerator science and technology, access to unique SC accelerator R&D infrastructure, workforce development, and public-private partnerships to advance new technologies for use in SC's scientific facilities and in commercial products. ARDAP supports fundamental research, user facility operations, and production of accelerator technologies in industry, with the aim of ensuring the Office of Science and broader research community have the best scientific instruments available. Reducing supply chain risks by re-shoring critical accelerator technologies is a key part of ARDAP's mission. The Accelerator Stewardship program supports early-stage translational research to move advanced accelerator technology out of scientific laboratories and into broader applications in industry, environmental cleanup, medicine, and national security.

**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 workers. This is accomplished through support of undergraduate internships, faculty fellowships, 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.

**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 2022 Budget includes funding for two new construction starts and sixteen 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.

**Program Direction.**—Science Program Direction supports a highly skilled Federal workforce to develop and oversee SC investments in research and scientific user facilities. 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. Oversight of DOE's basic research portfolio, which includes extramural grants and contracts supporting nearly 28,000 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 36,000 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	2020 actual	2021 est.	2022 est.
<b>Direct obligations:</b>			
<b>Personnel compensation:</b>			
11.1 Full-time permanent .....	101	102	108
11.3 Other than full-time permanent .....	2	2	2
11.5 Other personnel compensation .....	4	4	4
11.8 Special personal services payments .....	1	1	1
11.9 Total personnel compensation .....	108	109	115
12.1 Civilian personnel benefits .....	35	34	36
21.0 Travel and transportation of persons .....	1	1	1
23.1 Rental payments to GSA .....	1	1	1
23.2 Rental payments to others .....	2	2	2
23.3 Communications, utilities, and miscellaneous charges .....	3	3	3
25.1 Advisory and assistance services .....	23	22	23
25.2 Other services from non-Federal sources .....	30	29	31
25.3 Other goods and services from Federal sources .....	15	15	16
25.4 Operation and maintenance of facilities .....	4,045	3,919	4,150
25.5 Research and development contracts .....	11	11	12
25.7 Operation and maintenance of equipment .....	1	1	1
26.0 Supplies and materials .....	1	1	2
31.0 Equipment .....	282	274	290
32.0 Land and structures .....	1,386	1,345	1,424
41.0 Grants, subsidies, and contributions .....	1,298	1,259	1,333
99.0 Direct obligations .....	7,242	7,026	7,440
99.0 Reimbursable obligations .....	592	608	624
99.9 Total new obligations, unexpired accounts .....	7,834	7,634	8,064

**Employment Summary**

Identification code 089-0222-0-1-251	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	767	778	810

SCIENCE

(Legislative proposal, subject to PAYGO)

**Program and Financing** (in millions of dollars)

Identification code 089-0222-4-1-251	2020 actual	2021 est.	2022 est.
<b>Budgetary resources:</b>			
<b>Budget authority:</b>			
<b>Appropriations, mandatory:</b>			
1200 Appropriation .....			150
1930 Total budgetary resources available .....			150
<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year .....			150
<b>Change in obligated balance:</b>			
<b>Unpaid obligations:</b>			
3020 Outlays (gross) .....			-30
3050 Unpaid obligations, end of year .....			-30
<b>Memorandum (non-add) entries:</b>			
3200 Obligated balance, end of year .....			-30
<b>Budget authority and outlays, net:</b>			
<b>Mandatory:</b>			
4090 Budget authority, gross .....			150
<b>Outlays, gross:</b>			
4100 Outlays from new mandatory authority .....			30
4180 Budget authority, net (total) .....			150
4190 Outlays, net (total) .....			30

Prepare Americans for Future Pandemics includes \$30 billion over four years to create U.S. jobs and prevent the severe job losses caused by pandemics through major new investments in medical countermeasures manufacturing; research and development; and related biopreparedness and

biosecurity. The U.S. will build on the momentum from the American Rescue Plan, bolster scientific leadership, create jobs, markedly decrease the time from discovering a new threat to putting shots in arms, and prevent future biological catastrophes. Funds will be administered by HHS in collaboration with other agencies. Thus, the proposal includes authority to transfer resources from HHS to other agencies.

**ADVANCED RESEARCH PROJECTS AGENCY—ENERGY**

For Department of Energy expenses necessary in carrying out the activities authorized by section 5012 of the America COMPETES Act (Public Law 110–69), **[\$427,000,000] \$500,000,000**, to remain available until expended: *Provided*, That of such amount, **[\$35,000,000] \$37,000,000** shall be available until September 30, **[2022] 2023**, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

**Program and Financing** (in millions of dollars)

Identification code 089–0337–0–1–270	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 ARPA-E Projects .....	420	392	463
0002 Program Direction .....	34	35	37
0799 Total direct obligations .....	454	427	500
0900 Total new obligations, unexpired accounts .....	454	427	500
<b>Budgetary resources:</b>			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	411	397	398
1021 Recoveries of prior year unpaid obligations .....	15		
1050 Unobligated balance (total) .....	426	397	398
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....	425	427	500
Spending authority from offsetting collections, discretionary:			
1701 Change in uncollected payments, Federal sources .....		1	1
1900 Budget authority (total) .....	425	428	501
1930 Total budgetary resources available .....	851	825	899
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	397	398	399
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	567	736	796
3010 New obligations, unexpired accounts .....	454	427	500
3020 Outlays (gross) .....	-270	-367	-409
3040 Recoveries of prior year unpaid obligations, unexpired .....	-15		
3050 Unpaid obligations, end of year .....	736	796	887
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1 .....			-1
3070 Change in uncollected pymts, Fed sources, unexpired .....		-1	-1
3090 Uncollected pymts, Fed sources, end of year .....		-1	-2
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	567	736	795
3200 Obligated balance, end of year .....	736	795	885
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000 Budget authority, gross .....	425	428	501
Outlays, gross:			
4010 Outlays from new discretionary authority .....	23	44	51
4011 Outlays from discretionary balances .....	247	323	358
4020 Outlays, gross (total) .....	270	367	409
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources .....		-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) .....	425	427	500
4080 Outlays, net (discretionary) .....	270	366	408
4180 Budget authority, net (total) .....	425	427	500
4190 Outlays, net (total) .....	270	366	408

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 mission of ARPA-E is to enhance the economic and energy security of the United States through the development of energy technologies that reduce imports of energy from foreign sources; reduce energy-related emissions, including greenhouse gases; improve the energy efficiency of all economic sectors; provide transformative solutions to improve the management, clean-up, and disposal of radioactive waste and spent nuclear fuel; and improve the resilience, reliability, and security of infrastructure to produce, deliver, and store energy. ARPA-E will ensure that the United States maintains a technological lead in developing and deploying advanced energy technologies. ARPA-E will identify and promote revolutionary advances in energy-related applied sciences, translating scientific discoveries and cutting-edge inventions into technological innovations. It will also accelerate transformational technological advances in areas where industry by itself is not likely to invest due to technical and financial uncertainty. The role of ARPA-E is not to duplicate DOE's basic research and applied programs but to focus on novel early-stage energy research and development with technology applications that can be meaningfully advanced with a small investment over a defined period of time.

**Object Classification** (in millions of dollars)

Identification code 089–0337–0–1–270	2020 actual	2021 est.	2022 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent .....	2	2	2
11.3 Other than full-time permanent .....	6	10	11
11.9 Total personnel compensation .....	8	12	13
12.1 Civilian personnel benefits .....	2	2	2
21.0 Travel and transportation of persons .....	1	1	2
25.1 Advisory and assistance services .....	17	16	19
25.2 Other services from non-Federal sources .....	16	15	18
25.3 Other goods and services from Federal sources .....	4	4	5
25.4 Operation and maintenance of facilities .....	60	56	66
25.5 Research and development contracts .....	346	321	375
99.0 Direct obligations .....	454	427	500
99.9 Total new obligations, unexpired accounts .....	454	427	500

**Employment Summary**

Identification code 089–0337–0–1–270	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	48	64	64

**ADVANCED RESEARCH PROJECTS AGENCY—CLIMATE**

For Department of Energy expenses necessary in carrying out Advanced Research Projects Agency—Climate activities, under the authority of the Department of Energy Organization Act (42 U.S.C. 7101 et seq.), **\$200,000,000**, to remain available until expended: *Provided*, That of such amount, **\$20,000,000** shall be available until September 30, 2023, for program direction.

**Program and Financing** (in millions of dollars)

Identification code 089–2299–0–1–251	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0010 ARPA-C Projects .....			60
0020 Program direction .....			18
0900 Total new obligations, unexpired accounts .....			78
<b>Budgetary resources:</b>			
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....			200
1930 Total budgetary resources available .....			200
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....			122
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3010 New obligations, unexpired accounts .....			78

ADVANCED RESEARCH PROJECTS AGENCY—CLIMATE—Continued  
**Program and Financing—Continued**

Identification code 089-2299-0-1-251	2020 actual	2021 est.	2022 est.
3020 Outlays (gross) .....			-33
3050 Unpaid obligations, end of year .....			45
Memorandum (non-add) entries:			
3200 Obligated balance, end of year .....			45
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000 Budget authority, gross .....			200
Outlays, gross:			
4010 Outlays from new discretionary authority .....			33
4180 Budget authority, net (total) .....			200
4190 Outlays, net (total) .....			33

The U.S. Department of Energy's Advanced Research Projects Agency-Climate (ARPA-C) will invest in climate-related innovations necessary to achieve net zero climate-inducing emissions by 2050 and address adaptation and resilience due to a changing climate. ARPA-C's mission will be to harness innovation to solve the global climate crisis while enhancing the economic and energy security of the United States through development of new technologies that will lead to economic opportunities for American workers and businesses. ARPA-C will identify and promote revolutionary advances in climate-related applied sciences, translating scientific discoveries and cutting-edge innovations into products, services, and systems that the market, government agencies or private organizations can adopt. It will also accelerate transformational technological advances in areas where industry by itself is not likely to invest due to technical and financial uncertainty. The role of ARPA-C is not to duplicate the basic research and applied programs within DOE and the other Federal research and development enterprises, but to focus on research and development with technology applications that can be meaningfully advanced with a targeted investment over a defined period of time.

**Object Classification** (in millions of dollars)

Identification code 089-2299-0-1-251	2020 actual	2021 est.	2022 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent .....			1
11.3 Other than full-time permanent .....			5
11.9 Total personnel compensation .....			6
12.1 Civilian personnel benefits .....			1
25.1 Advisory and assistance services .....			7
25.2 Other services from non-Federal sources .....			1
25.3 Other goods and services from Federal sources .....			3
25.4 Operation and maintenance of facilities .....			10
25.5 Research and development contracts .....			50
99.9 Total new obligations, unexpired accounts .....			78

**Employment Summary**

Identification code 089-2299-0-1-251	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....			37

ENERGY SUPPLY AND CONSERVATION

**Program and Financing** (in millions of dollars)

Identification code 089-0224-0-1-999	2020 actual	2021 est.	2022 est.
<b>Budgetary resources:</b>			
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
4180 Budget authority, net (total) .....			

4190 Outlays, net (total) .....			
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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, **[\$1,507,600,000] \$1,850,500,000**, to remain available until expended: *Provided*, That of such amount, **[\$75,131,000] \$85,000,000** shall be available until September 30, **[2022] 2023**, for program direction. *(Energy and Water Development and Related Agencies Appropriations Act, 2021.)*

**Program and Financing** (in millions of dollars)

Identification code 089-0319-0-1-999	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0010 Naval Reactors Development .....	89		
0032 Reactor Concepts RD&D .....	264	208	240
0034 Advanced Reactors Demonstration Program .....	39	250	370
0041 Fuel Cycle R&D .....	282	309	369
0042 Integrated University Program .....	5	5	6
0043 Nuclear Energy Enabling Technologies R&D .....	125	123	124
0091 Research and Development programs, subtotal .....	804	895	1,109
0301 ORNL Infrastructure Facilities O&M .....	20	20	
0350 Research Reactor Infrastructure .....	9	12	15
0391 Direct program activities, subtotal .....	29	32	15
0401 Idaho Facilities Management .....	306	280	300
0402 Versatile Test Reactor Project .....		45	145
0403 Sample Preparation Laboratory Project .....		26	42
0450 Idaho National Laboratory safeguards and security .....	153	150	150
0451 International Nuclear Safety .....	4		
0491 Infrastructure programs, subtotal .....	463	501	637
0501 Small Modular Reactor Licensing Technical Support Program .....	1		
0502 Supercritical Transformational Electric Power Generation .....	5	5	
0551 Program Direction .....	77	75	85
0552 International Nuclear Energy Cooperation .....	1		5
0591 Other direct program activities, subtotal .....	84	80	90
0799 Total direct obligations .....	1,380	1,508	1,851
0801 Nuclear Energy (Reimbursable) .....	178	275	275
0900 Total new obligations, unexpired accounts .....	1,558	1,783	2,126

**Budgetary resources:**

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	115	309	400
1011 Unobligated balance transfer from other acct [072-0306] ...	5		
1021 Recoveries of prior year unpaid obligations .....	10		
1050 Unobligated balance (total) .....	130	309	400
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....	1,494	1,508	1,851
1120 Appropriations transferred to other accts [089-0222] .....	-22		
1121 Appropriations transferred from other acct [089-0314] ...	89	91	
1160 Appropriation, discretionary (total) .....	1,561	1,599	1,851
Spending authority from offsetting collections, discretionary:			
1700 Collected .....	160	275	275
1701 Change in uncollected payments, Federal sources .....	17		
1750 Spending auth from offsetting collections, disc (total) .....	177	275	275
1900 Budget authority (total) .....	1,738	1,874	2,126
1930 Total budgetary resources available .....	1,868	2,183	2,526
Memorandum (non-add) entries:			
1940 Unobligated balance expiring .....	-1		
1941 Unexpired unobligated balance, end of year .....	309	400	400

**Change in obligated balance:**

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	1,189	1,192	1,687
3010 New obligations, unexpired accounts .....	1,558	1,783	2,126
3020 Outlays (gross) .....	-1,545	-1,288	-1,796
3040 Recoveries of prior year unpaid obligations, unexpired .....	-10		
3050 Unpaid obligations, end of year .....	1,192	1,687	2,017

Uncollected payments:				
3060	Uncollected pymts, Fed sources, brought forward, Oct 1 .....	-110	-127	-127
3070	Change in uncollected pymts, Fed sources, unexpired .....	-17	.....	.....
3090	Uncollected pymts, Fed sources, end of year .....	-127	-127	-127
Memorandum (non-add) entries:				
3100	Obligated balance, start of year .....	1,079	1,065	1,560
3200	Obligated balance, end of year .....	1,065	1,560	1,890
<b>Budget authority and outlays, net:</b>				
Discretionary:				
4000	Budget authority, gross .....	1,738	1,874	2,126
Outlays, gross:				
4010	Outlays from new discretionary authority .....	617	727	727
4011	Outlays from discretionary balances .....	928	561	1,069
4020	Outlays, gross (total) .....	1,545	1,288	1,796
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources .....	-148	-275	-275
4033	Non-Federal sources .....	-12	.....	.....
4040	Offsets against gross budget authority and outlays (total) ....	-160	-275	-275
Additional offsets against gross budget authority only:				
4050	Change in uncollected pymts, Fed sources, unexpired .....	-17	.....	.....
4070	Budget authority, net (discretionary) .....	1,561	1,599	1,851
4080	Outlays, net (discretionary) .....	1,385	1,013	1,521
4180	Budget authority, net (total) .....	1,561	1,599	1,851
4190	Outlays, net (total) .....	1,385	1,013	1,521

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 2022 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.

*Integrated University Program.*—This program provides scholarships and fellowships for undergraduate and graduate nuclear engineering students.

*Reactor Concepts Research, Development and Demonstration.*—This program conducts R&D on advanced reactor designs and 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 risk of proliferation.

*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).

*Advanced Reactors Demonstration Program.*—This program focuses federal and non-federal resources on the demonstration of advanced reactors 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.

*Infrastructure.*—This program manages Department of Energy mission critical facilities at the Idaho National Laboratory (INL), creating a safe and compliant status to support the Department's nuclear energy research and development activities, testing of naval reactor fuels and reactor core components, and other federal agency and DOE programs. The Infrastructure program also funds services for U.S. university research reactors.

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

*International Nuclear Energy Cooperation.*—This program leads the Department's international engagement for civil nuclear energy, including analysis, development, and coordination activities.

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

**Object Classification** (in millions of dollars)

Identification code 089-0319-0-1-999	2020 actual	2021 est.	2022 est.	
Direct obligations:				
Personnel compensation:				
11.1	Full-time permanent .....	36	36	45
11.3	Other than full-time permanent .....	1	1	1
11.5	Other personnel compensation .....	1	1	1
11.9	Total personnel compensation .....	38	38	47
12.1	Civilian personnel benefits .....	13	13	14
21.0	Travel and transportation of persons .....	1	1	1
23.3	Communications, utilities, and miscellaneous charges .....	1	1	1
25.1	Other Contractual Services .....	11	15	15
25.2	Other services from non-Federal sources .....	246	250	350
25.3	Other goods and services from Federal sources .....	10	21	22
25.4	Operation and maintenance of facilities .....	934	1,024	1,229
31.0	Equipment .....	9	15	15
32.0	Land and structures .....	60	70	75
41.0	Grants, subsidies, and contributions .....	57	60	82
99.0	Direct obligations .....	1,380	1,508	1,851
99.0	Reimbursable obligations .....	178	275	275
99.9	Total new obligations, unexpired accounts .....	1,558	1,783	2,126

**Employment Summary**

Identification code 089-0319-0-1-999	2020 actual	2021 est.	2022 est.	
1001	Direct civilian full-time equivalent employment .....	275	272	298
2001	Reimbursable civilian full-time equivalent employment .....	1	.....	.....

**ELECTRICITY**

For Department of Energy expenses including the purchase, construction, and acquisition of plant and capital equipment, and other expenses necessary for electricity 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, **[\$211,720,000] \$327,000,000**, to remain available until expended: *Provided*, That of such amount, **[\$18,000,000] \$20,000,000** shall be available until September 30, **[2022] 2023**, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

**Program and Financing** (in millions of dollars)

Identification code 089-0318-0-1-271	2020 actual	2021 est.	2022 est.	
<b>Obligations by program activity:</b>				
0011	Transmission reliability and resiliency .....	56	48	37
0012	Resilient distribution systems .....	51	50	50
0014	Energy Storage .....	55	80	119
0015	Transformer Resilience and Advanced Components .....	7	8	22
0016	DCEI Energy Mission Assurance .....	.....	1	.....
0017	Cyber R&D .....	.....	.....	25
0018	Grid Operations Technology & Transmission .....	.....	.....	44
0030	Transmission permitting and technical assistance .....	7	7	10
0040	Program Direction .....	17	18	20
0799	Total direct obligations .....	193	212	327
0801	Reimbursable work .....	1	1	.....
0809	Reimbursable program activities, subtotal .....	1	1	.....
0900	Total new obligations, unexpired accounts .....	194	213	327
<b>Budgetary resources:</b>				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1 .....	33	12	17
1010	Unobligated balance transfer to other accts [089-2250] .....	-2	.....	.....
1021	Recoveries of prior year unpaid obligations .....	2	.....	.....
1050	Unobligated balance (total) .....	33	12	17
Budget authority:				
Appropriations, discretionary:				
1100	Appropriation .....	190	212	327

ELECTRICITY—Continued  
Program and Financing—Continued

Identification code 089-0318-0-1-271	2020 actual	2021 est.	2022 est.
1120 Appropriations transferred to other accts [089-0222] .....	-5		
1160 Appropriation, discretionary (total) .....	185	212	327
Spending authority from offsetting collections, discretionary:			
1700 Collected .....		3	
1701 Change in uncollected payments, Federal sources .....	-12	3	
1750 Spending auth from offsetting collections, disc (total) .....	-12	6	
1900 Budget authority (total) .....	173	218	327
1930 Total budgetary resources available .....	206	230	344
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	12	17	17
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	299	286	261
3010 New obligations, unexpired accounts .....	194	213	327
3020 Outlays (gross) .....	-205	-238	-301
3040 Recoveries of prior year unpaid obligations, unexpired .....	-2		
3050 Unpaid obligations, end of year .....	286	261	287
Uncollected payments:			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1 .....	-14	-2	-5
3070 Change in uncollected pymts, Fed sources, unexpired .....	12	-3	
3090 Uncollected pymts, Fed sources, end of year .....	-2	-5	-5
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	285	284	256
3200 Obligated balance, end of year .....	284	256	282
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000 Budget authority, gross .....	173	218	327
Outlays, gross:			
4010 Outlays from new discretionary authority .....	26	91	131
4011 Outlays from discretionary balances .....	179	147	170
4020 Outlays, gross (total) .....	205	238	301
Offsets against gross budget authority and outlays:			
4030 Offsetting collections (collected) from:			
Federal sources .....		-3	
4040 Offsets against gross budget authority and outlays (total) .....		-3	
Additional offsets against gross budget authority only:			
4050 Change in uncollected pymts, Fed sources, unexpired .....	12	-3	
4070 Budget authority, net (discretionary) .....	185	212	327
4080 Outlays, net (discretionary) .....	205	235	301
4180 Budget authority, net (total) .....	185	212	327
4190 Outlays, net (total) .....	205	235	301

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

	2020 actual	2021 est.	2022 est.
Enacted/requested:			
Budget Authority .....	185	212	327
Outlays .....	205	235	301
Legislative proposal, subject to PAYGO:			
Budget Authority .....			1,400
Outlays .....			280
Total:			
Budget Authority .....	185	212	1,727
Outlays .....	205	235	581

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

**Transmission Reliability and Resilience (TRR).**—The TRR program helps ensure the reliability and resilience of the U.S. electric grid through research and development (R&D) focused on measurement and control of the electricity system, assessing evolving systems needs, identifying pathways to achieve an equitable transition to decarbonization and electrification, and risk assessment to address challenges across integrated energy systems. Development funding for the North American Energy Resilience Model (NAERM) is completed in FY 2021.

**Resilient Distribution Systems (RDS).**—The RDS program develops transformative technologies, tools, and techniques to modernize the distribution portion of the electric delivery system. RDS pursues strategic investments to improve reliability and resilience, support vehicle electrification, integrate clean distributed energy resources (DER), and provide consumers with mor choices for managing their energy consumption.

**Energy Storage.**—The Energy Storage program, which is included in the Department's Grand Challenge, helps ensure the stability, reliability, and resilience of electricity infrastructure by supporting technology development of novel materials and system components, building a safety and reliability knowledge base for energy storage systems and components, and developing tools to address issues such as energy storage planning, sizing, placement, valuation, and societal and environmental impacts.

**Cybersecurity R&D.**—Cyber R&D addresses energy sector cybersecurity associated with electricity delivery systems. Cyber R&D will focus on data and physics to redesign grid architecture that exposes the electricity system to cyber threats and will pursue coordinated engagement with DOE's other cyber-related activities. This is a new activity for OE in FY 2022.

**Transformer Resilience and Advanced Components (TRAC).**—The TRAC program develops innovations for grid hardware that carries, controls, and converts electricity, helping to achieve decarbonization goals, ensure reliability and resilience of electric infrastructure, and adapt the electricity delivery system to the evolution of the electric power grid. Program activities will ultimately address the need for real and reactive power flow control, facilitate the integration of grid-scale energy storage, develop new system components, and increase system efficiency, stability and resilience.

**Energy Delivery Grid Operations Technology (EDGOT).**—EDGOT will support a public-private partnership to develop national-scale energy planning and real-time situational awareness capabilities by focusing on developing large, networked communication and data infrastructure across multiple utility boundaries. The core of the GOT portfolio is NAERM, which will help us transition the current reactive state-of-practice to a new energy planning, investment, and operation paradigm in which we proactively develop infrastructure investment strategies. This is a new program in FY 2022.

**Defense Critical Energy Infrastructure (DCEI) Energy Mission Assurance.**—The DCEI Energy Mission Assurance program was established in FY 2021 to identify, evaluate, prioritize, and assist in developing executable strategies to ensure that critical national defense and security missions have reliable access to power. In FY 2022, DOE is proposing to integrate the functions of the DCEI Energy Mission Assurance program into the Office of Cybersecurity, Energy Security, and Emergency Response's suite of activities, partnering with, supporting, and sharing information with the electric utility industry to address cybersecurity.

**Transmission Permitting & Technical Assistance (TPTA).**—The TPTA program works with electricity system partners and stakeholders to modernize the grid and ensure adequate transmission capacity across the United States. TPTA's outreach and support activities help Federal, State, and industry partners address the climate crisis by decarbonizing the electricity sector, supporting transmission planning, and maximizing cost-effective demand-side resources and solutions to achieve 100% carbon-free electricity by 2035.

**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	2020 actual	2021 est.	2022 est.
Direct obligations:			
Personnel compensation:			
11.1 Full-time permanent .....	7	8	8
11.3 Other than full-time permanent .....	1	1	1
11.9 Total personnel compensation .....	8	9	9
12.1 Civilian personnel benefits .....	3	3	3

25.1	Advisory and assistance services .....	9	9	11
25.2	Other services from non-Federal sources .....	1	1	2
25.3	Other goods and services from Federal sources .....	5	4	5
25.4	Operation and maintenance of facilities .....	136	141	213
25.5	Research and development contracts .....	10	5	35
32.0	Land and structures .....	21	40	49
99.0	Direct obligations .....	193	212	327
99.0	Reimbursable obligations .....	1	1	.....
99.9	Total new obligations, unexpired accounts .....	194	213	327

**Employment Summary**

Identification code 089-0318-0-1-271	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	66	62	75

**ELECTRICITY**

(Legislative proposal, subject to PAYGO)

**Program and Financing** (in millions of dollars)

Identification code 089-0318-4-1-271	2020 actual	2021 est.	2022 est.
<b>Budgetary resources:</b>			
Budget authority:			
Appropriations, mandatory:			
1200	Appropriation .....	.....	1,400
1930	Total budgetary resources available .....	.....	1,400
Memorandum (non-add) entries:			
1941	Unexpired unobligated balance, end of year .....	.....	1,400
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3020	Outlays (gross) .....	.....	-280
3050	Unpaid obligations, end of year .....	.....	-280
Memorandum (non-add) entries:			
3200	Obligated balance, end of year .....	.....	-280
<b>Budget authority and outlays, net:</b>			
Mandatory:			
4090	Budget authority, gross .....	.....	1,400
Outlays, gross:			
4100	Outlays from new mandatory authority .....	.....	280
4180	Budget authority, net (total) .....	.....	1,400
4190	Outlays, net (total) .....	.....	280

The President's American Jobs Plan includes funding to enhance electric grid resilience and to employ electrical workers upgrading the grid.

**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]** \$201,000,000, to remain available until expended: *Provided*, That of such amount, **[\$12,000,000]** \$16,000,000 shall be available until September 30, **[2022]** 2023, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

**Program and Financing** (in millions of dollars)

Identification code 089-2250-0-1-271	2020 actual	2021 est.	2022 est.	
<b>Obligations by program activity:</b>				
0010	Risk Management Technology and Tools (CEDs) .....	94	94	135
0020	Infrastructure security and energy restoration .....	49	48	.....
0021	Response and Restoration .....	.....	.....	25
0022	Information Sharing, Partnerships and Exercises .....	.....	.....	25
0030	Program direction .....	14	14	16
0799	Total direct obligations .....	157	156	201
0801	Reimbursable work .....	1	1	.....
0900	Total new obligations, unexpired accounts .....	158	157	201

**Budgetary resources:**

Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1 .....	16	22	21
1011	Unobligated balance transfer from other acct [089-0318] ....	2	.....	.....
1021	Recoveries of prior year unpaid obligations .....	4	.....	.....
1050	Unobligated balance (total) .....	22	22	21
Budget authority:				
Appropriations, discretionary:				
1100	Appropriation .....	156	156	201
1120	Appropriations transferred to other acct [089-0222] .....	-1	.....	.....
1160	Appropriation, discretionary (total) .....	155	156	201
Spending authority from offsetting collections, discretionary:				
1700	Collected .....	2	.....	3
1701	Change in uncollected payments, Federal sources .....	1	.....	.....
1750	Spending auth from offsetting collections, disc (total) .....	3	.....	3
1900	Budget authority (total) .....	158	156	204
1930	Total budgetary resources available .....	180	178	225
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year .....	22	21	24

**Change in obligated balance:**

Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1 .....	92	181	205
3010	New obligations, unexpired accounts .....	158	157	201
3020	Outlays (gross) .....	-65	-133	-185
3040	Recoveries of prior year unpaid obligations, unexpired .....	-4	.....	.....
3050	Unpaid obligations, end of year .....	181	205	221
Uncollected payments:				
3060	Uncollected pymts, Fed sources, brought forward, Oct 1 .....	-1	-2	-2
3070	Change in uncollected pymts, Fed sources, unexpired .....	-1	.....	.....
3090	Uncollected pymts, Fed sources, end of year .....	-2	-2	-2
Memorandum (non-add) entries:				
3100	Obligated balance, start of year .....	91	179	203
3200	Obligated balance, end of year .....	179	203	219

**Budget authority and outlays, net:**

Discretionary:				
4000	Budget authority, gross .....	158	156	204
Outlays, gross:				
4010	Outlays from new discretionary authority .....	19	62	83
4011	Outlays from discretionary balances .....	46	71	102
4020	Outlays, gross (total) .....	65	133	185
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources .....	-1	.....	-3
4033	Non-Federal sources .....	-1	.....	.....
4040	Offsets against gross budget authority and outlays (total) ....	-2	.....	-3
Additional offsets against gross budget authority only:				
4050	Change in uncollected pymts, Fed sources, unexpired .....	-1	.....	.....
4070	Budget authority, net (discretionary) .....	155	156	201
4080	Outlays, net (discretionary) .....	63	133	182
4180	Budget authority, net (total) .....	155	156	201
4190	Outlays, net (total) .....	63	133	182

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:

**Risk Management Tools (RMT).**—The RMT 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, RMT focuses on enhancing the speed and effectiveness of threat and vulnerability sharing and accelerating technology and tools 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.

**Response and Restoration (R&R).**—The R&R 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. R&R delivers a range of capabilities including energy sector

CYBERSECURITY, ENERGY SECURITY, AND EMERGENCY RESPONSE—Continued  
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.

*Information Sharing, Partnerships and Exercises (ISPE).*—The ISPE program supports energy sector security and resilience in coordination with government and industry partners. By seeding public-private partnerships this program will advance the Department's efforts to support State, Local, Tribal, territory and industry in preparing for, mitigating, and recovering from all threats and hazards facing the U.S. energy sector through information sharing, risk assessments, capacity building in planning and resilience, and targeted training and exercises.

*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	2020 actual	2021 est.	2022 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent .....	3	3	4
11.9 Total personnel compensation .....	3	3	4
12.1 Civilian personnel benefits .....	1	2	2
23.1 Rental payments to GSA .....	3	2	2
23.3 Communications, utilities, and miscellaneous charges .....	1	1	1
25.1 Advisory and assistance services .....	17	17	62
25.2 Other services from non-Federal sources .....	1	1	1
25.3 Other goods and services from Federal sources .....	2	2	2
25.4 Operation and maintenance of facilities .....	55	55	55
25.5 Research and development contracts .....	72	71	70
26.0 Supplies and materials .....	2	2	2
99.0 Direct obligations .....	157	156	201
99.0 Reimbursable obligations .....	1	1	.....
99.9 Total new obligations, unexpired accounts .....	158	157	201

**Employment Summary**

Identification code 089-2250-0-1-271	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	21	43	50

**ENERGY EFFICIENCY AND RENEWABLE ENERGY**

[(INCLUDING RESCISSIONS 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, **[\$2,864,000,293] \$4,732,000,000**, to remain available until expended: *Provided*, That of such amount, **[\$165,000,000] \$250,000,000** shall be available until September 30, **[2022] 2023**, for program direction **1**: *Provided further*, That of the unobligated balances available from amounts appropriated in Public Law 111-8 under this heading, \$806,831 is hereby rescinded: *Provided further*, That of the unobligated balances available from amounts appropriated in Public Law 111-85 under this heading, \$1,433,462 is hereby rescinded: *Provided further*, That no amounts may be rescinded under the previous two provisos 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, 2021.*)

**Program and Financing** (in millions of dollars)

Identification code 089-0321-0-1-270	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 Vehicle Technologies .....	395	392	589
0002 Bioenergy Technologies .....	320	223	323

0003 Hydrogen & Fuel Cell Technologies .....	154	149	197
0091 Sustainable Transportation, subtotal .....	869	764	1,109
0101 Solar Energy .....	280	283	322
0102 Wind Energy .....	103	115	185
0103 Water Power .....	142	142	180
0104 Geothermal Technologies .....	79	84	132
0191 Renewable Electricity, subtotal .....	604	624	819
0201 Advanced Manufacturing .....	418	374	484
0202 Building Technologies .....	258	318	362
0203 Weatherization & Intergovernmental Activities .....	374	376	793
0204 Federal Energy Management Program .....	27	42	385
0291 Energy Efficiency, subtotal .....	1,077	1,110	2,024
0301 Program Direction & Support .....	151	177	242
0302 Strategic Programs .....	15	17	40
0303 Facilities & Infrastructure .....	130	130	175
0391 EERE Corporate Support, subtotal .....	296	324	457
0799 Total direct obligations .....	2,846	2,822	4,409
0810 Energy Efficiency and Renewable Energy (Reimbursable) .....	168	168	168
0900 Total new obligations, unexpired accounts .....	3,014	2,990	4,577

**Budgetary resources:**

<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1 .....	836	719	817
1010 Unobligated balance transfer to other accts [089-0222] .....	-1	.....	.....
1021 Recoveries of prior year unpaid obligations .....	45	45	90
1050 Unobligated balance (total) .....	880	764	907
<b>Budget authority:</b>			
<b>Appropriations, discretionary:</b>			
1100 Appropriation .....	2,848	2,864	4,732
1120 Appropriations transferred to other accts [089-0222] .....	-77	.....	.....
1131 Unobligated balance of appropriations permanently reduced .....	-72	-2	.....
1160 Appropriation, discretionary (total) .....	2,699	2,862	4,732
<b>Spending authority from offsetting collections, discretionary:</b>			
1700 Collected .....	160	181	181
1701 Change in uncollected payments, Federal sources .....	-6	.....	.....
1750 Spending auth from offsetting collections, disc (total) .....	154	181	181
1900 Budget authority (total) .....	2,853	3,043	4,913
1930 Total budgetary resources available .....	3,733	3,807	5,820
<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year .....	719	817	1,243

**Change in obligated balance:**

<b>Unpaid obligations:</b>			
3000 Unpaid obligations, brought forward, Oct 1 .....	3,362	4,132	4,594
3010 New obligations, unexpired accounts .....	3,014	2,990	4,577
3020 Outlays (gross) .....	-2,199	-2,483	-3,457
3040 Recoveries of prior year unpaid obligations, unexpired .....	-45	-45	-90
3050 Unpaid obligations, end of year .....	4,132	4,594	5,624
<b>Uncollected payments:</b>			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1 .....	-83	-77	-77
3070 Change in uncollected pymts, Fed sources, unexpired .....	6	.....	.....
3090 Uncollected pymts, Fed sources, end of year .....	-77	-77	-77
<b>Memorandum (non-add) entries:</b>			
3100 Obligated balance, start of year .....	3,279	4,055	4,517
3200 Obligated balance, end of year .....	4,055	4,517	5,547

**Budget authority and outlays, net:**

<b>Discretionary:</b>			
4000 Budget authority, gross .....	2,853	3,043	4,913
<b>Outlays, gross:</b>			
4010 Outlays from new discretionary authority .....	318	586	915
4011 Outlays from discretionary balances .....	1,881	1,897	2,542
4020 Outlays, gross (total) .....	2,199	2,483	3,457
<b>Offsets against gross budget authority and outlays:</b>			
<b>Offsetting collections (collected) from:</b>			
4030 Federal sources .....	-64	-81	-81
4033 Non-Federal sources .....	-96	-100	-100
4040 Offsets against gross budget authority and outlays (total) ....	-160	-181	-181
<b>Additional offsets against gross budget authority only:</b>			
4050 Change in uncollected pymts, Fed sources, unexpired .....	6	.....	.....
4060 Additional offsets against budget authority only (total) .....	6	.....	.....
4070 Budget authority, net (discretionary) .....	2,699	2,862	4,732
4080 Outlays, net (discretionary) .....	2,039	2,302	3,276
4180 Budget authority, net (total) .....	2,699	2,862	4,732



4190 Outlays, net (total) .....	2,039	2,302	3,276
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**Summary of Budget Authority and Outlays** (in millions of dollars)

	2020 actual	2021 est.	2022 est.
<b>Enacted/requested:</b>			
Budget Authority .....	2,699	2,862	4,732
Outlays .....	2,039	2,302	3,276
<b>Legislative proposal, subject to PAYGO:</b>			
Budget Authority .....			23,000
Outlays .....			7,050
<b>Total:</b>			
Budget Authority .....	2,699	2,862	27,732
Outlays .....	2,039	2,302	10,326

The Office of Energy Efficiency and Renewable Energy (EERE) is the largest investor in clean energy technologies in the federal government. EERE's mission is to accelerate the research, development, demonstration, and deployment (RDD&D) of innovative technologies that will transition Americans to a net-zero economy no later than 2050, reach 100 percent carbon pollution-free electricity by 2035, and ensure the clean energy economy benefits all Americans.

To achieve this mission, EERE invests in clean energy technologies that are ready to be demonstrated and deployed, as well as R&D activities that advance early stage technologies with a clear path to deployment. EERE's investments focus on five strategic priority areas: decarbonizing the electricity sector, decarbonizing transportation across all modes, decarbonizing energy-intensive industries, reducing the carbon footprint of buildings, and enabling net-zero agricultural production of biofuels.

EERE works in a unified and coordinated way with its state and local partners to accelerate a just, equitable transition to a clean energy economy and ensure that the office's investments benefit everyone, especially those in underserved or pollution over-burdened communities and workers and communities impacted by the energy transition. The office is organized into four pillars, with three technical pillars designed to advance cross-technology solutions, and a Corporate Program pillar that serves as the central organization for all EERE products and services, processes, and systems.

**Sustainable Transportation Pillar.**—Supports RDD&D efforts to decarbonize transportation across all modes, with a goal to develop and enable the commercial deployment of net-zero greenhouse gas technologies while ensuring affordable mobility solutions for people and goods across all economic and social groups, reducing the impact on local air quality, and utilizing sustainable water and land practices. This pillar also supports the deployment of electrified vehicles and new mobility solutions for underserved communities, funding to support production of sustainable bioproducts for aviation and other sectors, green hydrogen production to support industrial decarbonization and energy storage, and work to decarbonize agricultural production of biofuels. Increased support for American auto manufacturing (including Buy American), the electrification of transportation from cars to infrastructure, and the Administration's commitment to ensuring equity will help generate good paying-jobs across the energy and transportation sectors.

**Renewable Power Pillar.**—Supports RDD&D efforts in solar, wind, water, and geothermal power to help reduce the costs and deployment of renewable power and ensure that the integration of renewables contributes to a reliable, secure, and resilient grid. In turn, these investments will generate good-paying American jobs and build economic equity. Efforts include a new focus on support for deployment and increased support for demonstration and job creation, as well as support for high impact R&D with clear deployment and commercialization pathways that will help contribute to reaching 100 percent carbon pollution-free electricity by 2035 (in conjunction with other energy technologies).

**Energy Efficiency Pillar.**—Supports RDD&D focused on improving the energy affordability, productivity, and resilience of homes and buildings and strengthening U.S. manufacturing competitiveness. Efforts include demonstrations as well as the deployment of commercially ready technologies, as well as the acceleration of innovation to help decarbonize energy intensive industries, strengthen the domestic supply chain for critical minerals sustain-

ably, and increase energy efficiency and demand flexibility for the U.S.'s 125 million homes and commercial sector buildings. EERE also supports its statutory responsibilities associated with appliance standards and assessment of energy savings from model building codes through the Energy Efficiency pillar.

The Energy Efficiency sector also supports the Weatherization Assistance and State Energy Program's efforts to transform the energy economy by working with community-level implementation partners and State Energy Offices. This includes increased funding to weatherize at least 50,000 homes and for the new Build Back Better Challenge grant program. This program incentivizes states to develop novel ways to deploy clean energy technologies and prioritizes investments in marginalized, overburdened, and energy transition communities. This pillar also includes two new initiatives: the Local Government Energy Program and the Weatherization Readiness Fund.

In addition, this pillar supports EERE's Federal Energy Management Program (FEMP). FEMP helps other Federal agencies meet their 2035 and 2050 carbon reduction goals by accelerating the implementation of energy and water conservation measures and implementing deep retrofits. The program provides technical assistance to help Federal agencies lead by example in the transition to carbon-free electricity use and an electrified Federal vehicle fleet.

**Corporate Programs Pillar.**—Supports activities to make EERE more efficient and effective. This pillar identifies ways to strengthen EERE's overall performance, organization, budget, laboratory management, operations, human capital, and project management while achieving significant cost savings. This includes support for program direction (e.g., salaries and benefits, support services, working capital fund, etc.) and facilities and infrastructure as part of EERE's stewardship of the National Renewable Energy Laboratory (e.g., general plant projects, general purpose equipment, safeguards and security, and capacity building for Administration priorities).

**Object Classification** (in millions of dollars)

Identification code 089-0321-0-1-270	2020 actual	2021 est.	2022 est.
<b>Direct obligations:</b>			
<b>Personnel compensation:</b>			
11.1 Full-time permanent .....	72	88	102
11.3 Other than full-time permanent .....	2	2	3
11.5 Other personnel compensation .....	2	2	3
11.9 Total personnel compensation .....	76	92	108
12.1 Civilian personnel benefits .....	25	31	41
21.0 Travel and transportation of persons .....	1	1	2
23.3 Communications, utilities, and miscellaneous charges .....	2	2	3
25.1 Advisory and assistance services .....	127	125	196
25.2 Other services from non-Federal sources .....	39	38	60
25.3 Other goods and services from Federal sources .....	29	29	46
25.4 Operation and maintenance of facilities .....	1,310	1,287	1,998
25.5 Research and development contracts .....	239	235	369
26.0 Supplies and materials .....	1	1	2
31.0 Equipment .....	13	13	20
41.0 Grants, subsidies, and contributions .....	984	968	1,564
99.0 Direct obligations .....	2,846	2,822	4,409
99.0 Reimbursable obligations .....	168	168	168
99.9 Total new obligations, unexpired accounts .....	3,014	2,990	4,577

**Employment Summary**

Identification code 089-0321-0-1-270	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	557	675	825

ENERGY EFFICIENCY AND RENEWABLE ENERGY

(Legislative proposal, subject to PAYGO)

**Program and Financing** (in millions of dollars)

Identification code 089-0321-4-1-270	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0401 Clean Energy Block Grants for Early Action .....			5,000
0402 Community Solar and Storage .....			1,000
0403 Modernizing the Auto Supply Chain .....			5,500

ENERGY EFFICIENCY AND RENEWABLE ENERGY—Continued  
Program and Financing—Continued

Identification code 089-0321-4-1-270	2020 actual	2021 est.	2022 est.
0404 HOPE for Homes .....			2,000
0405 Weatherization Assistance Program .....			3,500
0406 Efficiency/Electrification Block Grants .....			4,000
0407 Auto Manufacturing Conversion Grants .....			2,000
0491 Direct program activities, subtotal .....			23,000
0799 Total direct obligations .....			23,000
0900 Total new obligations, unexpired accounts (object class 41.0) .....			23,000
<b>Budgetary resources:</b>			
Budget authority:			
Appropriations, mandatory:			
1200 Appropriation .....			23,000
1930 Total budgetary resources available .....			23,000
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3010 New obligations, unexpired accounts .....			23,000
3020 Outlays (gross) .....			-7,050
3050 Unpaid obligations, end of year .....			15,950
Memorandum (non-add) entries:			
3200 Obligated balance, end of year .....			15,950
<b>Budget authority and outlays, net:</b>			
Mandatory:			
4090 Budget authority, gross .....			23,000
Outlays, gross:			
4100 Outlays from new mandatory authority .....			7,050
4180 Budget authority, net (total) .....			23,000
4190 Outlays, net (total) .....			7,050

The President's American Jobs Plan includes significant investments for newly-proposed and established programs managed by the Office of Energy Efficiency and Renewable Energy, including: expansion of weatherization assistance; providing clean energy block grants for early action; providing community solar and storage assistance; investing in HOPE for Homes; modernizing the auto supply chain; and providing auto manufacturing conversion grants.

OFFICE OF TECHNOLOGY TRANSITIONS

For Department of Energy expenses in carrying out the activities of the Office of Technology Transitions, \$19,470,000, to remain available until September 30, 2027: Provided, That of such amount, \$11,095,000 shall be available until September 30, 2023, for program direction.

Program and Financing (in millions of dollars)

Identification code 089-0346-0-1-276	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0010 Technology transition activities .....			8
0040 Program direction .....			11
0900 Total new obligations, unexpired accounts .....			19
<b>Budgetary resources:</b>			
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....			19
1930 Total budgetary resources available .....			19
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3010 New obligations, unexpired accounts .....			19
3020 Outlays (gross) .....			-10
3050 Unpaid obligations, end of year .....			9
Memorandum (non-add) entries:			
3200 Obligated balance, end of year .....			9

Budget authority and outlays, net:

Discretionary:			
4000 Budget authority, gross .....			19
Outlays, gross:			
4010 Outlays from new discretionary authority .....			10
4180 Budget authority, net (total) .....			19
4190 Outlays, net (total) .....			10

The mission of the Office of Technology Transitions (OTT) is to expand the commercial and public impact of the Department of Energy's (DOE) research investments. It does so by facilitating accessibility of DOE's capabilities, technologies and expertise for private sector commercialization. OTT serves a multi-disciplinary role, providing management of DOE's ongoing lab-to-market commercialization activities, including Energy I-Corps, the Energy Program for Innovation Clusters (EPIC), and 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 Laboratories and Production Facilities—as well as engaging with other Federal agencies to improve awareness of the benefits of engaging the DOE research enterprise. In FY 2022, OTT is requested as a separate appropriation.

Object Classification (in millions of dollars)

Identification code 089-0346-0-1-276	2020 actual	2021 est.	2022 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent .....			3
11.9 Total personnel compensation .....			3
12.1 Civilian personnel benefits .....			1
25.1 Advisory and assistance services .....			2
25.2 Other services from non-Federal sources .....			6
25.3 Other goods and services from Federal sources .....			2
25.4 Operation and maintenance of facilities .....			5
99.9 Total new obligations, unexpired accounts .....			19

Employment Summary

Identification code 089-0346-0-1-276	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....			22

OFFICE OF CLEAN ENERGY DEMONSTRATIONS

For Department of Energy expenses, including the purchase, construction, and acquisition of plant and capital equipment and other expenses necessary for clean energy demonstrations 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, \$400,000,000, to remain available until expended: Provided, That of such amount, \$13,500,000 shall be available until September 30, 2023, for program direction.

Program and Financing (in millions of dollars)

Identification code 089-2297-0-1-270	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0010 Clean Energy Demonstrations .....			386
0011 Program Direction .....			14
0900 Total new obligations, unexpired accounts .....			400
<b>Budgetary resources:</b>			
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....			400
1930 Total budgetary resources available .....			400
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3010 New obligations, unexpired accounts .....			400

3020	Outlays (gross) .....	-160
3050	Unpaid obligations, end of year .....	240
	Memorandum (non-add) entries:	
3200	Obligated balance, end of year .....	240

**Budget authority and outlays, net:**

Discretionary:		
4000	Budget authority, gross .....	400
	Outlays, gross:	
4010	Outlays from new discretionary authority .....	160
4180	Budget authority, net (total) .....	400
4190	Outlays, net (total) .....	160

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

	2020 actual	2021 est.	2022 est.
Enacted/requested:			
Budget Authority .....			400
Outlays .....			160
Legislative proposal, subject to PAYGO:			
Budget Authority .....			5,000
Outlays .....			500
Total:			
Budget Authority .....			5,400
Outlays .....			660

The FY 2022 President's Budget establishes a new Office of Clean Energy Demonstrations (OCED). The OCED is a technology-neutral office with expertise in large-scale energy project management and finance that will leverage the existing technical expertise throughout the Department of Energy. The OCED is envisioned to issue at least one technology-neutral commercial-scale demonstration solicitation per year focused on a cross-cutting energy challenge. In addition, the office will provide project management support to the applied energy offices on technology scale-up and demonstration activities funded within their existing programs to ensure a consistent approach to capital intensive, late-stage technology development while ensuring demonstration projects maximize the creation of good jobs. In FY 2022, OCED will focus on demonstrating a broad range of energy storage technologies.

**Object Classification** (in millions of dollars)

Identification code 089-2297-0-1-270	2020 actual	2021 est.	2022 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent .....			4
11.9 Total personnel compensation .....			4
12.1 Civilian personnel benefits .....			2
21.0 Travel and transportation of persons .....			1
23.3 Communications, utilities, and miscellaneous charges .....			1
25.1 Advisory and assistance services .....			13
25.2 Other services from non-Federal sources .....			6
25.4 Operation and maintenance of facilities .....			10
25.5 Research and development contracts .....			363
99.9 Total new obligations, unexpired accounts .....			400

**Employment Summary**

Identification code 089-2297-0-1-270	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....			35

OFFICE OF CLEAN ENERGY DEMONSTRATIONS  
(Legislative proposal, subject to PAYGO)

**Program and Financing** (in millions of dollars)

Identification code 089-2297-4-1-270	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0010 Clean Energy Demonstrations .....			4,925
0011 Program Direction .....			75
0900 Total new obligations, unexpired accounts .....			5,000

**Budgetary resources:**

Budget authority:		
Appropriations, mandatory:		
1200	Appropriation .....	5,000
1930	Total budgetary resources available .....	5,000

**Change in obligated balance:**

Unpaid obligations:		
3010	New obligations, unexpired accounts .....	5,000
3020	Outlays (gross) .....	-500
3050	Unpaid obligations, end of year .....	4,500
Memorandum (non-add) entries:		
3200	Obligated balance, end of year .....	4,500

**Budget authority and outlays, net:**

Mandatory:		
4090	Budget authority, gross .....	5,000
Outlays, gross:		
4100	Outlays from new mandatory authority .....	500
4180	Budget authority, net (total) .....	5,000
4190	Outlays, net (total) .....	500

The President's American Jobs Plan includes funding for investments to establish the United States as a leader in climate science, innovation, and R&D. Within this amount, \$15 billion is included for clean energy demonstration projects.

**Object Classification** (in millions of dollars)

Identification code 089-2297-4-1-270	2020 actual	2021 est.	2022 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent .....			15
11.9 Total personnel compensation .....			15
12.1 Civilian personnel benefits .....			5
21.0 Travel and transportation of persons .....			3
23.3 Communications, utilities, and miscellaneous charges .....			2
25.1 Advisory and assistance services .....			20
25.4 Operation and maintenance of facilities .....			30
25.5 Research and development contracts .....			4,925
99.9 Total new obligations, unexpired accounts .....			5,000

**Employment Summary**

Identification code 089-2297-4-1-270	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....			95

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,] \$122,000,000** to remain available until expended: *Provided, That, of the amount appropriated under this heading, [\$5,000,000] \$5,522,566 shall be available until September 30, [2022] 2023, for program direction. (Energy and Water Development and Related Agencies Appropriations Act, 2021.)*

**Program and Financing** (in millions of dollars)

Identification code 089-0342-0-1-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0010	Direct program activity .....	9	25
<b>Budgetary resources:</b>			
Unobligated balance:			
1000	Unobligated balance brought forward, Oct 1 .....	8	21
Budget authority:			
Appropriations, discretionary:			
1100	Appropriation .....	22	22
1930	Total budgetary resources available .....	30	43
Memorandum (non-add) entries:			
1941	Unexpired unobligated balance, end of year .....	21	18
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000	Unpaid obligations, brought forward, Oct 1 .....	10	12
			26

OFFICE OF INDIAN ENERGY POLICY AND PROGRAMS—Continued  
Program and Financing—Continued

Identification code 089-0342-0-1-271	2020 actual	2021 est.	2022 est.
3010 New obligations, unexpired accounts .....	9	25	122
3020 Outlays (gross) .....	-7	-11	-25
3050 Unpaid obligations, end of year .....	12	26	123
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	10	12	26
3200 Obligated balance, end of year .....	12	26	123
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000 Budget authority, gross .....	22	22	122
Outlays, gross:			
4010 Outlays from new discretionary authority .....	1	1	6
4011 Outlays from discretionary balances .....	6	10	19
4020 Outlays, gross (total) .....	7	11	25
4180 Budget authority, net (total) .....	22	22	122
4190 Outlays, net (total) .....	7	11	25

*Office of Indian Energy Policy and Programs (IE).*—Directs, fosters, coordinates, and implements energy planning, education, management, and financial assistance 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. Through financial and technical assistance IE will empower American Indian and Alaskan Native nations to lead the transition to 100% clean energy, seven generation planning, and addressing energy access and energy poverty in Indian Country. A key focus will be on assisting Tribal Colleges and Universities to power their institutions with clean energy.

Object Classification (in millions of dollars)

Identification code 089-0342-0-1-271	2020 actual	2021 est.	2022 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent .....	1	1	2
11.9 Total personnel compensation .....	1	1	2
21.0 Travel and transportation of persons .....			1
23.3 Communications, utilities, and miscellaneous charges .....			1
25.1 Advisory and assistance services .....	3	5	19
25.2 Other services from non-Federal sources .....	2	3	4
25.4 Operation and maintenance of facilities .....	1	1	2
41.0 Grants, subsidies, and contributions .....	2	15	93
99.9 Total new obligations, unexpired accounts .....	9	25	122

Employment Summary

Identification code 089-0342-0-1-271	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	5	12	15

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]** *\$338,860,000*, to remain available until expended: *Provided*, That, in addition, fees collected pursuant to subsection (b)(1) of section 6939f of title 42, United States Code, and deposited under this heading in fiscal year **[2021]** *2022* 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: *Provided further*, *That of the amount appropriated under this heading, \$116,203,000 shall be derived from the United States Enrichment Corporation Fund,*

*to remain available until expended. (Energy and Water Development and Related Agencies Appropriations Act, 2021.)*

Program and Financing (in millions of dollars)

Identification code 089-0315-0-1-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0002 Fast Flux Test Facility .....	4	3	3
0003 Gaseous Diffusion Plants .....	113	115	116
0004 Small Sites .....	159	111	129
0005 West Valley Demonstration Project .....	76	88	88
0006 Management and Storage of Elemental Mercury .....		2	2
0799 Total direct obligations .....	352	319	338
0801 Non-defense Environmental Cleanup (Reimbursable) .....	43	35	35
0900 Total new obligations, unexpired accounts .....	395	354	373
<b>Budgetary resources:</b>			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	39	9	9
1021 Recoveries of prior year unpaid obligations .....	3		
1050 Unobligated balance (total) .....	42	9	9
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....	319	319	223
Spending authority from offsetting collections, discretionary:			
1700 Collected .....	43	35	35
1711 Spending authority from offsetting collections transferred from other accounts [486-4054] .....			116
1750 Spending auth from offsetting collections, disc (total) .....	43	35	151
1900 Budget authority (total) .....	362	354	374
1930 Total budgetary resources available .....	404	363	383
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	9	9	10
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	172	269	250
3010 New obligations, unexpired accounts .....	395	354	373
3020 Outlays (gross) .....	-295	-373	-514
3040 Recoveries of prior year unpaid obligations, unexpired .....	-3		
3050 Unpaid obligations, end of year .....	269	250	109
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	172	269	250
3200 Obligated balance, end of year .....	269	250	109
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000 Budget authority, gross .....	362	354	374
Outlays, gross:			
4010 Outlays from new discretionary authority .....	190	258	307
4011 Outlays from discretionary balances .....	105	115	207
4020 Outlays, gross (total) .....	295	373	514
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources .....	-1		
4033 Non-Federal sources .....	-42	-35	-35
4040 Offsets against gross budget authority and outlays (total) ....	-43	-35	-35
4070 Budget authority, net (discretionary) .....	319	319	339
4080 Outlays, net (discretionary) .....	252	338	479
4180 Budget authority, net (total) .....	319	319	339
4190 Outlays, net (total) .....	252	338	479

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. 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	2020 actual	2021 est.	2022 est.
<b>Direct obligations:</b>			
25.1 Advisory and assistance services .....	15	13	15
25.2 Other services from non-Federal sources .....	25	23	24
25.3 Other goods and services from Federal sources .....	1	1	1
25.4 Operation and maintenance of facilities .....	286	259	275
32.0 Land and structures .....	23	21	22
41.0 Grants, subsidies, and contributions .....	2	2	2
99.0 Direct obligations .....	352	319	339
99.0 Reimbursable obligations .....	43	35	34
99.9 Total new obligations, unexpired accounts .....	395	354	373

**FOSSIL ENERGY [RESEARCH AND DEVELOPMENT] AND CARBON MANAGEMENT**

For Department of Energy expenses necessary in carrying out fossil energy and carbon management 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] \$890,000,000**, to remain available until expended: *Provided*, That of such amount **[\$61,500,000] \$66,800,000** shall be available until September 30, **[2022] 2023**, for program direction. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

**Program and Financing** (in millions of dollars)

Identification code 089-0213-0-1-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0002 Carbon Capture .....	140	126	150
0003 Carbon Storage .....	126	79	117
0004 Advanced Energy Systems .....	89	122	82
0005 Cross-Cutting Research .....	51	72	36
0007 Carbon Dioxide Removal .....			63
0008 Carbon Utilization .....		23	38
0009 Mineral Sustainability .....			45
0012 Program Direction - Management .....	65	62	67
0013 Program Direction - NETL R&D .....	141		
0017 Special Recruitment Program .....	1	1	1
0020 Natural gas technologies .....	37	57	130
0021 Unconventional FE Technologies .....	40	46	
0022 STEP (Supercritical CO2) .....	11		
0024 NETL Research and Operations .....		83	83
0025 NETL Infrastructure .....		55	78
0029 Supercritical Transformational Electric Power .....		15	
0030 Transformational Coal Pilots .....		10	
0799 Total direct obligations .....	701	751	890
0801 Fossil Energy Research and Development (Reimbursable) .....	1		
0900 Total new obligations, unexpired accounts .....	702	751	890

**Budgetary resources:**

<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1 .....	303	353	354
1021 Recoveries of prior year unpaid obligations .....	17		
1050 Unobligated balance (total) .....	320	353	354
<b>Budget authority:</b>			
<b>Appropriations, discretionary:</b>			
1100 Appropriation .....	750	750	890
1120 Appropriations transferred to other accts [089-0222] .....	-16		
1160 Appropriation, discretionary (total) .....	734	750	890
<b>Spending authority from offsetting collections, discretionary:</b>			
1700 Collected .....	1	2	2
1900 Budget authority (total) .....	735	752	892
1930 Total budgetary resources available .....	1,055	1,105	1,246
<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year .....	353	354	356

**Change in obligated balance:**

<b>Unpaid obligations:</b>			
3000 Unpaid obligations, brought forward, Oct 1 .....	947	958	777
3010 New obligations, unexpired accounts .....	702	751	890
3020 Outlays (gross) .....	-674	-932	-1,138
3040 Recoveries of prior year unpaid obligations, unexpired .....	-17		
3050 Unpaid obligations, end of year .....	958	777	529
<b>Uncollected payments:</b>			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1 .....	-1	-1	-1
3090 Uncollected pymts, Fed sources, end of year .....	-1	-1	-1
<b>Memorandum (non-add) entries:</b>			
3100 Obligated balance, start of year .....	946	957	776
3200 Obligated balance, end of year .....	957	776	528

**Budget authority and outlays, net:**

<b>Discretionary:</b>			
4000 Budget authority, gross .....	735	752	892
<b>Outlays, gross:</b>			
4010 Outlays from new discretionary authority .....	132	301	357
4011 Outlays from discretionary balances .....	542	631	781
4020 Outlays, gross (total) .....	674	932	1,138
<b>Offsets against gross budget authority and outlays:</b>			
<b>Offsetting collections (collected) from:</b>			
4033 Non-Federal sources .....	-1	-2	-2
4040 Offsets against gross budget authority and outlays (total) ....	-1	-2	-2
4180 Budget authority, net (total) .....	734	750	890
4190 Outlays, net (total) .....	673	930	1,136

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

	2020 actual	2021 est.	2022 est.
<b>Enacted/requested:</b>			
Budget Authority .....	734	750	890
Outlays .....	673	930	1,136
<b>Legislative proposal, subject to PAYGO:</b>			
Budget Authority .....			2,840
Outlays .....			530
<b>Total:</b>			
Budget Authority .....	734	750	3,730
Outlays .....	673	930	1,666

The Fossil Energy and Carbon Management Research and Development (R&D) program conducts research that focuses on early-stage technologies that help to ensure clean and affordable energy for all Americans, facilitate the transition towards a carbon-pollution-free economy, and rebuild a U.S. critical minerals (CM) supply chain. To meet these challenges, the Budget re-focuses funding from traditional fossil combustion-centric activities (Advanced Energy Systems and Cross-cutting Research) to climate-centric activities (Carbon Capture, Utilization and Storage). These reallocations will enable near-term work to develop and deploy carbon solutions for the power and industrial sectors. Immediate action will be taken to locate and mitigate methane leaks (one of the most potent greenhouse gases) — coupled with longer-term R&D to expedite the hydrogen (H2) energy economy. These investments will be critical to meet 100% clean electricity by 2035. Carbon dioxide (CO2) removal will be an important tool to achieve net-zero emissions economy-wide by 2050. The Office of Fossil Energy and Carbon Management (FECM) is investing in direct air capture, carbon capture and storage coupled to the conversion of biomass waste to energy,

FOSSIL ENERGY AND CARBON MANAGEMENT—Continued

and accelerated weathering through mineral carbonation to assist in meeting our climate goals.

Program activities, including the National Energy Technology Laboratory (NETL) R&D, focus on: 1) Developing technologies and deploying regional initiatives to monitor and reduce methane emissions across the legacy fossil energy infrastructure including coal, oil, and gas; 2) Developing technologies that leverage the natural gas infrastructure for H2 production, transportation, storage, and use coupled to carbon management; 3) Developing novel approaches to recycle carbon oxide emissions, principally carbon dioxide, into value-added products such as cement, concrete, steel, chemicals, and fuels using systems-based carbon management approaches; 4) Researching, developing, and demonstrating carbon dioxide removal technologies and approaches by investing in direct air capture and mineral carbonation projects; 5) Investing in technologies and approaches and deploy regional initiatives to help in the transition of coal and power plant communities to a net-zero carbon economy; 6) Utilizing CCS R&D in the power and industrial sectors to enable wider, strategic commercial deployment to meet net-zero emissions by 2050 goals; 7) Developing technologies that enable the sustainable recovery of CM, including rare earth elements (REE) from multiple feed stocks, throughout the upstream, midstream, and downstream supply chain from carbon and other ores, mining by-products, abandoned mines and other valuable sources; 8) Using artificial intelligence (AI) machine learning (ML), and data analysis to create learning algorithms within large datasets to help discover new materials, optimize processes, and run autonomous systems; and 9) Improving the efficient use of scarce water resources and advance water remediation technologies associated with produced or displaced water associated with oil, gas, and coal industries, in addition to that associated with dedicated CO2 storage.

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 Fossil Energy and Carbon Management R&D.

Object Classification (in millions of dollars)

Identification code 089-0213-0-1-271	2020 actual	2021 est.	2022 est.
<b>Direct obligations:</b>			
<b>Personnel compensation:</b>			
11.1 Full-time permanent .....	63	63	75
11.3 Other than full-time permanent .....	1	1	1
11.5 Other personnel compensation .....	2	2	2
11.9 Total personnel compensation .....	66	66	78
12.1 Civilian personnel benefits .....	23	23	27
21.0 Travel and transportation of persons .....	1	11	13
23.3 Communications, utilities, and miscellaneous charges .....	10	20	24
25.1 Advisory and assistance services .....	144	144	171
25.2 Other services from non-Federal sources .....	2	22	26
25.3 Other goods and services from Federal sources .....	6	10	12
25.4 Operation and maintenance of facilities .....	93	93	110
25.5 Research and development contracts .....	331	331	393
25.7 Operation and maintenance of equipment .....	5	10	12
26.0 Supplies and materials .....	1	1	1
31.0 Equipment .....	1	1	1
32.0 Land and structures .....	15	15	18
41.0 Grants, subsidies, and contributions .....	3	3	4
99.0 Direct obligations .....	701	750	890
99.0 Reimbursable obligations .....	1	1	.....
99.9 Total new obligations, unexpired accounts .....	702	751	890

Employment Summary

Identification code 089-0213-0-1-271	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	504	504	504

FOSSIL ENERGY AND CARBON MANAGEMENT

(Legislative proposal, subject to PAYGO)

Program and Financing (in millions of dollars)

Identification code 089-0213-4-1-271	2020 actual	2021 est.	2022 est.
<b>Budgetary resources:</b>			
Budget authority:			
Appropriations, mandatory:			
1200 Appropriation .....	.....	.....	2,840
1930 Total budgetary resources available .....	.....	.....	2,840
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	.....	.....	2,840
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3020 Outlays (gross) .....	.....	.....	-530
3050 Unpaid obligations, end of year .....	.....	.....	-530
Memorandum (non-add) entries:			
3200 Obligated balance, end of year .....	.....	.....	-530
<b>Budget authority and outlays, net:</b>			
Mandatory:			
4090 Budget authority, gross .....	.....	.....	2,840
Outlays, gross:			
4100 Outlays from new mandatory authority .....	.....	.....	530
4180 Budget authority, net (total) .....	.....	.....	2,840
4190 Outlays, net (total) .....	.....	.....	530

The American Jobs Plan includes funding to relieve low-income rate burden for mitigating methane leaks.

NAVAL PETROLEUM AND OIL SHALE RESERVES

For Department of Energy expenses necessary to carry out naval petroleum and oil shale reserve activities, **【\$13,006,000】** \$13,650,000, to remain available until expended: *Provided*, That notwithstanding any other provision of law, unobligated funds remaining from prior years shall be available for all naval petroleum and oil shale reserve activities. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

Program and Financing (in millions of dollars)

Identification code 089-0219-0-1-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 Production and Operations .....	12	12	12
0002 Naval Petroleum and Oil Shale Reserves Program Direction .....	1	.....	.....
0003 Program support .....	.....	1	2
0799 Total direct obligations .....	13	13	14
0900 Total new obligations, unexpired accounts (object class 25.4) .....	13	13	14
<b>Budgetary resources:</b>			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	3	4	4
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....	14	13	14
1900 Budget authority (total) .....	14	13	14
1930 Total budgetary resources available .....	17	17	18
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	4	4	4
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	18	13	7
3010 New obligations, unexpired accounts .....	13	13	14
3020 Outlays (gross) .....	-18	-19	-14
3050 Unpaid obligations, end of year .....	13	7	7
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	18	13	7
3200 Obligated balance, end of year .....	13	7	7
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000 Budget authority, gross .....	14	13	14

Outlays, gross:				
4010	Outlays from new discretionary authority .....	3	8	9
4011	Outlays from discretionary balances .....	15	11	5
4020	Outlays, gross (total) .....	18	19	14
4180	Budget authority, net (total) .....	14	13	14
4190	Outlays, net (total) .....	18	19	14

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 2022, funding will continue ongoing activities to attain release from the remaining environmental findings related to the sale of NPR-1. On January 30, 2015, the Department finalized the sale of the Teapot Dome Oilfield. The Department continues to oversee post-sale remediation activities and ground water sampling for the closure of the landfill in compliance with National Environmental Policy Act and Wyoming Department of Environmental Quality requirements.

**Employment Summary**

Identification code 089-0219-0-1-271	2020 actual	2021 est.	2022 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.), **[\$188,000,000]** \$197,000,000, to remain available until expended. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

**Program and Financing** (in millions of dollars)

Identification code 089-0218-0-1-274	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 SPR Management .....	44	27	28
0002 SPR Storage Facilities Development .....	176	161	169
0900 Total new obligations, unexpired accounts .....	220	188	197

**Budgetary resources:**

<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1 .....	58	34	34
1021 Recoveries of prior year unpaid obligations .....	1		
1050 Unobligated balance (total) .....	59	34	34
<b>Budget authority:</b>			
<b>Appropriations, discretionary:</b>			
1100 Appropriation .....	195	188	197
1930 Total budgetary resources available .....	254	222	231
<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year .....	34	34	34

**Change in obligated balance:**

<b>Unpaid obligations:</b>			
3000 Unpaid obligations, brought forward, Oct 1 .....	166	172	124
3010 New obligations, unexpired accounts .....	220	188	197
3020 Outlays (gross) .....	-213	-236	-212
3040 Recoveries of prior year unpaid obligations, unexpired .....	-1		
3050 Unpaid obligations, end of year .....	172	124	109
<b>Memorandum (non-add) entries:</b>			
3100 Obligated balance, start of year .....	166	172	124
3200 Obligated balance, end of year .....	172	124	109

**Budget authority and outlays, net:**

<b>Discretionary:</b>				
4000	Budget authority, gross .....	195	188	197
<b>Outlays, gross:</b>				
4010	Outlays from new discretionary authority .....	54	103	108
4011	Outlays from discretionary balances .....	159	133	104
4020	Outlays, gross (total) .....	213	236	212
4180	Budget authority, net (total) .....	195	188	197
4190	Outlays, net (total) .....	213	236	212

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 State 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 2022 Budget will support the SPR's operational readiness and drawdown capabilities of 4.4 MB/d. The program will perform cavern wellbore testing and maintenance 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's (NGSR) 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 less than one day's worth of gasoline demand in the Northeast States.

**Object Classification** (in millions of dollars)

Identification code 089-0218-0-1-274	2020 actual	2021 est.	2022 est.	
<b>Direct obligations:</b>				
11.1	Personnel compensation: Full-time permanent .....	12	12	12
12.1	Civilian personnel benefits .....	4	4	4
21.0	Travel and transportation of persons .....	1	1	1
23.2	Rental payments to others .....	5	5	5
23.3	Communications, utilities, and miscellaneous charges .....	1	1	1
25.1	Advisory and assistance services .....	4	4	4
25.2	Other services from non-Federal sources .....	33	33	33
25.4	Operation and maintenance of facilities .....	159	128	137
99.0	Direct obligations .....	219	188	197
99.5	Adjustment for rounding .....	1		
99.9	Total new obligations, unexpired accounts .....	220	188	197

**Employment Summary**

Identification code 089-0218-0-1-274	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	111	111	111
2001 Reimbursable civilian full-time equivalent employment .....	13	13	13

**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), **[\$1,000,000]** \$7,350,000, to remain available until expended. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

**Program and Financing** (in millions of dollars)

Identification code 089-0233-0-1-274	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 SPR Petroleum Account .....	13	1	7
<b>Budgetary resources:</b>			
<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1 .....	12	9	9
1001 Discretionary unobligated balance brought fwd, Oct 1 .....	7		

SPR PETROLEUM ACCOUNT—Continued  
Program and Financing—Continued

Identification code 089-0233-0-1-274	2020 actual	2021 est.	2022 est.
<b>Budget authority:</b>			
Appropriations, discretionary:			
1100 Appropriation .....	10	1	7
1900 Budget authority (total) .....	10	1	7
1930 Total budgetary resources available .....	22	10	16
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	9	9	9
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	22	25	2
3010 New obligations, unexpired accounts .....	13	1	7
3020 Outlays (gross) .....	-10	-24	-2
3050 Unpaid obligations, end of year .....	25	2	7
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	22	25	2
3200 Obligated balance, end of year .....	25	2	7
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000 Budget authority, gross .....	10	1	7
Outlays, gross:			
4010 Outlays from new discretionary authority .....			2
4011 Outlays from discretionary balances .....	10	24	
4020 Outlays, gross (total) .....	10	24	2
4180 Budget authority, net (total) .....	10	1	7
4190 Outlays, net (total) .....	10	24	2

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 2022 Budget proposes to disestablish the Northeast Gasoline Supply Reserve's (NGSR) one-million barrels of gasoline blendstock. Subsequently, the Budget requests no operational funding for the NGSR in the SPR account.

Object Classification (in millions of dollars)

Identification code 089-0233-0-1-274	2020 actual	2021 est.	2022 est.
<b>Direct obligations:</b>			
25.2 Other services from non-Federal sources .....	7		7
25.4 Operation and maintenance of facilities .....	6	1	
99.9 Total new obligations, unexpired accounts .....	13	1	7

ENERGY SECURITY AND INFRASTRUCTURE MODERNIZATION FUND

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5615-0-2-274	2020 actual	2021 est.	2022 est.
0100 Balance, start of year .....		567	567
<b>Receipts:</b>			
Current law:			
1130 Proceeds from Sale of Oil, Energy Security and Infrastructure Modernization Fund .....	567		
2000 Total: Balances and receipts .....	567	567	567
5099 Balance, end of year .....	567	567	567

Program and Financing (in millions of dollars)

Identification code 089-5615-0-2-274	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0010 Energy security and infrastructure modernization .....	8		
0900 Total new obligations, unexpired accounts (object class 25.4) .....	8		
<b>Budgetary resources:</b>			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	21	13	13

1930 Total budgetary resources available .....	21	13	13
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 .....	814	731	707
3010 New obligations, unexpired accounts .....	8		
3020 Outlays (gross) .....	-91	-24	-212
3050 Unpaid obligations, end of year .....	731	707	495
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	814	731	707
3200 Obligated balance, end of year .....	731	707	495

Budget authority and outlays, net:

Discretionary:			
Outlays, gross:			
4011 Outlays from discretionary balances .....	91	24	212
4180 Budget authority, net (total) .....			
4190 Outlays, net (total) .....	91	24	212

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 Phase 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 CARES Act extended the Department's authority to sell oil in support of modernization from FY 2020 to FY 2022; however, DOE expects to conduct all modernization-related sales activities within the extended period with resources already appropriated, thus no appropriation request is made for FY 2022.

ENERGY INFORMATION ADMINISTRATION

For Department of Energy expenses necessary in carrying out the activities of the Energy Information Administration, \$126,800,000, to remain available until expended. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

Program and Financing (in millions of dollars)

Identification code 089-0216-0-1-276	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 Obligations by Program Activity .....	128	127	127
<b>Budgetary resources:</b>			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	3	4	4
1021 Recoveries of prior year unpaid obligations .....	2		
1050 Unobligated balance (total) .....	5	4	4
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....	127	127	127
1930 Total budgetary resources available .....	132	131	131
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	4	4	4

Change in obligated balance:

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	45	42	47
3010 New obligations, unexpired accounts .....	128	127	127
3020 Outlays (gross) .....	-129	-122	-127
3040 Recoveries of prior year unpaid obligations, unexpired .....	-2		
3050 Unpaid obligations, end of year .....	42	47	47
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	45	42	47
3200 Obligated balance, end of year .....	42	47	47

Budget authority and outlays, net:

Discretionary:			
Budget authority, gross:			
4000 Budget authority, gross .....	127	127	127
Outlays, gross:			
4010 Outlays from new discretionary authority .....	88	89	89
4011 Outlays from discretionary balances .....	41	33	38



4020	Outlays, gross (total) .....	129	122	127
4180	Budget authority, net (total) .....	127	127	127
4190	Outlays, net (total) .....	129	122	127

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 2022 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	2020 actual	2021 est.	2022 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent .....	44	44	44
11.9 Total personnel compensation .....	44	44	44
12.1 Civilian personnel benefits .....	14	14	14
23.3 Communications, utilities, and miscellaneous charges .....	3	3	3
25.1 Advisory and assistance services .....	63	62	62
26.0 Pamphlets, Documents, Subscriptions and Publications .....	2	2	2
31.0 Equipment .....	2	2	2
99.9 Total new obligations, unexpired accounts .....	128	127	127

**Employment Summary**

Identification code 089-0216-0-1-276	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	324	359	361

**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, **[\$404,350,000] \$463,900,000**, to remain available until expended: *Provided*, That notwithstanding any other provision of law, not to exceed **[\$404,350,000] \$463,900,000** of revenues from fees and annual charges, and other services and collections in fiscal year **[2021] 2022** 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 **[2021] 2022** so as to result in a final fiscal year **[2021] 2022** appropriation from the general fund estimated at not more than \$0. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

**Program and Financing** (in millions of dollars)

Identification code 089-0212-0-1-276	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0801 Ensure Just and Reasonable Rates, Terms & Conditions .....	173	182	216
0802 Promote Safe, Reliable, Secure & Efficient Infrastructure .....	129	143	160
0803 Mission Support through Organizational Excellence .....	78	79	88
0900 Total new obligations, unexpired accounts .....	380	404	464
<b>Budgetary resources:</b>			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	40	52	52
1021 Recoveries of prior year unpaid obligations .....	10		
1050 Unobligated balance (total) .....	50	52	52
Budget authority:			
1700 Spending authority from offsetting collections, discretionary: Collected .....	382	404	464

1930 Total budgetary resources available .....	432	456	516
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	52	52	52

**Change in obligated balance:**

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	95	91	28
3010 New obligations, unexpired accounts .....	380	404	464
3020 Outlays (gross) .....	-374	-467	-478
3040 Recoveries of prior year unpaid obligations, unexpired .....	-10		
3050 Unpaid obligations, end of year .....	91	28	14
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	95	91	28
3200 Obligated balance, end of year .....	91	28	14

**Budget authority and outlays, net:**

Discretionary:			
4000 Budget authority, gross .....	382	404	464
Outlays, gross:			
4010 Outlays from new discretionary authority .....	305	364	418
4011 Outlays from discretionary balances .....	69	103	60
4020 Outlays, gross (total) .....	374	467	478
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4034 Offsetting governmental collections .....	-382	-404	-464
4180 Budget authority, net (total) .....			
4190 Outlays, net (total) .....	-8	63	14

**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-

FEDERAL ENERGY REGULATORY COMMISSION—Continued

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 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-two 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 2022, 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 2022 request includes approximately \$11.9 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	2020 actual	2021 est.	2022 est.
Reimbursable obligations:			
Personnel compensation:			
11.1 Full-time permanent .....	188	192	201
11.3 Other than full-time permanent .....	4	6	4
11.5 Other personnel compensation .....	5	5	6
11.9 Total personnel compensation .....	197	203	211
12.1 Civilian personnel benefits .....	67	68	75
21.0 Travel and transportation of persons .....	1	4	4
23.1 Rental payments to GSA .....	33	30	32
23.2 Rental payments to others .....	1	1	1
23.3 Communications, utilities, and miscellaneous charges .....	2	4	6
24.0 Printing and reproduction .....	2	2	2
25.1 Advisory and assistance services .....	12	15	21
25.2 Other services from non-Federal sources .....	12	14	18
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 .....	32	37	57
26.0 Supplies and materials .....	4	5	5
31.0 Equipment .....	13	11	16
32.0 Land and structures .....		6	11

99.0	Reimbursable obligations .....	380	404	463
99.5	Adjustment for rounding .....			1
99.9	Total new obligations, unexpired accounts .....	380	404	464

**Employment Summary**

Identification code 089-0212-0-1-276	2020 actual	2021 est.	2022 est.
2001 Reimbursable civilian full-time equivalent employment .....	1,451	1,465	1,465

**CLEAN COAL TECHNOLOGY**

**Program and Financing** (in millions of dollars)

Identification code 089-0235-0-1-271	2020 actual	2021 est.	2022 est.
<b>Budgetary resources:</b>			
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	2020 actual	2021 est.	2022 est.
<b>Budgetary resources:</b>			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	1	7	7
1021 Recoveries of prior year unpaid obligations .....	6		
1050 Unobligated balance (total) .....	7	7	7
1930 Total budgetary resources available .....	7	7	7
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	7	7	7
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	6		
3040 Recoveries of prior year unpaid obligations, unexpired .....	-6		
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	6		
4180 Budget authority, net (total) .....			
4190 Outlays, net (total) .....			

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

**PAYMENTS TO STATES UNDER FEDERAL POWER ACT**

**Special and Trust Fund Receipts** (in millions of dollars)

Identification code 089-5105-0-2-806	2020 actual	2021 est.	2022 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%) .....	3	6	6
2000 Total: Balances and receipts .....	3	6	6

Appropriations:			
Current law:			
2101 Payments to States under Federal Power Act .....	-3	-6	-6
5099 Balance, end of year .....			

**Program and Financing** (in millions of dollars)

Identification code 089-5105-0-2-806	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 Payments to States under Federal Power Act (Direct) .....	3	6	6
0900 Total new obligations, unexpired accounts (object class 41.0) .....	3	6	6

**Budgetary resources:**

Budget authority:			
Appropriations, mandatory:			
1201 Appropriation (special or trust fund) .....	3	6	6
1930 Total budgetary resources available .....	3	6	6

**Change in obligated balance:**

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	4	3	
3010 New obligations, unexpired accounts .....	3	6	6
3020 Outlays (gross) .....	-4	-9	-6
3050 Unpaid obligations, end of year .....	3		
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	4	3	
3200 Obligated balance, end of year .....	3		

**Budget authority and outlays, net:**

Mandatory:			
4090 Budget authority, gross .....	3	6	6
Outlays, gross:			
4100 Outlays from new mandatory authority .....		6	6
4101 Outlays from mandatory balances .....	4	3	
4110 Outlays, gross (total) .....	4	9	6
4180 Budget authority, net (total) .....	3	6	6
4190 Outlays, net (total) .....	4	9	6

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

**NORTHEAST HOME HEATING OIL RESERVE**

【For Department of Energy expenses necessary for Northeast Home Heating Oil Reserve storage, operation, and management activities pursuant to the Energy Policy and Conservation Act (42 U.S.C. 6201 et seq.), \$6,500,000, to remain available until expended.】 (Energy and Water Development and Related Agencies Appropriations Act, 2021.)

**Special and Trust Fund Receipts** (in millions of dollars)

Identification code 089-5369-0-2-274	2020 actual	2021 est.	2022 est.
0100 Balance, start of year .....	1	1	1
2000 Total: Balances and receipts .....	1	1	1
5099 Balance, end of year .....	1	1	1

**Program and Financing** (in millions of dollars)

Identification code 089-5369-0-2-274	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 NEHHOR .....	6	7	
0900 Total new obligations, unexpired accounts (object class 25.2) .....	6	7	

**Budgetary resources:**

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	2	6	6
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....	10	7	
1930 Total budgetary resources available .....	12	13	6

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

Identification code 089-5369-0-2-274	2020 actual	2021 est.	2022 est.
<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year .....	6	6	6
<b>Change in obligated balance:</b>			
<b>Unpaid obligations:</b>			
3000 Unpaid obligations, brought forward, Oct 1 .....	5	4	2
3010 New obligations, unexpired accounts .....	6	7	.....
3020 Outlays (gross) .....	-7	-9	-2
3050 Unpaid obligations, end of year .....	4	2	.....
<b>Memorandum (non-add) entries:</b>			
3100 Obligated balance, start of year .....	5	4	2
3200 Obligated balance, end of year .....	4	2	.....
<b>Budget authority and outlays, net:</b>			
<b>Discretionary:</b>			
4000 Budget authority, gross .....	10	7	.....
<b>Outlays, gross:</b>			
4010 Outlays from new discretionary authority .....	2	6	.....
4011 Outlays from discretionary balances .....	5	3	2
4020 Outlays, gross (total) .....	7	9	2
4180 Budget authority, net (total) .....	10	7	.....
4190 Outlays, net (total) .....	7	9	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. NEHHOR currently holds one million barrels of ultra-low sulfur diesel oil in reserve. However, the NEHHOR has not been used for its intended purpose since it was established and, for this reason, the FY 2022 Budget proposes to disestablish NEHHOR.

**NUCLEAR WASTE DISPOSAL**

For Department of Energy expenses necessary for [nuclear waste disposal] activities to carry out the purposes of the Nuclear Waste Policy Act of 1982, Public Law 97-425, as amended, [including interim storage activities, \$27,500,000] \$7,500,000, to remain available until expended, [of which \$7,500,000 shall] to be derived from the Nuclear Waste Fund. (Energy and Water Development and Related Agencies Appropriations Act, 2021.)

**Special and Trust Fund Receipts** (in millions of dollars)

Identification code 089-5227-0-2-271	2020 actual	2021 est.	2022 est.
0100 Balance, start of year .....	40,431	42,172	44,135
0198 Reconciliation adjustment .....	1	.....	.....
0199 Balance, start of year .....	40,432	42,172	44,135
<b>Receipts:</b>			
<b>Current law:</b>			
1130 Nuclear Waste Disposal Fund .....	182	374	373
1140 Earnings on Investments, Nuclear Waste Disposal Fund .....	1,562	1,601	1,660
1199 Total current law receipts .....	1,744	1,975	2,033
1999 Total receipts .....	1,744	1,975	2,033
2000 Total: Balances and receipts .....	42,176	44,147	46,168
<b>Appropriations:</b>			
<b>Current law:</b>			
2101 Nuclear Waste Disposal .....	.....	-8	-8
2101 Salaries and Expenses .....	-4	-4	-4
2199 Total current law appropriations .....	-4	-12	-12
2999 Total appropriations .....	-4	-12	-12
5099 Balance, end of year .....	42,172	44,135	46,156

**Program and Financing** (in millions of dollars)

Identification code 089-5227-0-2-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 Interim Storage and Nuclear Waste Fund Oversight .....	2	28	8
<b>Budgetary resources:</b>			
<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1 .....	5	3	3
<b>Budget authority:</b>			
<b>Appropriations, discretionary:</b>			
1100 Appropriation .....	.....	20	.....
1101 Appropriation (special or trust) .....	.....	8	8
1160 Appropriation, discretionary (total) .....	.....	28	8
1930 Total budgetary resources available .....	5	31	11
<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year .....	3	3	3
<b>Change in obligated balance:</b>			
<b>Unpaid obligations:</b>			
3000 Unpaid obligations, brought forward, Oct 1 .....	4	4	19
3010 New obligations, unexpired accounts .....	2	28	8
3020 Outlays (gross) .....	-2	-13	-16
3050 Unpaid obligations, end of year .....	4	19	11
<b>Memorandum (non-add) entries:</b>			
3100 Obligated balance, start of year .....	4	4	19
3200 Obligated balance, end of year .....	4	19	11
<b>Budget authority and outlays, net:</b>			
<b>Discretionary:</b>			
4000 Budget authority, gross .....	.....	28	8
<b>Outlays, gross:</b>			
4010 Outlays from new discretionary authority .....	.....	11	3
4011 Outlays from discretionary balances .....	2	2	13
4020 Outlays, gross (total) .....	2	13	16
4180 Budget authority, net (total) .....	.....	28	8
4190 Outlays, net (total) .....	2	13	16
<b>Memorandum (non-add) entries:</b>			
5000 Total investments, SOY: Federal securities: Par value .....	54,022	54,666	55,322
5001 Total investments, EOY: Federal securities: Par value .....	54,666	55,322	55,986

The mission of the Nuclear Waste Fund Oversight program is to ensure the continued safety of the Yucca Mountain site through activities such as security, maintenance, and environmental requirements, and continued oversight for the Nuclear Waste Fund (NWF) including the fiduciary responsibility under the Nuclear Waste Policy Act of 1982

**Object Classification** (in millions of dollars)

Identification code 089-5227-0-2-271	2020 actual	2021 est.	2022 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent .....	.....	4	3
11.9 Total personnel compensation .....	.....	4	3
12.1 Civilian personnel benefits .....	.....	1	1
25.1 Advisory and assistance services .....	2	23	3
25.3 Other goods and services from Federal sources .....	.....	.....	1
99.9 Total new obligations, unexpired accounts .....	2	28	8

**Employment Summary**

Identification code 089-5227-0-2-271	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	.....	26	24

**URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING FUND**

For Department of Energy expenses necessary in carrying out uranium enrichment facility decontamination and decommissioning, remedial actions, and other activities of title II of the Atomic Energy Act of 1954, and title X, subtitle A, of the Energy Policy Act of 1992, [\$841,000,000] \$831,340,000, to be derived from the Uranium Enrichment Decontamination and Decommissioning Fund, to remain available until expended, of which [\$5,000,000] \$33,500,000 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, 2021.)

**Special and Trust Fund Receipts** (in millions of dollars)

Identification code 089-5231-0-2-271	2020 actual	2021 est.	2022 est.
0100 Balance, start of year	1,410	565	15
<b>Receipts:</b>			
<b>Current law:</b>			
1140 Earnings on Investments, Decontamination and Decommissioning Fund	36	21	21
1140 General Fund Payment - Defense, Decontamination and Decommissioning Fund			416
1199 Total current law receipts	36	21	437
1999 Total receipts	36	21	437
2000 Total: Balances and receipts	1,446	586	452
<b>Appropriations:</b>			
<b>Current law:</b>			
2101 Uranium Enrichment Decontamination and Decommissioning Fund	-881	-571	-416
5099 Balance, end of year	565	15	36

**Program and Financing** (in millions of dollars)

Identification code 089-5231-0-2-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 Oak Ridge	196	135	105
0002 Paducah	257	240	199
0003 Portsmouth	408	430	467
0004 Pension and Community and Regulatory Support	22	31	26
0005 Title X Uranium/Thorium Reimbursement Program	5	5	34
0900 Total new obligations, unexpired accounts	888	841	831
<b>Budgetary resources:</b>			
<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1	10	11	11
1021 Recoveries of prior year unpaid obligations	8		
1050 Unobligated balance (total)	18	11	11
<b>Budget authority:</b>			
<b>Appropriations, discretionary:</b>			
1101 Appropriation (special or trust)	881	571	416
<b>Spending authority from offsetting collections, discretionary:</b>			
1711 Spending authority from offsetting collections transferred from other accounts [486-4054]		291	416
1725 Spending authority from offsetting collections precluded from obligation (limitation on obligations)		-21	
1750 Spending auth from offsetting collections, disc (total)		270	416
1900 Budget authority (total)	881	841	832
1930 Total budgetary resources available	899	852	843
<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year	11	11	12
<b>Change in obligated balance:</b>			
<b>Unpaid obligations:</b>			
3000 Unpaid obligations, brought forward, Oct 1	282	305	504
3010 New obligations, unexpired accounts	888	841	831
3020 Outlays (gross)	-857	-642	-1,091
3040 Recoveries of prior year unpaid obligations, unexpired	-8		
3050 Unpaid obligations, end of year	305	504	244
<b>Memorandum (non-add) entries:</b>			
3100 Obligated balance, start of year	282	305	504
3200 Obligated balance, end of year	305	504	244
<b>Budget authority and outlays, net:</b>			
<b>Discretionary:</b>			
4000 Budget authority, gross	881	841	832
<b>Outlays, gross:</b>			
4010 Outlays from new discretionary authority	628	589	582
4011 Outlays from discretionary balances	229	53	509
4020 Outlays, gross (total)	857	642	1,091
4180 Budget authority, net (total)	881	841	832
4190 Outlays, net (total)	857	642	1,091
<b>Memorandum (non-add) entries:</b>			
5000 Total investments, SOY: Federal securities: Par value	1,689	851	15
5001 Total investments, EOY: Federal securities: Par value	851	15	21

*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	2020 actual	2021 est.	2022 est.
<b>Direct obligations:</b>			
25.1 Advisory and assistance services	1	1	1
25.2 Other services from non-Federal sources	11	10	10
25.4 Operation and maintenance of facilities	827	783	774
32.0 Land and structures	48	46	45
41.0 Grants, subsidies, and contributions	1	1	1
99.9 Total new obligations, unexpired accounts	888	841	831

**ISOTOPE PRODUCTION AND DISTRIBUTION PROGRAM FUND**

**Program and Financing** (in millions of dollars)

Identification code 089-4180-0-3-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0801 Isotope Production and Distribution Reimbursable program	120	126	126
<b>Budgetary resources:</b>			
<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1	23	20	20
<b>Budget authority:</b>			
<b>Spending authority from offsetting collections, discretionary:</b>			
1700 Collected	117	126	126
1930 Total budgetary resources available	140	146	146
<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year	20	20	20
<b>Change in obligated balance:</b>			
<b>Unpaid obligations:</b>			
3000 Unpaid obligations, brought forward, Oct 1	96	112	108
3010 New obligations, unexpired accounts	120	126	126
3020 Outlays (gross)	-104	-130	-122
3050 Unpaid obligations, end of year	112	108	112
<b>Memorandum (non-add) entries:</b>			
3100 Obligated balance, start of year	96	112	108
3200 Obligated balance, end of year	112	108	112
<b>Budget authority and outlays, net:</b>			
<b>Discretionary:</b>			
4000 Budget authority, gross	117	126	126
<b>Outlays, gross:</b>			
4010 Outlays from new discretionary authority	29	38	38
4011 Outlays from discretionary balances	75	92	84
4020 Outlays, gross (total)	104	130	122
<b>Offsets against gross budget authority and outlays:</b>			
<b>Offsetting collections (collected) from:</b>			
4030 Federal sources	-67	-56	-56
4033 Non-Federal sources	-50	-70	-70
4040 Offsets against gross budget authority and outlays (total)	-117	-126	-126
4080 Outlays, net (discretionary)	-13	4	-4
4180 Budget authority, net (total)			
4190 Outlays, net (total)	-13	4	-4

**Object Classification** (in millions of dollars)

Identification code 089-4180-0-3-271	2020 actual	2021 est.	2022 est.
<b>Reimbursable obligations:</b>			
25.4 Operation and maintenance of facilities	97	105	105
31.0 Equipment	15	15	15
41.0 Grants, subsidies, and contributions	7	6	6
99.0 Reimbursable obligations	119	126	126

ISOTOPE PRODUCTION AND DISTRIBUTION PROGRAM FUND—Continued  
Object Classification—Continued

Identification code 089-4180-0-3-271	2020 actual	2021 est.	2022 est.
99.5 Adjustment for rounding .....	1		
99.9 Total new obligations, unexpired accounts .....	120	126	126

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING LOAN PROGRAM  
[(INCLUDING RESCISSION 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, [2022: *Provided*, That, of the unobligated balances available from amounts appropriated for the costs of direct loans in section 129 of division A of the Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009 (Public Law 110-329), \$1,908,000,000 are hereby rescinded: *Provided further*, That the amounts rescinded pursuant to the preceding proviso that were previously designated by the Congress as an emergency requirement pursuant to section 204(a) of S. Con. Res. 21 (110th Congress) and section 301(b)(2) of S. Con. Res. 70 (110th Congress), the concurrent resolutions on the budget for fiscal years 2008 and 2009, are designated by the Congress as an emergency requirement pursuant to section 251(b)(2)(A)(i) of the Balanced Budget and Emergency Deficit Control Act of 1985] 2023. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

Program and Financing (in millions of dollars)

Identification code 089-0322-0-1-272	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
Credit program obligations:			
0701 Direct loan subsidy .....		162	346
0705 Reestimates of direct loan subsidy .....		9	
0706 Interest on reestimates of direct loan subsidy .....		6	
0709 Administrative expenses .....	5	5	7
0900 Total new obligations, unexpired accounts .....	5	182	353
<b>Budgetary resources:</b>			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	4,339	4,339	2,269
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....	5	5	5
1131 Unobligated balance of appropriations permanently reduced .....		-1,908	
1160 Appropriation, discretionary (total) .....	5	-1,903	5
Appropriations, mandatory:			
1200 Appropriation .....		15	
1900 Budget authority (total) .....	5	-1,888	5
1930 Total budgetary resources available .....	4,344	2,451	2,274
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	4,339	2,269	1,921
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	3	4	105
3010 New obligations, unexpired accounts .....	5	182	353
3020 Outlays (gross) .....	-4	-81	-161
3050 Unpaid obligations, end of year .....	4	105	297
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	3	4	105
3200 Obligated balance, end of year .....	4	105	297
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000 Budget authority, gross .....	5	-1,903	5
Outlays, gross:			
4011 Outlays from discretionary balances .....	4	66	161
Mandatory:			
4090 Budget authority, gross .....		15	
Outlays, gross:			
4100 Outlays from new mandatory authority .....		15	
4180 Budget authority, net (total) .....	5	-1,888	5
4190 Outlays, net (total) .....	4	81	161

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

Identification code 089-0322-0-1-272	2020 actual	2021 est.	2022 est.
Direct loan levels supportable by subsidy budget authority:			
115001 Direct Auto Loans .....		1,496	6,945
Direct loan subsidy (in percent):			
132001 Direct Auto Loans .....		10.83	4.98
132999 Weighted average subsidy rate .....	0.00	10.83	4.98
Direct loan subsidy budget authority:			
133001 Direct Auto Loans .....		162	346
Direct loan subsidy outlays:			
134001 Direct Auto Loans .....		61	154
Direct loan reestimates:			
135001 Direct Auto Loans .....	-17	14	
Administrative expense data:			
3580 Outlays from balances .....	4	1	1

Section 136 of the Energy Independence and Security Act of 2007 (EISA) established a direct loan program to support the development of advanced technology vehicles and associated components in the United States, known as the Advanced Technology Vehicles Manufacturing (ATVM) Loan Program. The ATVM Loan Program provides loans to automobile and automobile part manufacturers for the cost of reequipping, expanding, or establishing manufacturing facilities in the United States to produce advanced technology vehicles or qualified components and for associated engineering integration costs. The Consolidated Security, Disaster Assistance, and Continuing Appropriation Act of 2009, enacted on September 30, 2008, appropriated \$7.5 billion for credit subsidy costs to support a maximum of \$25 billion in loans under the ATVM Loan Program. Per EISA subsection (d)(1), the full credit subsidy cost must be paid using appropriated funds. Currently, \$17.7 billion remains in loan authority and \$2.4 billion in appropriated credit subsidy. The FY 2022 President's Budget requests \$5,000,000 for administrative expenses to operate the ATVM program.

Object Classification (in millions of dollars)

Identification code 089-0322-0-1-272	2020 actual	2021 est.	2022 est.
Direct obligations:			
11.1 Personnel compensation: Full-time permanent .....	1	2	3
13.0 Benefits for former personnel .....			1
25.1 Advisory and assistance services .....	3	3	3
25.3 Other goods and services from Federal sources .....	1		
41.0 Grants, subsidies, and contributions .....		177	346
99.0 Direct obligations .....	5	182	353
99.9 Total new obligations, unexpired accounts .....	5	182	353

Employment Summary

Identification code 089-0322-0-1-272	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	11	14	20

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING DIRECT LOAN FINANCING ACCOUNT

Program and Financing (in millions of dollars)

Identification code 089-4579-0-3-272	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
Credit program obligations:			
0710 Direct loan obligations .....		1,496	6,945
0713 Payment of interest to Treasury .....	4	13	14
0715 Interest paid to FFB .....	33	28	40
0742 Downward reestimates paid to receipt accounts .....	13		
0743 Interest on downward reestimates .....	4		
0900 Total new obligations, unexpired accounts .....	54	1,537	6,999

<b>Budgetary resources:</b>				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1 .....	68	20	164
1023	Unobligated balances applied to repay debt .....	-41		
1050	Unobligated balance (total) .....	27	20	164
Financing authority:				
Borrowing authority, mandatory:				
1400	Borrowing authority .....	181	1,522	6,945
1422	Borrowing authority applied to repay debt .....	-170		
1424	Capital transfers of borrowing authority to general fund .....	-11		
1440	Borrowing authority, mandatory (total) .....		1,522	6,945
Spending authority from offsetting collections, mandatory:				
1800	Collected .....	427	251	1,172
1801	Change in uncollected payments, Federal sources .....		101	191
1825	Spending authority from offsetting collections applied to repay debt .....	-380	-193	-958
1850	Spending auth from offsetting collections, mand (total) .....	47	159	405
1900	Budget authority (total) .....	47	1,681	7,350
1930	Total budgetary resources available .....	74	1,701	7,514
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year .....	20	164	515
<b>Change in obligated balance:</b>				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1 .....			935
3010	New obligations, unexpired accounts .....	54	1,537	6,999
3020	Outlays (gross) .....	-54	-602	-2,056
3050	Unpaid obligations, end of year .....		935	5,878
Uncollected payments:				
3060	Uncollected pymts, Fed sources, brought forward, Oct 1 .....			-101
3070	Change in uncollected pymts, Fed sources, unexpired .....		-101	-191
3090	Uncollected pymts, Fed sources, end of year .....		-101	-292
Memorandum (non-add) entries:				
3100	Obligated balance, start of year .....			834
3200	Obligated balance, end of year .....			834
<b>Financing authority and disbursements, net:</b>				
Mandatory:				
4090	Budget authority, gross .....	47	1,681	7,350
Financing disbursements:				
4110	Outlays, gross (total) .....	54	602	2,056
Offsets against gross financing authority and disbursements:				
Offsetting collections (collected) from:				
4120	Payment from program account .....		-61	-154
4120	Upward Reestimate .....		-9	
4120	Interest on Reestimate .....		-6	
4122	Interest on uninvested funds .....	-5	-16	-22
4123	Non-Federal sources (interest) .....	-33	-29	-37
4123	Non-Federal sources (principal) .....	-389	-129	-952
4123	Other Income - Fees .....		-1	-7
4130	Offsets against gross budget authority and outlays (total) .....	-427	-251	-1,172
Additional offsets against financing authority only (total):				
4140	Change in uncollected pymts, Fed sources, unexpired .....		-101	-191
4160	Budget authority, net (mandatory) .....	-380	1,329	5,987
4170	Outlays, net (mandatory) .....	-373	351	884
4180	Budget authority, net (total) .....	-380	1,329	5,987
4190	Outlays, net (total) .....	-373	351	884

**Status of Direct Loans (in millions of dollars)**

Identification code 089-4579-0-3-272	2020 actual	2021 est.	2022 est.	
Position with respect to appropriations act limitation on obligations:				
1121	Limitation available from carry-forward .....	17,719	17,719	16,223
1143	Unobligated limitation carried forward (P.L. 110-329) (-) .....	-17,719	-16,223	-9,278
1150	Total direct loan obligations .....		1,496	6,945
Cumulative balance of direct loans outstanding:				
1210	Outstanding, start of year .....	1,618	1,249	1,680
1231	Disbursements: Direct loan disbursements .....		560	2,002
1251	Repayments: Repayments and prepayments .....	-389	-129	-952
1264	Other adjustments, re-establish receivable written off .....	20		
1290	Outstanding, end of year .....	1,249	1,680	2,730

**Balance Sheet (in millions of dollars)**

Identification code 089-4579-0-3-272	2019 actual	2020 actual	
<b>ASSETS:</b>			
Federal assets:			
1101	Fund balances with Treasury .....	68	20
Investments in U.S. securities:			
1106	Receivables, net .....		34
Net value of assets related to post-1991 direct loans receivable:			
1401	Direct loans receivable, gross .....	1,618	1,249
1402	Interest receivable .....	1	1
1405	Allowance for subsidy cost (-) .....	-52	-76
1499	Net present value of assets related to direct loans .....	1,567	1,174
1999	Total assets .....	1,635	1,228
<b>LIABILITIES:</b>			
Federal liabilities:			
2101	Accounts payable .....		
2103	Debt .....	1,618	1,208
2105	Other .....	17	20
2999	Total liabilities .....	1,635	1,228
<b>NET POSITION:</b>			
3300	Cumulative results of operations .....		
4999	Total upward reestimate subsidy BA [89-0322] .....	1,635	1,228

**TITLE 17 INNOVATIVE TECHNOLOGY LOAN GUARANTEE PROGRAM**

**[(INCLUDING RESCISSION OF FUNDS)]**

**[Such]** For the cost of guaranteed loans, \$150,000,000, to remain available until expended, for innovative technology projects as authorized under Title XVII of the Energy Policy Act of 2005: Provided, That such costs, including the cost of modifying such loans, shall be as defined in section 502 of the Congressional Budget Act of 1974: Provided further, That these funds are available in addition to the authority provided in any other Act for the costs to guarantee loans under the heading "Department of Energy—Energy Programs—Title 17 Innovative Technology Loan Guarantee Program": Provided further, That these funds are available to subsidize total loan principal, any part of which is to be guaranteed, not to exceed \$1,500,000,000: Provided further, That 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 further, That for necessary administrative expenses of the Title 17 Innovative Technology Loan Guarantee Program, as authorized, \$32,000,000 is appropriated, to remain available until September 30, [2022] 2023: Provided further, That up to \$32,000,000 of fees collected in fiscal year [2021] 2022 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, [2022] 2023: Provided further, That to the extent that fees collected in fiscal year [2021] 2022 exceed \$32,000,000, 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 [2021] 2022 (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 [2021] 2022 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, of the unobligated balances available under the heading "Department of Energy—Energy Programs—Title 17—Innovative Technology Loan Guarantee Program" in the American Recovery and Reinvestment Act of 2009 (Public Law 111-5) for the cost of guaranteed loans authorized by section 1705 of the Energy Policy Act of 2005, \$392,000,000 are hereby rescinded: Provided further, That the amounts rescinded pursuant to the preceding proviso that were previously designated by the Congress as an emergency requirement pursuant to section 204(a) of S. Con. Res. 21 (110th Congress) and section 301(b)(2) of S. Con. Res. 70 (110th Congress), the concurrent resolutions on the budget for fiscal years 2008 and 2009, are designated by the Congress as an emergency requirement pursuant to section 251(b)(2)(A)(i) of the Balanced Budget and Emergency Deficit

**TITLE 17 INNOVATIVE TECHNOLOGY LOAN GUARANTEE PROGRAM—Continued**  
**Control Act of 1985]. (Energy and Water Development and Related Agencies Ap-**  
**ropriations Act, 2021.)**

**Program and Financing** (in millions of dollars)

Identification code 089-0208-0-1-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
Credit program obligations:			
0701			59
0705	39	262	
0706	27	34	
0707	36		
0708	12		
0709	32	40	55
0900	146	336	114
<b>Budgetary resources:</b>			
Unobligated balance:			
1000	683	682	282
Budget authority:			
Appropriations, discretionary:			
1100	29	29	179
1131		-392	
1160	29	-363	179
Appropriations, mandatory:			
1200	113	296	
Spending authority from offsetting collections, discretionary:			
1700	3	3	3
1900	145	-64	182
1930	828	618	464
Memorandum (non-add) entries:			
1941	682	282	350
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000	21	21	21
3010	146	336	114
3020	-145	-336	-60
3041	-1		-15
3050	21	21	60
Memorandum (non-add) entries:			
3100	21	21	21
3200	21	21	60
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000	32	-360	182
Outlays, gross:			
4010		10	25
4011	32	30	35
4020	32	40	60
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4033	-3	-3	-3
4040	-3	-3	-3
Mandatory:			
4090	113	296	
Outlays, gross:			
4100	113	296	
4180	142	-67	179
4190	142	333	57

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

Identification code 089-0208-0-1-271	2020 actual	2021 est.	2022 est.
Direct loan levels supportable by subsidy budget authority:			
115001			4,051
115003			845
115999			4,896
Direct loan subsidy (in percent):			
132001			0.00
132003			6.95
132999			1.20
Direct loan subsidy budget authority:			
133003			59
133999			59

Direct loan subsidy outlays:				
134001	Section 1703 FFB Loans (Self Pay)	-62	-45	-10
134003	Section 1703 FFB Loans (EERE)			9
134999	Total subsidy outlays	-62	-45	-1
Direct loan reestimates:				
135001	Section 1703 FFB Loans (Self Pay)	65	190	
135002	Section 1705 FFB Loans	-35	14	
135999	Total direct loan reestimates	30	204	
Guaranteed loan reestimates:				
235002	Section 1705 Loan Guarantees	45	-68	
235999	Total guaranteed loan reestimates	45	-68	
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 (EPAct of 2005) as amended, allows the Department of Energy's (DOE) to provide loan guarantees for innovative energy projects that avoid, reduce, or sequester air pollutants or anthropogenic emissions of greenhouse gases. Eligible technologies include advanced nuclear facilities, coal gasification, carbon sequestration, energy efficiency, renewable energy systems, and other innovative clean energy technologies.

Through the Title 17 loan guarantee program, the Loan Programs Office (LPO) provides access to debt capital for large-scale infrastructure projects in the United States. Eligible projects 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. As of April 2021, \$22.4 billion in loan guarantee authority is available to support projects eligible under Section 1703. In addition, there is \$161 million in appropriated credit subsidy remaining (from the FY 2011 full-year continuing resolution) that can be used for renewable energy and efficient end-use technology projects. Section 1703 requires borrowers to make a payment equal to the credit subsidy cost prior to financial close when appropriated funds are not available.

The Energy Act of 2020 (the Act) changed the way LPO charges and collects administrative fees, including those for third-party consultants. The Act directed the Secretary of Energy "to charge and collect on or after the date of the financial close of an obligation, a fee for a guarantee in an amount that the Secretary determines is sufficient to cover any applicable administrative expenses (including any costs associated with third-party consultants engaged by the Secretary." Previously, LPO charged and collected certain fees prior to financial close and the funds were used to offset LPO's administrative expenses. In addition, borrowers were previously responsible for the costs of third-party consultants engaged by LPO during the due diligence phase. In FY 2022, LPO will utilize anticipated available balances from prior year appropriations to pay the costs of third-party consultants estimated at \$16 million, prior to recouping the costs through fees collected at financial close of future loan guarantees.

The FY 2022 President's Budget requests \$150,000,000 for credit subsidy to support an additional \$1.5 billion of guaranteed loan authority for innovative electric vehicle infrastructure, carbon management, and other clean energy projects that create good paying jobs. In addition, the Budget requests \$32,000,000 for administrative expenses to operate the Title 17 program. The Department estimates that \$3,000,000 will be received from fees pursuant to Section 1702(h) of the Energy Policy Act of 2005 and credited as offsetting collection.



**Object Classification** (in millions of dollars)

Identification code 089-0208-0-1-271	2020 actual	2021 est.	2022 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent .....	10	11	12
11.9 Total personnel compensation .....	10	11	12
12.1 Civilian personnel benefits .....	4	4	6
25.1 Advisory and assistance services .....	13	21	33
25.3 Other goods and services from Federal sources .....	2	3	3
25.7 Operation and maintenance of equipment .....	1		
26.0 Supplies and materials .....	1	1	1
41.0 Grants, subsidies, and contributions .....	115	296	59
99.0 Direct obligations .....	146	336	114
99.9 Total new obligations, unexpired accounts .....	146	336	114

**Employment Summary**

Identification code 089-0208-0-1-271	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	71	77	93

**TITLE 17 INNOVATIVE TECHNOLOGY DIRECT LOAN FINANCING ACCOUNT**

**Program and Financing** (in millions of dollars)

Identification code 089-4455-0-3-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
Credit program obligations:			
0710 Direct loan obligations .....			4,896
0713 Payment of interest to Treasury .....	23	22	19
0715 Interest paid to FFB .....	399	427	440
0742 Downward reestimates paid to receipt accounts .....	24	92	
0743 Interest on downward reestimates .....	11		
0900 Total new obligations, unexpired accounts .....	457	541	5,355
<b>Budgetary resources:</b>			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	821	861	1,238
1023 Unobligated balances applied to repay debt .....	-198	-216	-227
1050 Unobligated balance (total) .....	623	645	1,011
Financing authority:			
Borrowing authority, mandatory:			
1400 Borrowing authority .....	46	106	4,903
Spending authority from offsetting collections, mandatory:			
1800 Collected .....	876	1,325	978
1801 Change in uncollected payments, Federal sources .....			50
1825 Spending authority from offsetting collections applied to repay debt .....	-227	-297	-262
1850 Spending auth from offsetting collections, mand (total) .....	649	1,028	766
1900 Budget authority (total) .....	695	1,134	5,669
1930 Total budgetary resources available .....	1,318	1,779	6,680
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	861	1,238	1,325

**Change in obligated balance:**

Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	4,405	2,430	832
3010 New obligations, unexpired accounts .....	457	541	5,355
3020 Outlays (gross) .....	-2,432	-2,139	-1,704
3050 Unpaid obligations, end of year .....	2,430	832	4,483
Uncollected payments:			
3070 Change in uncollected pymts, Fed sources, unexpired .....			-50
3090 Uncollected pymts, Fed sources, end of year .....			-50
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	4,405	2,430	832
3200 Obligated balance, end of year .....	2,430	832	4,433

**Financing authority and disbursements, net:**

Mandatory:			
4090 Budget authority, gross .....	695	1,134	5,669
Financing disbursements:			
4110 Outlays, gross (total) .....	2,432	2,139	1,704
Offsets against gross financing authority and disbursements:			
Offsetting collections (collected) from:			
4120 Payment from program account .....			-9

4120 Upward reestimate .....	-39	-262	
4120 Interest on reestimate .....	-27	-34	
4122 Interest on uninvested funds .....	-57	-57	-48
4123 Interest payments .....	-460	-463	-473
4123 Principal payments .....	-293	-509	-350
4123 Fees .....			-98
4130 Offsets against gross budget authority and outlays (total) ...	-876	-1,325	-978
Additional offsets against financing authority only (total):			
4140 Change in uncollected pymts, Fed sources, unexpired .....			-50
4160 Budget authority, net (mandatory) .....	-181	-191	4,641
4170 Outlays, net (mandatory) .....	1,556	814	726
4180 Budget authority, net (total) .....	-181	-191	4,641
4190 Outlays, net (total) .....	1,556	814	726

**Status of Direct Loans** (in millions of dollars)

Identification code 089-4455-0-3-271	2020 actual	2021 est.	2022 est.
Position with respect to appropriations act limitation on obligations:			
1121 Limitation available from carry-forward .....	22,422	22,422	22,422
1143 Unobligated limitation carried forward (P.L. xx) (-) .....	-22,422	-22,422	-17,526
1150 Total direct loan obligations .....			4,896
Cumulative balance of direct loans outstanding:			
1210 Outstanding, start of year .....	13,199	14,782	15,759
1231 Disbursements: Direct loan disbursements .....	1,913	1,553	1,235
1251 Repayments: Repayments and prepayments .....	-293	-509	-350
1264 Other adjustments, net (+ or -) [Payment of capitalized interest] .....	-37	-67	-60
1290 Outstanding, end of year .....	14,782	15,759	16,584

**Balance Sheet** (in millions of dollars)

Identification code 089-4455-0-3-271	2019 actual	2020 actual
<b>ASSETS:</b>		
Federal assets:		
1101 Fund balances with Treasury .....	821	860
Investments in U.S. securities:		
1106 Receivables, net .....	209	510
1206 Non-Federal assets: Receivables, net .....	12	12
Net value of assets related to post-1991 direct loans receivable:		
1401 Direct loans receivable, gross .....	13,199	14,782
1402 Interest receivable .....	74	78
1405 Allowance for subsidy cost (-) .....	-429	-872
1499 Net present value of assets related to direct loans .....	12,844	13,988
1999 Total assets .....	13,886	15,370
<b>LIABILITIES:</b>		
Federal liabilities:		
2103 Debt .....	13,552	15,148
2105 Other .....	334	222
2999 Total liabilities .....	13,886	15,370
4999 Total liabilities and net position .....	13,886	15,370

**TRIBAL ENERGY LOAN GUARANTEE PROGRAM**

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, [2022] 2023. (Energy and Water Development and Related Agencies Appropriations Act, 2021.)

**Program and Financing** (in millions of dollars)

Identification code 089-0350-0-1-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
Credit program obligations:			
0702 Loan guarantee subsidy .....			4
0709 Administrative expenses .....	1	2	2
0900 Total new obligations, unexpired accounts .....	1	2	6
<b>Budgetary resources:</b>			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	10	11	11

TRIBAL ENERGY LOAN GUARANTEE PROGRAM—Continued  
Program and Financing—Continued

Identification code 089-0350-0-1-271	2020 actual	2021 est.	2022 est.
<b>Budget authority:</b>			
Appropriations, discretionary:			
1100 Appropriation .....	2	2	2
1930 Total budgetary resources available .....	12	13	13
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	11	11	7
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	1	2	2
3010 New obligations, unexpired accounts .....	1	2	6
3020 Outlays (gross) .....		-2	-3
3050 Unpaid obligations, end of year .....	2	2	5
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	1	2	2
3200 Obligated balance, end of year .....	2	2	5
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000 Budget authority, gross .....	2	2	2
Outlays, gross:			
4010 Outlays from new discretionary authority .....		2	2
4011 Outlays from discretionary balances .....			1
4020 Outlays, gross (total) .....		2	3
4180 Budget authority, net (total) .....	2	2	2
4190 Outlays, net (total) .....		2	3

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

Identification code 089-0350-0-1-271	2020 actual	2021 est.	2022 est.
Guaranteed loan levels supportable by subsidy budget authority:			
215001 Tribal Indian Energy Loan Guarantee Program .....			735
Guaranteed loan subsidy (in percent):			
232001 Tribal Indian Energy Loan Guarantee Program .....			0.56
232999 Weighted average subsidy rate .....	0.00	0.00	0.56
Guaranteed loan subsidy budget authority:			
233001 Tribal Indian Energy Loan Guarantee Program .....			4
Guaranteed loan subsidy outlays:			
234001 Tribal Indian Energy Loan Guarantee Program .....			1

The Tribal Energy Loan Guarantee Program (TELGP) provides access to debt capital for tribal ownership of energy projects and activities that support economic development and tribal sovereignty. TELGP is authorized pursuant to section 2602 of the Energy Policy Act of 1992, as amended by the Energy Policy Act of 2005, to make available up to \$2 billion in partial loan guarantees. The Consolidated Appropriations Act, 2017, (H.R. 244, Public Law 115-31) appropriated \$8.5 million to cover the credit subsidy costs associated with the \$2 billion in available loan authority. The FY 2022 President's Budget requests \$2,000,000 for administrative expenses to operate the TELGP.

Object Classification (in millions of dollars)

Identification code 089-0350-0-1-271	2020 actual	2021 est.	2022 est.
Direct obligations:			
25.1 Advisory and assistance services .....	1	2	2
41.0 Grants, subsidies, and contributions .....			4
99.0 Direct obligations .....	1	2	6
99.9 Total new obligations, unexpired accounts .....	1	2	6

Employment Summary

Identification code 089-0350-0-1-271	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....		5	5

TRIBAL INDIAN ENERGY RESOURCE DEVELOPMENT LOAN GUARANTEE FINANCING ACCOUNT

Program and Financing (in millions of dollars)

Identification code 089-4370-0-3-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
Credit program obligations:			
0711 Default claim payments on principal .....			1
0900 Total new obligations, unexpired accounts .....			1
<b>Budgetary resources:</b>			
Financing authority:			
Spending authority from offsetting collections, mandatory:			
1800 Collected .....			1
1801 Change in uncollected payments, Federal sources .....			3
1850 Spending auth from offsetting collections, mand (total) .....			4
1930 Total budgetary resources available .....			4
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....			3
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3010 New obligations, unexpired accounts .....			1
3020 Outlays (gross) .....			-1
Uncollected payments:			
3070 Change in uncollected pymts, Fed sources, unexpired .....			-3
3090 Uncollected pymts, Fed sources, end of year .....			-3
Memorandum (non-add) entries:			
3200 Obligated balance, end of year .....			-3

Financing authority and disbursements, net:

Mandatory:			
4090 Budget authority, gross .....			4
Financing disbursements:			
4110 Outlays, gross (total) .....			1
Offsets against gross financing authority and disbursements:			
Offsetting collections (collected) from:			
4120 Program Fund Collections .....			-1
Additional offsets against financing authority only (total):			
4140 Change in uncollected pymts, Fed sources, unexpired .....			-3
4180 Budget authority, net (total) .....			
4190 Outlays, net (total) .....			

Status of Guaranteed Loans (in millions of dollars)

Identification code 089-4370-0-3-271	2020 actual	2021 est.	2022 est.
Position with respect to appropriations act limitation on commitments:			
2121 Limitation available from carry-forward .....		2,000	2,000
2142 Uncommitted loan guarantee limitation .....			
2143 Uncommitted limitation carried forward .....		-2,000	-1,265
2150 Total guaranteed loan commitments .....			735
2199 Guaranteed amount of guaranteed loan commitments .....			662
Cumulative balance of guaranteed loans outstanding:			
2210 Outstanding, start of year .....			
2231 Disbursements of new guaranteed loans .....			113
2251 Repayments and prepayments .....			
2263 Adjustments: Terminations for default that result in claim payments .....			
2290 Outstanding, end of year .....			113
Memorandum:			
2299 Guaranteed amount of guaranteed loans outstanding, end of year .....			102
Addendum:			
Cumulative balance of defaulted guaranteed loans that result in loans receivable:			
2310 Outstanding, start of year .....			
2331 Disbursements for guaranteed loan claims .....			1
2351 Repayments of loans receivable .....			
2390 Outstanding, end of year .....			1

TITLE 17 INNOVATIVE TECHNOLOGY GUARANTEED LOAN FINANCING ACCOUNT

Program and Financing (in millions of dollars)

Identification code 089-4577-0-3-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
Credit program obligations:			
0711		21	5
0712		4	5
0742	2	49	
0743	1	19	
0900	3	93	10
<b>Budgetary resources:</b>			
Unobligated balance:			
1000	135	194	108
Financing authority:			
Borrowing authority, mandatory:			
1400		4	
Spending authority from offsetting collections, mandatory:			
1800	62	3	18
1825			-4
1850	62	3	14
1900	62	7	14
1930	197	201	122
Memorandum (non-add) entries:			
1941	194	108	112
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3010	3	93	10
3020	-3	-93	-10
Uncollected payments:			
3060	-9	-9	-9
3090	-9	-9	-9
Memorandum (non-add) entries:			
3100	-9	-9	-9
3200	-9	-9	-9
<b>Financing authority and disbursements, net:</b>			
Mandatory:			
4090	62	7	14
Financing disbursements:			
4110	3	93	10
Offsets against gross financing authority and disbursements:			
Offsetting collections (collected) from:			
4120	-36		
4120	-12		
4122	-6	-3	-3
4123			-13
4123			-2
4123	-8		
4130	-62	-3	-18
4160		4	-4
4170	-59	90	-8
4180		4	-4
4190	-59	90	-8

Status of Guaranteed Loans (in millions of dollars)

Identification code 089-4577-0-3-271	2020 actual	2021 est.	2022 est.
Position with respect to appropriations act limitation on commitments:			
2121			
2143			
2150			
Cumulative balance of guaranteed loans outstanding:			
2210	2,528	2,000	1,870
2231			
2251	-528	-109	-126
2261		-21	-5
2290	2,000	1,870	1,739

Memorandum:				
2299	Guaranteed amount of guaranteed loans outstanding, end of year	1,600	1,496	1,391
Addendum:				
Cumulative balance of defaulted guaranteed loans that result in loans receivable:				
2310	Outstanding, start of year			25
2331	Disbursements for guaranteed loan claims	21		5
2351	Repayments of loans receivable			-15
2364	Other adjustments, net	4		5
2390	Outstanding, end of year		25	20

Balance Sheet (in millions of dollars)

Identification code 089-4577-0-3-271	2019 actual	2020 actual
<b>ASSETS:</b>		
Federal assets:		
1101	138	184
Investments in U.S. securities:		
1106		
1501		
1999	138	184
<b>LIABILITIES:</b>		
Federal liabilities:		
2101		
2105	22	67
2204	116	117
2999	138	184
<b>NET POSITION:</b>		
3300		
4999	138	184

POWER MARKETING ADMINISTRATION

Federal Funds

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, **[\$7,246,000] \$7,184,000**, 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 **[\$7,246,000] \$7,184,000** 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 **[2021] 2022** appropriation estimated at not more than \$0: *Provided further*, That notwithstanding 31 U.S.C. 3302, up to **[\$52,000,000] \$74,986,000** 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, 2021.*)

Program and Financing (in millions of dollars)

Identification code 089-0302-0-1-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001		52	75
0002		7	7
0799		59	82
0801	42		
0802	7		
0899	49		

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

Identification code 089-0302-0-1-271	2020 actual	2021 est.	2022 est.
0900 Total new obligations, unexpired accounts .....	49	59	82
<b>Budgetary resources:</b>			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	16	20	20
Budget authority:			
Spending authority from offsetting collections, discretionary:			
1700 Collected .....	53	59	82
1900 Budget authority (total) .....	53	59	82
1930 Total budgetary resources available .....	69	79	102
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	20	20	20
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	7	4	3
3010 New obligations, unexpired accounts .....	49	59	82
3020 Outlays (gross) .....	-52	-60	-81
3050 Unpaid obligations, end of year .....	4	3	4
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	7	4	3
3200 Obligated balance, end of year .....	4	3	4
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000 Budget authority, gross .....	53	59	82
Outlays, gross:			
4010 Outlays from new discretionary authority .....	30	57	79
4011 Outlays from discretionary balances .....	22	3	2
4020 Outlays, gross (total) .....	52	60	81
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4033 Non-Federal sources .....	-53	-59	-82
4040 Offsets against gross budget authority and outlays (total) ....	-53	-59	-82
4180 Budget authority, net (total) .....			
4190 Outlays, net (total) .....	-1	1	-1

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

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

**Program Direction.**—Provision is made for negotiation and administration of transmission and power contracts, collection of revenues, accounting and budget activities, development of wholesale power rates, amortization of the Federal power investment, energy efficiency and competitiveness program, investigation and planning of proposed water resources projects, scheduling and dispatch of power generation, scheduling storage and release of water, administration of contractual operation requirements, and determination of methods of operating generating plants individually and in coordination with others to obtain maximum utilization of resources.

**Purchase Power and Wheeling.**—Provision is made for the payment of wheeling fees and for the purchase of electricity in connection with the disposal of power under contracts with utility companies. Customers are encouraged to use alternative funding mechanisms, including customer advances and net billing to finance these activities. Offsetting collections to fund these ongoing operating services are also available up to 52 million in 2021. As of the end of FY 2020, Southeastern's PPW reserve balance was \$18 million.

DISCRETIONARY PURCHASE POWER AND WHEELING, SOUTHEASTERN POWER ADMINISTRATION

	(in millions of dollars)				
	2018 Actual	2019 Actual	2020 Actual	2021 Estimate	2022 Estimate
Limitation to collect, ('up to' ceiling in appropriations language) .....	51	55	56	52	75
Actual collections .....	49	42	46	52	75
PPW Unobligated balance brought forward, Oct 1 .....	17	12	14	18	14
Spending authority from offsetting collections .....	49	42	46	52	75
Obligations incurred .....	-55	-40	-42	-56	-75
PPW Unobligated balance, end of year .....	12	14	18	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	2020 actual	2021 est.	2022 est.
<b>Direct obligations:</b>			
11.1 Personnel compensation: Full-time permanent .....		4	4
12.1 Civilian personnel benefits .....		1	1
25.2 Purchase Power and Wheeling .....		52	75
25.2 Other services from non-Federal sources .....		2	2
99.0 Direct obligations .....		59	82
99.0 Reimbursable obligations .....	49		
99.9 Total new obligations, unexpired accounts .....	49	59	82

Employment Summary

Identification code 089-0302-0-1-271	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	40	44	44

CONTINUING FUND, SOUTHEASTERN POWER ADMINISTRATION

A continuing fund maintained from receipts from the sale and transmission of electric power in the Southeastern service area is available to defray emergency expenses necessary to ensure continuity of service (16 U.S.C. 825s-2). The fund was last activated in 2018 to finance power purchases associated with heightened demand and cost spikes due to severe cold weather. Consistent with sound business practices, the Southeastern Power Administration has implemented a policy to recover all emergency costs associated with purchased power and wheeling within one year from the time funds are expended.

OPERATION AND MAINTENANCE, SOUTHWESTERN POWER ADMINISTRATION

For expenses necessary for operation and maintenance of power transmission facilities and for marketing electric power and energy, for construction and acquisition of transmission lines, substations and appurtenant facilities, and for administrative expenses, including official reception and representation expenses in an amount not to exceed \$1,500 in carrying out section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), as applied to the Southwestern Power Administration, **[\$47,540,000] \$48,324,000**, 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 **[\$37,140,000] \$37,924,000** 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 [2021] 2022 appropriation estimated at not more than \$10,400,000: *Provided further*, That notwithstanding 31 U.S.C. 3302, up to [\$34,000,000] \$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, 2021.*)

**Program and Financing** (in millions of dollars)

Identification code 089-0303-0-1-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 Systems operation and maintenance .....	3	2	2
0003 Construction .....	7	5	5
0004 Program direction .....	3	3	3
0010 Annual Expenses .....	37	37	37
0020 Purchase Power and Wheeling .....	34	34	70
0200 Direct program subtotal .....	13	81	117
0799 Total direct obligations .....	13	81	117
0801 Annual expenses .....	37	37	37
0805 Purchase power and wheeling .....	24	24	24
0810 Other reimbursable activities .....	46	52	51
0899 Total reimbursable obligations .....	107	52	51
0900 Total new obligations, unexpired accounts .....	120	133	168
<b>Budgetary resources:</b>			
Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	98	108	107
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....	10	10	10
Spending authority from offsetting collections, discretionary:			
1700 Collected .....	120	122	158
1900 Budget authority (total) .....	130	132	168
1930 Total budgetary resources available .....	228	240	275
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	108	107	107
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	110	152	117
3010 New obligations, unexpired accounts .....	120	133	168
3020 Outlays (gross) .....	-78	-168	-140
3050 Unpaid obligations, end of year .....	152	117	145
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	110	152	117
3200 Obligated balance, end of year .....	152	117	145
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000 Budget authority, gross .....	130	132	168
Outlays, gross:			
4010 Outlays from new discretionary authority .....	28	55	69
4011 Outlays from discretionary balances .....	50	113	71
4020 Outlays, gross (total) .....	78	168	140
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources .....	-3	-6	-6
4033 Non-Federal sources .....	-117	-116	-152
4040 Offsets against gross budget authority and outlays (total) ....	-120	-122	-158
4070 Budget authority, net (discretionary) .....	10	10	10
4080 Outlays, net (discretionary) .....	-42	46	-18
4180 Budget authority, net (total) .....	10	10	10
4190 Outlays, net (total) .....	-42	46	-18

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 communica-

tion 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, and customer advances are used to fund system-purchased power support and other contractual services. Southwestern has implemented a Purchase Power and Wheeling (PPW) risk mitigation strategy to ensure continuous operations during periods of significant drought. The strategy was developed consistent with existing authorities, and with the participation and support of Southwestern's power customers. Under this approach, Southwestern retains receipts from the recovery of purchase power and wheeling expenses within the 'up to' amount specified by Congress. The receipts retained are available until expended and are available only for PPW expenses. As of the end of FY 2020, Southwestern's PPW reserve balance was \$88 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)				
	2018 Actual	2019 Actual	2020 Actual	2021 Estimate <sup>1</sup>	2022 Estimate <sup>1</sup>
Limitation to collect, ('up to' ceiling in appropriations language) .....	40	50	43	34	70
Actual collections .....	40	36	43	34	70
PPW Unobligated balance brought forward, Oct 1 .....	85	69	86	88	84
Spending authority from offsetting collections .....	40	36	26	34	70
Obligations incurred .....	-56	-19	-24	-38	-70
PPW Unobligated balance, end of year .....	69	86	88	84	84

<sup>1</sup>The FY 2021 and FY 2022 Estimates assume spending authority from offsetting collections equals the 'up to' ceiling and that obligations incurred are the same amount as the spending authority for FY 2022. 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	2020 actual	2021 est.	2022 est.
11.1 Direct obligations: Personnel compensation: Full-time permanent .....	2	18	18

OPERATION AND MAINTENANCE, SOUTHWESTERN POWER ADMINISTRATION—Continued  
**Object Classification—Continued**

Identification code 089-0303-0-1-271	2020 actual	2021 est.	2022 est.
11.9 Total personnel compensation .....	2	18	18
12.1 Civilian personnel benefits .....		6	6
21.0 Travel and transportation of persons .....	1	2	2
23.1 Rental payments to GSA .....		1	1
23.3 Communications, utilities, and miscellaneous charges .....		1	1
25.2 Other services from non-Federal sources .....	10	37	73
25.3 Other goods and services from Federal sources .....		1	1
25.4 Operation and maintenance of facilities .....		4	4
26.0 Supplies and materials .....		2	2
31.0 Equipment .....		9	9
99.0 Direct obligations .....	13	81	117
99.0 Reimbursable obligations .....	107	52	51
99.9 Total new obligations, unexpired accounts .....	120	133	168

**Employment Summary**

Identification code 089-0303-0-1-271	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	10	172	172
2001 Reimbursable civilian full-time equivalent employment .....	155	22	22

CONTINUING FUND, SOUTHWESTERN POWER ADMINISTRATION

**Program and Financing** (in millions of dollars)

Identification code 089-5649-0-2-271	2020 actual	2021 est.	2022 est.
4180 Budget authority, net (total) .....			
4190 Outlays, net (total) .....			
<b>Memorandum (non-add) entries:</b>			
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 Power Administration service area, is available permanently for emergency expenses necessary to ensure continuity of electric service and continuous operation of the facilities. The fund is also available on an ongoing basis to pay for purchase power and wheeling expenses when the Administrator determines that such expenses are necessary to meet contractual obligations for the sale and delivery of power during periods of below-average generation (16 U.S.C. 825s-1 as amended further by Public Law 101-101). The fund was last activated in FY 2009 to repair and replace damaged transmission lines due to an ice storm.

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

For carrying out the functions authorized by title III, section 302(a)(1)(E) of the Act of August 4, 1977 (42 U.S.C. 7152), and other related activities including conservation and renewable resources programs as authorized, **[\$259,126,000]** \$285,237,000, including official reception and representation expenses in an amount not to exceed \$1,500, to remain available until expended, of which **[\$259,126,000]** \$285,237,000 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 **[\$169,754,000]** \$194,465,000 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 **[2021]** 2022 appropriation estimated at not more than **[\$89,372,000]** \$90,772,000, of which **[\$89,372,000]** \$90,772,000 is derived from the Reclamation Fund: *Provided further*, That notwithstanding 31 U.S.C. 3302, up to **[\$192,000,000]** \$316,000,000 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). (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

**Program and Financing** (in millions of dollars)

Identification code 089-5068-0-2-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 Systems operation and maintenance .....	43	46	46
0004 Program direction .....	43	47	41
0010 Annual Expenses .....		185	194
0011 Purchase Power and Wheeling .....		192	223
0091 Direct Program by Activities - Subtotal (1 level) .....	86	470	504
0100 Total operating expenses .....	86	470	504
0101 Capital investment .....	7	7	4
0799 Total direct obligations .....	93	477	508
0802 Purchase Power and Wheeling .....	147		
0803 Annual Expenses .....	174		
0804 Other Reimbursable .....	306	748	655
0809 Reimbursable program activities, subtotal .....	627	748	655
0899 Total reimbursable obligations .....	627	748	655
0900 Total new obligations, unexpired accounts .....	720	1,225	1,163

**Budgetary resources:**

<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1 .....	689	704	713
1021 Recoveries of prior year unpaid obligations .....	3		
1050 Unobligated balance (total) .....	692	704	713
<b>Budget authority:</b>			
<b>Appropriations, discretionary:</b>			
1101 Appropriation (special or trust) .....	89	89	91
<b>Spending authority from offsetting collections, discretionary:</b>			
1700 Collected .....	630	1,145	1,165
1701 Change in uncollected payments, Federal sources .....	13		
1750 Spending auth from offsetting collections, disc (total) .....	643	1,145	1,165
1900 Budget authority (total) .....	732	1,234	1,256
1930 Total budgetary resources available .....	1,424	1,938	1,969
<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year .....	704	713	806

**Change in obligated balance:**

<b>Unpaid obligations:</b>			
3000 Unpaid obligations, brought forward, Oct 1 .....	265	273	890
3010 New obligations, unexpired accounts .....	720	1,225	1,163
3020 Outlays (gross) .....	-709	-608	-939
3040 Recoveries of prior year unpaid obligations, unexpired .....	-3		
3050 Unpaid obligations, end of year .....	273	890	1,114
<b>Uncollected payments:</b>			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1 .....	-29	-42	-42
3070 Change in uncollected pymts, Fed sources, unexpired .....	-13		
3090 Uncollected pymts, Fed sources, end of year .....	-42	-42	-42
<b>Memorandum (non-add) entries:</b>			
3100 Obligated balance, start of year .....	236	231	848
3200 Obligated balance, end of year .....	231	848	1,072

**Budget authority and outlays, net:**

<b>Discretionary:</b>			
4000 Budget authority, gross .....	732	1,234	1,256
<b>Outlays, gross:</b>			
4010 Outlays from new discretionary authority .....	244	384	391
4011 Outlays from discretionary balances .....	465	224	548
4020 Outlays, gross (total) .....	709	608	939
<b>Offsets against gross budget authority and outlays:</b>			
<b>Offsetting collections (collected) from:</b>			
4030 Federal sources .....	-163	-354	-218
4033 Non-Federal sources .....	-467	-791	-947
4040 Offsets against gross budget authority and outlays (total) ....	-630	-1,145	-1,165
<b>Additional offsets against gross budget authority only:</b>			
4050 Change in uncollected pymts, Fed sources, unexpired .....	-13		
4070 Budget authority, net (discretionary) .....	89	89	91

4080	Outlays, net (discretionary) .....	79	-537	-226
4180	Budget authority, net (total) .....	89	89	91
4190	Outlays, net (total) .....	79	-537	-226

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 2020, WAPA's PPW reserve balance was \$393 million.

**DISCRETIONARY PURCHASE POWER AND WHEELING, WESTERN AREA POWER ADMINISTRATION<sup>1</sup>**

	(in millions of dollars)				
	2018 Actual	2019 Actual	2020 Actual	2021 Estimate	2022 Estimate
Limitation to collect, ('up to' ceiling in appropriations language) .....	209	225	227	192	316
Actual collections .....	209	225	171	192	316
PPW Unobligated balance brought forward, Oct 1 .....	239	282	362	393	300
Spending authority from offsetting collections .....	209	225	227	192	316
Obligations incurred .....	-166	-145	-147	-285	-223
PPW Unobligated balance, end of year .....	282	362	393	300	393

<sup>1</sup>Excludes 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 also support responses to natural disasters - to restore the energy infrastructure and access to power.

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

**Object Classification (in millions of dollars)**

Identification code 089-5068-0-2-271	2020 actual	2021 est.	2022 est.
<b>Direct obligations:</b>			
<b>Personnel compensation:</b>			
11.1 Full-time permanent .....	17	99	101
11.5 Other personnel compensation .....	3	7	7
11.9 Total personnel compensation .....	20	106	108
12.1 Civilian personnel benefits .....	7	32	35
21.0 Travel and transportation of persons .....	1	8	8
22.0 Transportation of things .....	1		
23.1 Rental payments to GSA .....		2	2
23.3 Communications, utilities, and miscellaneous charges .....	3	6	6
25.1 Advisory and assistance services .....	8	34	29
25.2 Other services from non-Federal sources .....	10	221	249
25.3 Other goods and services from Federal sources .....		3	3
25.7 Operation and maintenance of equipment .....		8	9
26.0 Supplies and materials .....	3	9	10
31.0 Equipment .....	19	15	27
32.0 Land and structures .....	21	33	22
99.0 Direct obligations .....	93	477	508
99.0 Reimbursable obligations .....	627	748	655
99.9 Total new obligations, unexpired accounts .....	720	1,225	1,163

**Employment Summary**

Identification code 089-5068-0-2-271	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	151	857	852
2001 Reimbursable civilian full-time equivalent employment .....	1,023	359	350

**WESTERN AREA POWER ADMINISTRATION, BORROWING AUTHORITY, RECOVERY ACT**

**Program and Financing (in millions of dollars)**

Identification code 089-4404-0-3-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0102 Transmission Infrastructure Program Projects .....		100	1,200
0811 Western Area Power Administration, Borrowing Authority, Recovery (Reimbursable) .....	6	12	31
0900 Total new obligations, unexpired accounts .....	6	112	1,231
<b>Budgetary resources:</b>			
<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1 .....	13	13	13
1001 Discretionary unobligated balance brought fwd, Oct 1 .....	5		
<b>Budget authority:</b>			
<b>Borrowing authority, mandatory:</b>			
1400 Borrowing authority .....		106	1,273
1421 Borrowing authority temporarily reduced .....		-6	-73

WESTERN AREA POWER ADMINISTRATION, BORROWING AUTHORITY, RECOVERY ACT—Continued

Program and Financing—Continued

Identification code 089-4404-0-3-271	2020 actual	2021 est.	2022 est.
1440 Borrowing authority, mandatory (total) .....		100	1,200
Spending authority from offsetting collections, discretionary:			
1700 Collected .....	2	7	26
Spending authority from offsetting collections, mandatory:			
1800 Collected .....	4	5	5
1900 Budget authority (total) .....	6	112	1,231
1930 Total budgetary resources available .....	19	125	1,244
Memorandum (non-add) entries:			
1941 Unexpired unobligated balance, end of year .....	13	13	13
<b>Change in obligated balance:</b>			
Unpaid obligations:			
3000 Unpaid obligations, brought forward, Oct 1 .....	20	21	22
3010 New obligations, unexpired accounts .....	6	112	1,231
3020 Outlays (gross) .....	-5	-111	-611
3050 Unpaid obligations, end of year .....	21	22	642
Memorandum (non-add) entries:			
3100 Obligated balance, start of year .....	20	21	22
3200 Obligated balance, end of year .....	21	22	642
<b>Budget authority and outlays, net:</b>			
Discretionary:			
4000 Budget authority, gross .....	2	7	26
Outlays, gross:			
4010 Outlays from new discretionary authority .....		7	26
4011 Outlays from discretionary balances .....	3	3	2
4020 Outlays, gross (total) .....	3	10	28
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4030 Federal sources .....	-2	-2	-2
4033 Non-Federal sources .....		-5	-24
4040 Offsets against gross budget authority and outlays (total) ....	-2	-7	-26
4080 Outlays, net (discretionary) .....	1	3	2
Mandatory:			
4090 Budget authority, gross .....	4	105	1,205
Outlays, gross:			
4100 Outlays from new mandatory authority .....		84	557
4101 Outlays from mandatory balances .....	2	17	26
4110 Outlays, gross (total) .....	2	101	583
Offsets against gross budget authority and outlays:			
Offsetting collections (collected) from:			
4123 Non-Federal sources .....	-4	-5	-5
4180 Budget authority, net (total) .....		100	1,200
4190 Outlays, net (total) .....	-1	99	580

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	2020 actual	2021 est.	2022 est.
25.2 Direct obligations: Other services from non-Federal sources .....		100	1,200
99.0 Direct obligations .....		100	1,200
Reimbursable obligations:			
11.1 Personnel compensation: Full-time permanent .....	1	1	1
25.2 Other services from non-Federal sources .....	3	6	7
43.0 Interest and dividends .....	2	5	23
99.0 Reimbursable obligations .....	6	12	31
99.9 Total new obligations, unexpired accounts .....	6	112	1,231

Employment Summary

Identification code 089-4404-0-3-271	2020 actual	2021 est.	2022 est.
2001 Reimbursable civilian full-time equivalent employment .....	5	11	11

EMERGENCY FUND, WESTERN AREA POWER ADMINISTRATION

Program and Financing (in millions of dollars)

Identification code 089-5069-0-2-271	2020 actual	2021 est.	2022 est.
<b>Budgetary resources:</b>			
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) .....			
<b>Memorandum (non-add) entries:</b>			
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, **[\$5,776,000]** \$5,808,000, 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 **[\$5,548,000]** \$5,580,000 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 **[2021]** 2022 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 **[2021]** 2022, the Administrator of the Western Area Power Administration may accept up to **[\$1,526,000]** \$1,737,000 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, 2021.*)

Special and Trust Fund Receipts (in millions of dollars)

Identification code 089-5178-0-2-271	2020 actual	2021 est.	2022 est.
0100 Balance, start of year .....	11	11	13
0198 Reconciliation adjustment .....	-2		
0199 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	2020 actual	2021 est.	2022 est.	
<b>Obligations by program activity:</b>				
0001	Annual Expenses .....	6	6	6
0100	Direct program activities, subtotal .....	6	6	6
0801	Reimbursable program activity - Annual expenses .....	4		
0802	Reimbursable program activity - Alternative Financing .....	1	2	2
0899	Total reimbursable obligations .....	5	2	2
0900	Total new obligations, unexpired accounts .....	5	8	8
<b>Budgetary resources:</b>				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1 .....	3	1	
Budget authority:				
Spending authority from offsetting collections, discretionary:				
1700	Offsetting collections .....	3	7	8
1930	Total budgetary resources available .....	6	8	8
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year .....	1		
<b>Change in obligated balance:</b>				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1 .....	5	6	6
3010	New obligations, unexpired accounts .....	5	8	8
3020	Outlays (gross) .....	-4	-8	-10
3050	Unpaid obligations, end of year .....	6	6	4
Memorandum (non-add) entries:				
3100	Obligated balance, start of year .....	5	6	6
3200	Obligated balance, end of year .....	6	6	4
<b>Budget authority and outlays, net:</b>				
Discretionary:				
4000	Budget authority, gross .....	3	7	8
Outlays, gross:				
4010	Outlays from new discretionary authority .....		5	5
4011	Outlays from discretionary balances .....	4	3	5
4020	Outlays, gross (total) .....	4	8	10
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4033	Non-Federal sources .....	-3	-7	-8
4180	Budget authority, net (total) .....			
4190	Outlays, net (total) .....	1	1	2

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

**Object Classification** (in millions of dollars)

Identification code 089-5178-0-2-271	2020 actual	2021 est.	2022 est.	
25.3	Direct obligations: Other goods and services from Federal sources .....	6	6	6
99.0	Reimbursable obligations .....	5	2	2

99.9	Total new obligations, unexpired accounts .....	5	8	8
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**COLORADO RIVER BASINS POWER MARKETING FUND, WESTERN AREA POWER ADMINISTRATION**

**Program and Financing** (in millions of dollars)

Identification code 089-4452-0-3-271	2020 actual	2021 est.	2022 est.	
<b>Obligations by program activity:</b>				
0801	Program direction .....	67	70	74
0802	Equipment, Contracts and Related Expenses .....	107	175	163
0900	Total new obligations, unexpired accounts .....	174	245	237
<b>Budgetary resources:</b>				
Unobligated balance:				
1000	Unobligated balance brought forward, Oct 1 .....	155	142	142
Budget authority:				
Spending authority from offsetting collections, discretionary:				
1700	Collected .....	182	266	258
1710	Spending authority from offsetting collections transferred to other accounts [014-4081] .....	-21	-21	
1720	Capital transfer of spending authority from offsetting collections to general fund .....			-21
1750	Spending auth from offsetting collections, disc (total) .....	161	245	237
1930	Total budgetary resources available .....	316	387	379
Memorandum (non-add) entries:				
1941	Unexpired unobligated balance, end of year .....	142	142	142
<b>Change in obligated balance:</b>				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1 .....	52	53	68
3010	New obligations, unexpired accounts .....	174	245	237
3020	Outlays (gross) .....	-173	-230	-242
3050	Unpaid obligations, end of year .....	53	68	63
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 .....	51	52	67
3200	Obligated balance, end of year .....	52	67	62
<b>Budget authority and outlays, net:</b>				
Discretionary:				
4000	Budget authority, gross .....	161	245	237
Outlays, gross:				
4010	Outlays from new discretionary authority .....	55	55	53
4011	Outlays from discretionary balances .....	118	175	189
4020	Outlays, gross (total) .....	173	230	242
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources .....	-5	-5	-5
4033	Non-Federal sources .....	-177	-261	-253
4040	Offsets against gross budget authority and outlays (total) .....	-182	-266	-258
4070	Budget authority, net (discretionary) .....	-21	-21	-21
4080	Outlays, net (discretionary) .....	-9	-36	-16
4180	Budget authority, net (total) .....	-21	-21	-21
4190	Outlays, net (total) .....	-9	-36	-16

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

*Seedskaadee 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.

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

*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	2020 actual	2021 est.	2022 est.
<b>Reimbursable obligations:</b>			
<b>Personnel compensation:</b>			
11.1 Full-time permanent .....	33	32	34
11.5 Other personnel compensation .....	4	5	5
11.9 Total personnel compensation .....	37	37	39
12.1 Civilian personnel benefits .....	13	12	13
21.0 Travel and transportation of persons .....	1	2	2
22.0 Transportation of things .....	1	1	1
23.1 Rental payments to GSA .....	1	1	1
23.3 Communications, utilities, and miscellaneous charges .....	2	2	2
25.1 Advisory and assistance services .....	6	7	7
25.2 Other services from non-Federal sources .....	72	124	115
25.3 Other goods and services from Federal sources .....	20	28	29
25.7 Operation and maintenance of equipment .....	5	7	5
26.0 Supplies and materials .....	2	3	4
31.0 Equipment .....	4	6	5
32.0 Land and structures .....	10	12	12
43.0 Interest and dividends .....		3	2
99.9 Total new obligations, unexpired accounts .....	174	245	237

**Employment Summary**

Identification code 089-4452-0-3-271	2020 actual	2021 est.	2022 est.
2001 Reimbursable civilian full-time equivalent employment .....	290	294	308

**BONNEVILLE POWER ADMINISTRATION FUND**

Expenditures from the Bonneville Power Administration Fund, established pursuant to Public Law 93-454, are approved for *the Umatilla Hatchery Facility project and, in addition, for official reception and representation expenses in an amount not to exceed \$5,000; Provided, That during fiscal year [2021] 2022, no new direct loan obligations may be made. (Energy and Water Development and Related Agencies Appropriations Act, 2021.)*

**Program and Financing** (in millions of dollars)

Identification code 089-4045-0-3-271	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0801 Power business line .....	1,288	944	871

0802 Residential exchange .....	250	250	259
0803 Bureau of Reclamation .....	153	152	153
0804 Corp of Engineers .....	240	253	253
0805 Colville settlement / Spokane settlement .....	18	23	28
0806 U.S. Fish & Wildlife .....	32	30	31
0807 Planning council .....	11	12	12
0808 Fish and Wildlife .....	226	249	247
0809 Reimbursable program activities, subtotal .....	2,218	1,913	1,854
0811 Transmission business line .....	482	482	508
0812 Conservation and energy efficiency .....	140	157	156
0813 Interest .....	208	193	184
0814 Pension and health benefits .....	29	40	31
0819 Reimbursable program activities, subtotal .....	859	872	879
0821 Power business line .....	178	272	264
0822 Transmission services .....	280	484	497
0824 Fish and Wildlife .....	40	47	43
0825 Capital Equipment .....	21	22	22
0826 Projects funded in advance .....	89	70	56
0829 Reimbursable program activities, subtotal .....	608	895	882
0900 Total new obligations, unexpired accounts .....	3,685	3,680	3,615

**Budgetary resources:**

<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1 .....	11	10	225
1023 Unobligated balances applied to repay debt .....			-217
1050 Unobligated balance (total) .....	11	10	8
<b>Budget authority:</b>			
<b>Borrowing authority, mandatory:</b>			
1400 Borrowing authority .....	765	826	826
<b>Contract authority, mandatory:</b>			
1600 Contract authority .....	2,519		
<b>Spending authority from offsetting collections, mandatory:</b>			
1800 Collected .....	3,629	3,843	3,941
1801 Change in uncollected payments, Federal sources .....	16		
1802 Offsetting collections (previously unavailable) .....	9	7	7
1823 New and/or unobligated balance of spending authority from offsetting collections temporarily reduced .....	-8	-7	-7
1825 Spending authority from offsetting collections applied to repay debt .....	-396	-774	-696
1826 Spending authority from offsetting collections applied to liquidate contract authority .....	-2,850		
1850 Spending auth from offsetting collections, mand (total) .....	400	3,069	3,245
1900 Budget authority (total) .....	3,684	3,895	4,071
1930 Total budgetary resources available .....	3,695	3,905	4,079
<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year .....	10	225	464

**Change in obligated balance:**

<b>Unpaid obligations:</b>			
3000 Unpaid obligations, brought forward, Oct 1 .....	3,368	3,380	3,377
3010 New obligations, unexpired accounts .....	3,685	3,680	3,615
3020 Outlays (gross) .....	-3,673	-3,683	-3,618
3050 Unpaid obligations, end of year .....	3,380	3,377	3,374
<b>Uncollected payments:</b>			
3060 Uncollected pymts, Fed sources, brought forward, Oct 1 .....	-333	-349	-349
3070 Change in uncollected pymts, Fed sources, unexpired .....	-16		
3090 Uncollected pymts, Fed sources, end of year .....	-349	-349	-349
<b>Memorandum (non-add) entries:</b>			
3100 Obligated balance, start of year .....	3,035	3,031	3,028
3200 Obligated balance, end of year .....	3,031	3,028	3,025

**Budget authority and outlays, net:**

<b>Mandatory:</b>			
4090 Budget authority, gross .....	3,684	3,895	4,071
<b>Outlays, gross:</b>			
4100 Outlays from new mandatory authority .....	3,572	3,055	3,418
4101 Outlays from mandatory balances .....	101	628	200
4110 Outlays, gross (total) .....	3,673	3,683	3,618
<b>Offsets against gross budget authority and outlays:</b>			
<b>Offsetting collections (collected) from:</b>			
4120 Federal sources .....	-55	-90	-90
4121 Interest on Federal securities .....	-2	-2	-2
4123 Non-Federal sources .....	-3,572	-3,751	-3,849
4130 Offsets against gross budget authority and outlays (total) .....	-3,629	-3,843	-3,941
<b>Additional offsets against gross budget authority only:</b>			
4140 Change in uncollected pymts, Fed sources, unexpired .....	-16		
4160 Budget authority, net (mandatory) .....	39	52	130
4170 Outlays, net (mandatory) .....	44	-160	-323
4180 Budget authority, net (total) .....	39	52	130

4190	Outlays, net (total) .....	44	-160	-323
<b>Memorandum (non-add) entries:</b>				
5000	Total investments, SOY: Federal securities: Par value .....	137	491	491
5001	Total investments, EOY: Federal securities: Par value .....	491	491	491
5052	Obligated balance, SOY: Contract authority .....	2,850	2,519	2,519
5053	Obligated balance, EOY: Contract authority .....	2,519	2,519	2,519
5090	Unexpired unavailable balance, SOY: Offsetting collections .....	9	8	8
5092	Unexpired unavailable balance, EOY: Offsetting collections .....	8	8	8

**Status of Direct Loans** (in millions of dollars)

Identification code 089-4045-0-3-271	2020 actual	2021 est.	2022 est.
Cumulative balance of direct loans outstanding:			
1210 Outstanding, start of year .....	2	2	2
1290 Outstanding, end of year .....	2	2	2

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

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

BPA finances its operations with a business-type budget under the Government Corporation Control Act, 31 U.S.C. 9101-10, on the basis of the self-financing authority provided by the Federal Columbia River Transmission System Act of 1974 (Transmission Act) (Public Law 93-454) and the U.S. Treasury borrowing authority provided by the Transmission Act, the Pacific Northwest Electric Power Planning and Conservation Act (Pacific Northwest Power Act) (Public Law 96-501) for energy conservation, renewable energy resources, capital fish facilities, and other purposes, the American Recovery and Reinvestment Act of 2009 (Public Law 111-5), and other legislation. Authority to borrow from the U.S. Treasury is available to the BPA on a permanent, indefinite basis. The amount of U.S. Treasury borrowing outstanding at any time cannot exceed \$7.70 billion. BPA finances its approximate \$4.3 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 2022.

**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 2022 capital obligations are estimated to be \$826.2 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 2020, BPA had outstanding bonds with the U.S. Treasury of \$5,649 million. At the end of 2020, BPA also had \$7,320.3 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 2020, BPA made payments to the Treasury of \$736 million and also expects to make payments of \$ 1,007 million in 2021 and \$963 million in 2022. The 2022 payment is expected to be distributed as follows: interest on bonds and appropriations ( \$220 million), amortization ( \$696 million), and other ( \$47 million). BPA also received credits totaling approximately \$95.5 million applied against its Treasury payments in 2020 to reflect

BONNEVILLE POWER ADMINISTRATION FUND—Continued

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 2022, no new direct loan obligations may be made.

*Operating Results.*—Total revenues are forecast at approximately \$3.9 billion in 2022.

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	2019 actual	2020 actual
<b>ASSETS:</b>		
Federal assets:		
1101 Fund balances with Treasury .....	84	55
Investments in U.S. securities:		
1106 Receivables, net .....	138	493
1206 Non-Federal assets: Receivables, net .....	332	348
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 .....	106	108
1803 Property, plant and equipment, net .....	7,455	7,581
1901 Other assets .....	14,094	13,457
1999 Total assets .....	22,209	22,042
<b>LIABILITIES:</b>		
Federal liabilities:		
2102 Interest payable .....	88	84
2103 Debt .....	7,552	7,888
Non-Federal liabilities:		
2201 Accounts payable .....	408	390
2203 Debt .....	5,429	5,023
2207 Other .....	8,732	8,657
2999 Total liabilities .....	22,209	22,042
<b>NET POSITION:</b>		
3300 Cumulative results of operations .....		
4999 Total liabilities and net position .....	22,209	22,042

Object Classification (in millions of dollars)

Identification code 089-4045-0-3-271	2020 actual	2021 est.	2022 est.
Reimbursable obligations:			
11.1 Personnel compensation: Full-time permanent .....	304	337	334
12.1 Civilian personnel benefits .....	160	177	176
21.0 Travel and transportation of persons .....	3	3	3
22.0 Transportation of things .....	1	1	1
23.2 Rental payments to others .....	31	35	35
23.3 Communications, utilities, and miscellaneous charges .....	10	11	11
25.1 Advisory and assistance services .....	80	89	88
25.2 Other services from non-Federal sources .....	2,656	2,538	2,482
25.5 Research and development contracts .....	3	4	4
26.0 Supplies and materials .....	41	45	45
31.0 Equipment .....	48	54	53
32.0 Land and structures .....	78	87	86
41.0 Grants, subsidies, and contributions .....	37	41	41

43.0 Interest and dividends .....	233	258	256
99.9 Total new obligations, unexpired accounts .....	3,685	3,680	3,615

Employment Summary

Identification code 089-4045-0-3-271	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	2,743	3,000	3,000

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.), **[\$259,378,000]** \$422,338,000, to remain available until September 30, **[2022]** 2023, 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]** \$100,578,000 in fiscal year **[2021]** 2022 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 2021 appropriation from the general fund estimated at not more than **[\$166,000,000]** \$321,760,000. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

Program and Financing (in millions of dollars)

Identification code 089-0228-0-1-276	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0003 Office of the Secretary .....	5	7	5
0004 Office of Congressional and Intergovernmental Affairs .....	6	6	6
0005 Office of Public Affairs .....	5	7	5
0006 General Counsel .....	35	38	38
0008 Economic Impact and Diversity .....	12	13	17
0009 Chief Financial Officer .....	16	20	57
0010 Chief Information Officer .....			68
0011 Human Capital Management .....	25	30	30
0013 Office of Policy .....	6	8	29
0014 International Affairs .....	32	34	30
0015 Office of Small and Disadvantaged Business Utilization .....	4	3	3
0018 Management .....	58	59	70
0020 Project Management Oversight and Assessment .....	16	13	13
0025 Office of Technology Transitions .....	13	19	13
0030 Artificial Intelligence Technology Office .....	1	4	2
0045 Strategic partnership projects .....	16	16	16
0050 CARES Act IT Supplemental .....	22	6	
0799 Total direct obligations .....	272	283	402
0801 Departmental Administration (Reimbursable) .....	3	3	3
0900 Total new obligations, unexpired accounts .....	275	286	405

Budgetary resources:

Unobligated balance:			
1000 Unobligated balance brought forward, Oct 1 .....	88	84	57
1001 Discretionary unobligated balance brought fwd, Oct 1 .....	87		
1011 Unobligated balance transfer from other acct [072-0306] .....	4		
1011 Unobligated balance transfer from other acct [072-1037] .....	1		
1021 Recoveries of prior year unpaid obligations .....	3		
1050 Unobligated balance (total) .....	96	84	57
Budget authority:			
Appropriations, discretionary:			
1100 Appropriation .....	174	166	322
1100 Appropriation (CARES Act IT Supplemental P.L. 116-136) .....	28		
1160 Appropriation, discretionary (total) .....	202	166	322
Spending authority from offsetting collections, discretionary:			
1700 Collected .....	86	93	101
1701 Change in uncollected payments, Federal sources .....	-5		
1750 Spending auth from offsetting collections, disc (total) .....	81	93	101

1900	Budget authority (total) .....	283	259	423
1930	Total budgetary resources available .....	379	343	480
	Memorandum (non-add) entries:			
1940	Unobligated balance expiring .....	-20		
1941	Unexpired unobligated balance, end of year .....	84	57	75
<b>Change in obligated balance:</b>				
Unpaid obligations:				
3000	Unpaid obligations, brought forward, Oct 1 .....	112	118	150
3010	New obligations, unexpired accounts .....	275	286	405
3020	Outlays (gross) .....	-264	-254	-354
3040	Recoveries of prior year unpaid obligations, unexpired .....	-3		
3041	Recoveries of prior year unpaid obligations, expired .....	-2		
3050	Unpaid obligations, end of year .....	118	150	201
Uncollected payments:				
3060	Uncollected pymts, Fed sources, brought forward, Oct 1 .....	-9	-3	-3
3070	Change in uncollected pymts, Fed sources, unexpired .....	5		
3071	Change in uncollected pymts, Fed sources, expired .....	1		
3090	Uncollected pymts, Fed sources, end of year .....	-3	-3	-3
Memorandum (non-add) entries:				
3100	Obligated balance, start of year .....	103	115	147
3200	Obligated balance, end of year .....	115	147	198
<b>Budget authority and outlays, net:</b>				
Discretionary:				
4000	Budget authority, gross .....	283	259	423
Outlays, gross:				
4010	Outlays from new discretionary authority .....	162	114	208
4011	Outlays from discretionary balances .....	102	140	146
4020	Outlays, gross (total) .....	264	254	354
Offsets against gross budget authority and outlays:				
Offsetting collections (collected) from:				
4030	Federal sources .....	-37	-40	-40
4033	Non-Federal sources .....	-50	-53	-61
4040	Offsets against gross budget authority and outlays (total) ....	-87	-93	-101
Additional offsets against gross budget authority only:				
4050	Change in uncollected pymts, Fed sources, unexpired .....	5		
4052	Offsetting collections credited to expired accounts .....	1		
4060	Additional offsets against budget authority only (total) .....	6		
4070	Budget authority, net (discretionary) .....	202	166	322
4080	Outlays, net (discretionary) .....	177	161	253
4180	Budget authority, net (total) .....	202	166	322
4190	Outlays, net (total) .....	177	161	253

**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 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. In FY 2022, ED will drive new initiatives to achieve energy equity and

environmental justice across the DOE complex and labs. Additionally, ED's Office of Civil Rights and Diversity will assume new responsibilities of directly overseeing Equal Employment Opportunity (EEO) complaint processing for the entire enterprise (except for NNSA), as well as directly overseeing the affirmative employment and diversity and inclusion functions for the entire complex (except for NNSA and the PMAs).

**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. In FY 2022 significant investments will address Cyber vulnerabilities identified as a result of SolarWinds incident of December 2020.

**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. In FY 2022, OP includes components to support an Energy Jobs initiative and Arctic Energy coordination.

**International Affairs (IA).**—Advises Departmental leadership on strategic implementation of U.S. international energy policy and supports DOE's mission to ensure America's security and prosperity by addressing its energy, environmental, and climate challenges through innovative science and technology solutions. IA develops and leads the Department's bilateral and multilateral R&D cooperation, connecting DOE's program offices to advantageous international relationships. 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.

**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, purchase or lease of Zero Emission Vehicles (ZEVs) within agency-owned vehicle fleets or as part of a transition from GSA-leased gas-powered vehicles to GSA-leased ZEVs, and related charging infrastructure and program costs.

**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.

DEPARTMENTAL ADMINISTRATION—Continued

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

**Office of 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. In FY 2022, OTT is requested as a separate appropriation.

**Artificial Intelligence Technology Office (AITO).**—Coordinates Artificial Intelligence capabilities utilization and research throughout the Department.

**Object Classification** (in millions of dollars)

Identification code 089-0228-0-1-276	2020 actual	2021 est.	2022 est.
<b>Direct obligations:</b>			
<b>Personnel compensation:</b>			
11.1 Full-time permanent .....	90	88	90
11.3 Other than full-time permanent .....	14	14	14
11.5 Other personnel compensation .....	3	4	3
11.9 Total personnel compensation .....	107	106	107
12.1 Civilian personnel benefits .....	34	34	34
21.0 Travel and transportation of persons .....	2	2	1
23.3 Communications, utilities, and miscellaneous charges .....	10	10	10
25.1 Advisory and assistance services .....	31	31	40
25.2 Other services from non-Federal sources .....	15	24	129
25.3 Other goods and services from Federal sources .....	33	30	25
25.4 Operation and maintenance of facilities .....	22	27	27
25.7 Other Contractual Services .....		1	10
26.0 Other Services .....	2		2
31.0 Equipment .....	11	12	12
41.0 Grants, subsidies, and contributions .....	4	4	4
44.0 Non-Capitalized Personal Property .....	1	2	1
99.0 Direct obligations .....	272	283	402
99.0 Reimbursable obligations .....	3	3	3
99.9 Total new obligations, unexpired accounts .....	275	286	405

**Employment Summary**

Identification code 089-0228-0-1-276	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	732	651	826

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, **[\$57,739,000]** \$78,000,000, to remain available until September 30, **[2022]** 2023. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

**Program and Financing** (in millions of dollars)

Identification code 089-0236-0-1-276	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0001 Office of the Inspector General .....	54	58	78

**Budgetary resources:**

<b>Unobligated balance:</b>			
1000 Unobligated balance brought forward, Oct 1 .....	5	5	5
<b>Budget authority:</b>			
<b>Appropriations, discretionary:</b>			
1100 Appropriation .....	54	58	78
1930 Total budgetary resources available .....	59	63	83

<b>Memorandum (non-add) entries:</b>			
1941 Unexpired unobligated balance, end of year .....	5	5	5
<b>Change in obligated balance:</b>			
<b>Unpaid obligations:</b>			
3000 Unpaid obligations, brought forward, Oct 1 .....	4	6	7
3010 New obligations, unexpired accounts .....	54	58	78
3020 Outlays (gross) .....	-52	-57	-75
3050 Unpaid obligations, end of year .....	6	7	10
<b>Memorandum (non-add) entries:</b>			
3100 Obligated balance, start of year .....	4	6	7
3200 Obligated balance, end of year .....	6	7	10
<b>Budget authority and outlays, net:</b>			
<b>Discretionary:</b>			
4000 Budget authority, gross .....	54	58	78
<b>Outlays, gross:</b>			
4010 Outlays from new discretionary authority .....	44	49	66
4011 Outlays from discretionary balances .....	8	8	9
4020 Outlays, gross (total) .....	52	57	75
4180 Budget authority, net (total) .....	54	58	78
4190 Outlays, net (total) .....	52	57	75

The Office of Inspector General (OIG) provides Department-wide (including the National Nuclear Security Administration and the Federal Energy Regulatory Commission) audit, inspection, and investigative functions to identify and recommend corrections for management and administrative deficiencies, which create conditions for existing or potential instances of fraud, waste, abuse or violations of law. The audit function provides financial and performance audits of programs and operations. The inspection function provides independent inspection and analysis of the performance of programs and operations. The investigative function provides for the detection and investigation of improper and illegal activities involving programs, personnel, and operations. Through these efforts, the OIG identifies opportunities for cost savings and operational efficiency; identifies programs that are not meeting performance expectations; recovers monies to the Department and the Treasury as a result of civil and criminal prosecutions; and identifies ways to make Departmental programs safer and more secure.

**Object Classification** (in millions of dollars)

Identification code 089-0236-0-1-276	2020 actual	2021 est.	2022 est.
<b>Direct obligations:</b>			
<b>Personnel compensation:</b>			
11.1 Full-time permanent .....	30	32	38
11.3 Other than full-time permanent .....	1	2	2
11.5 Other personnel compensation .....	2	2	2
11.9 Total personnel compensation .....	33	36	42
12.1 Civilian personnel benefits .....	13	13	16
21.0 Travel and transportation of persons .....	1	1	1
23.3 Communications, utilities, and miscellaneous charges .....	1	1	2
25.1 Advisory and assistance services .....	1	1	1
25.2 Other services from non-Federal sources .....	1	2	12
25.3 Other goods and services from Federal sources .....	3	3	3
31.0 Equipment .....	1	1	1
99.0 Direct obligations .....	54	58	78
99.9 Total new obligations, unexpired accounts .....	54	58	78

**Employment Summary**

Identification code 089-0236-0-1-276	2020 actual	2021 est.	2022 est.
1001 Direct civilian full-time equivalent employment .....	260	303	335

WORKING CAPITAL FUND

**Program and Financing** (in millions of dollars)

Identification code 089-4563-0-4-276	2020 actual	2021 est.	2022 est.
<b>Obligations by program activity:</b>			
0802 Project management and career development program .....	1	2	2

0810	Supplies	1	2	2
0812	Copying Services	3	4	4
0813	Printing and graphics	4	5	5
0814	Building Occupancy (Rent, Operations & Maintenance)	103	117	117
0815	Corporate Business Systems	48	49	49
0816	Mail and Transportation Services	4	4	4
0817	Financial Statement Audits	11	12	12
0818	Procurement Management	11	16	16
0820	Telecommunication	39	38	38
0821	Overseas Presence	10	16	16
0822	Interagency Transfers	5	9	9
0823	Health Services	1	2	2
0825	Corporate Training Services	2	3	3
0826	A-123 / Internal Controls	2	2	2
0827	Pension Studies	.....	1	1
0900	Total new obligations, unexpired accounts	245	282	282

**Budgetary resources:**

Unobligated balance:

1000	Unobligated balance brought forward, Oct 1	50	68	62
1021	Recoveries of prior year unpaid obligations	3	.....	.....
1050	Unobligated balance (total)	53	68	62

Budget authority:

Spending authority from offsetting collections, discretionary:

1700	Collected	260	276	276
1930	Total budgetary resources available	313	344	338

Memorandum (non-add) entries:

1941	Unexpired unobligated balance, end of year	68	62	56
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**Change in obligated balance:**

Unpaid obligations:

3000	Unpaid obligations, brought forward, Oct 1	127	140	24
3010	New obligations, unexpired accounts	245	282	282
3020	Outlays (gross)	-229	-398	-276
3040	Recoveries of prior year unpaid obligations, unexpired	-3	.....	.....
3050	Unpaid obligations, end of year	140	24	30

Memorandum (non-add) entries:

3100	Obligated balance, start of year	127	140	24
3200	Obligated balance, end of year	140	24	30

**Budget authority and outlays, net:**

Discretionary:

4000	Budget authority, gross	260	276	276
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Outlays, gross:

4010	Outlays from new discretionary authority	98	265	265
4011	Outlays from discretionary balances	131	133	11
4020	Outlays, gross (total)	229	398	276

Offsets against gross budget authority and outlays:

Offsetting collections (collected) from:

4030	Federal sources	-260	-276	-276
4180	Budget authority, net (total)	.....	.....	.....
4190	Outlays, net (total)	-31	122	.....

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				
Reimbursable obligations:				
Personnel compensation:				
11.1	Full-time permanent	11	11	11
11.5	Other personnel compensation	1	1	1
11.8	Special personal services payments	1	1	1
11.9	Total personnel compensation	13	13	13
12.1	Civilian personnel benefits	5	6	6
21.0	Travel and transportation of persons	1	2	2
22.0	Transportation of things	2	2	2
23.1	Rental payments to GSA	39	47	47
23.3	Communications, utilities, and miscellaneous charges	19	24	24
24.0	Printing and reproduction	2	2	2
25.1	Advisory and assistance services	47	60	60

25.2	Other services from non-Federal sources	15	20	20
25.3	Other goods and services from Federal sources	59	65	65
25.4	Operation and maintenance of facilities	31	35	35
25.7	Operation and maintenance of equipment	1	1	1
26.0	Supplies and materials	1	1	1
32.0	Land and structures	10	4	4
99.0	Reimbursable obligations	245	282	282
99.9	Total new obligations, unexpired accounts	245	282	282

**Employment Summary**

Identification code 089-4563-0-4-276				
2001	Reimbursable civilian full-time equivalent employment	93	93	93

**GENERAL FUND RECEIPT ACCOUNTS**

(in millions of dollars)

2020 actual				
2021 est.				
2022 est.				
Offsetting receipts from the public:				
089-089400 Fees and Recoveries, Federal Energy Regulatory Commission				
		13	9	9
089-223400 Sale of Strategic Petroleum Reserve Oil				
		.....	430	694
089-224500 Sale and Transmission of Electric Energy, Falcon Dam				
		1	1	1
089-224700 Sale and Transmission of Electric Energy, Southwestern Power Administration				
		6	6	7
089-224800 Sale and Transmission of Electric Energy, Southeastern Power Administration				
		142	178	177
089-224900 Sale of Power and Other Utilities, not Otherwise Classified				
		.....	30	30
089-267910 Title 17 Innovative Technology Loan Guarantees, Negative Subsidies				
		62	45	10
089-279530 DOE ATM Direct Loans Downward Reestimate Account				
		17	.....	.....
089-279730 DOE Loan Guarantees Downward Reestimate Account				
		38	160	.....
089-288900 Repayments on Miscellaneous Recoverable Costs, not Otherwise Classified				
		29	40	31
089-322000 All Other General Fund Proprietary Receipts Including Budget Clearing Accounts				
		41	18	18
General Fund Offsetting receipts from the public				
		349	917	977
Intragovernmental payments:				
089-388500 Undistributed Intragovernmental Payments and Receivables from Cancelled Accounts				
		11	.....	.....
General Fund Intragovernmental payments				
		11	.....	.....

**GENERAL PROVISIONS—DEPARTMENT OF ENERGY**

【(INCLUDING TRANSFER OF FUNDS)】

SEC. 301. (a) No appropriation, funds, or authority made available by this title for the Department of Energy shall be used to initiate or resume any program, project, or activity or to prepare or initiate Requests For Proposals or similar arrangements (including Requests for Quotations, Requests for Information, and Funding Opportunity Announcements) for a program, project, or activity if the program, project, or activity has not been funded by Congress.

(b)

(1) Unless the Secretary of Energy notifies the Committees on Appropriations of both Houses of Congress at least 3 full business days in advance, none of the funds made available in this title may be used to—

(A) make a grant allocation or discretionary grant award totaling \$1,000,000 or more;

(B) make a discretionary contract award or Other Transaction Agreement totaling \$1,000,000 or more, including a contract covered by the Federal Acquisition Regulation;

(C) issue a letter of intent to make an allocation, award, or Agreement in excess of the limits in subparagraph (A) or (B); or

(D) announce publicly the intention to make an allocation, award, or Agreement in excess of the limits in subparagraph (A) or (B).

(2) The Secretary of Energy shall submit to the Committees on Appropriations of both Houses of Congress within 15 days of the conclusion of each quarter a

report detailing each grant allocation or discretionary grant award totaling less than \$1,000,000 provided during the previous quarter.

(3) The notification required by paragraph (1) and the report required by paragraph (2) shall include the recipient of the award, the amount of the award, the fiscal year for which the funds for the award were appropriated, the account and program, project, or activity from which the funds are being drawn, the title of the award, and a brief description of the activity for which the award is made.

(c) The Department of Energy may not, with respect to any program, project, or activity that uses budget authority made available in this title under the heading "Department of Energy—Energy Programs", enter into a multiyear contract, award a multiyear grant, or enter into a multiyear cooperative agreement unless—

(1) the contract, grant, or cooperative agreement is funded for the full period of performance as anticipated at the time of award; or

(2) the contract, grant, or cooperative agreement includes a clause conditioning the Federal Government's obligation on the availability of future year budget authority and the Secretary notifies the Committees on Appropriations of both Houses of Congress at least 3 days in advance.

(d) Except as provided in subsections (e), (f), and (g), the amounts made available by this title shall be expended as authorized by law for the programs, projects, and activities specified in the "Final Bill" column in the "Department of Energy" table included under the heading "Title III—Department of Energy" in the explanatory statement 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) 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 [2021] 2022 until the enactment of the Intelligence Authorization Act for fiscal year [2021] 2022.

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. 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. 306. (a) 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 the Interior—Bureau of Reclamation—Upper Colorado River Basin Fund" for the Bureau of Reclamation to carry out environmental stewardship and endangered species recovery efforts.

(b) No funds shall be transferred directly from "Department of Energy—Power Marketing Administration—Colorado River Basins Power Marketing Fund, Western Area Power Administration" to the general fund of the Treasury in the current fiscal year.]

(Energy and Water Development and Related Agencies Appropriations Act, 2021.)

## 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.

SEC. 505. (a) Requirements relating to non-Federal cost-share grants and cooperative agreements for the Delta Regional Authority under section 382D of the Agricultural Act of 1961 and Consolidated Farm and Rural Development Act (7 U.S.C. 2009aa-3) are waived for grants awarded in fiscal year 2020 and in subsequent years in response to economic distress directly related to the impacts of the Coronavirus Disease (COVID-19).

(b) Requirements relating to non-Federal cost-share grants and cooperative agreements for the Northern Border Regional Commission under section 15501(d) of title 40, United States Code, are waived for grants awarded in fiscal year 2020 and in subsequent years in response to economic distress directly related to the impacts of the Coronavirus Disease (COVID-19).

(c) Requirements relating to non-Federal cost-share grants and cooperative agreements for the Denali Commission are waived for grants awarded in fiscal



year 2020 and in subsequent years in response to economic distress directly related to the impacts of the Coronavirus Disease (COVID-19).】

SEC. 【506】504. Of the unavailable collections currently in the United States Enrichment Corporation Fund, 【\$291,000,000】\$415,670,000 shall be transferred to

and merged with the Uranium Enrichment Decontamination and Decommissioning Fund and shall be available only to the extent provided in advance in appropriations Acts. (*Energy and Water Development and Related Agencies Appropriations Act, 2021.*)

