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REPORT
116–102

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS BILL, 2020

SEPTEMBER 12, 2019.—Ordered to be printed

Mr. ALEXANDER, from the Committee on Appropriations, submitted the following

REPORT

[To accompany S. 2470]

The Committee on Appropriations reports the bill (S. 2470) making appropriations for energy and water development and related agencies for the fiscal year ending September 30, 2020, and for other purposes, reports favorably thereon and recommends that the bill do pass.

New obligational authority

Total of bill as reported to the Senate	$48,931,662,000
Amount of 2019 appropriations	47,954,044,000
Amount of 2020 budget estimate	37,955,704,000
Bill as recommended to Senate compared to—	
2019 appropriations	+977,618,000
2020 budget estimate	+10,975,958,000

37–540 PDF

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PURPOSE

The purpose of this bill is to provide appropriations for fiscal year 2020, beginning October 1, 2019 and ending September 30, 2020, for energy and water development, and for other related purposes. It supplies funds for water resources development programs and related activities of the Corps of Engineers' civil works program in title I; for the Department of the Interior's Bureau of Reclamation and Central Utah Project in title II; for the Department of Energy's energy research and development activities, including environmental restoration and waste management, and the atomic energy defense activities of the National Nuclear Security Administration in title III; and for independent agencies and commissions, including the Appalachian Regional Commission, Delta Regional Authority, Denali Commission, Northern Border Regional Commission, and the Nuclear Regulatory Commission in title IV.

SUMMARY OF ESTIMATES AND RECOMMENDATIONS

The fiscal year 2020 budget estimates for the bill total $38,059,042,000 in new budget (obligational) authority. The recommendation of the Committee totals $48,866,000,000. This is $10,806,958,000 above the budget estimates and $4,206,000,000 above the enacted appropriation for the current fiscal year.

SUBCOMMITTEE HEARINGS

To develop this recommendation, the Committee held four budget hearings in April and May 2019 in connection with the fiscal year 2020 budget requests for the Corps of Engineers, Bureau of Reclamation, Department of Energy and National Nuclear Security Administration, and the Nuclear Regulatory Commission. The hearings provided officials from the agencies with an opportunity to present the administration's most pressing priorities to the Committee. The Committee also invited and received recommendations from Senators and outside witnesses.

INTRODUCTION

The Subcommittee on Energy and Water Development's 302(b) allocation totals $48,866,000,000 of net budget authority for fiscal year 2020, including adjustments, which represents an increase of $4,206,000,000 above fiscal year 2019 enacted levels. Within the amount recommended, $24,400,000,000 is classified as defense (050) spending and $24,466,000,000 is classified as non-defense (non-050) spending.

The Committee's recommendation includes funding for the highest priority activities across the agencies funded in the bill. The recommendation includes funds for critical water infrastructure, including our Nation's inland waterways, ports, and harbors; agricultural water supply and drought relief in the West; groundbreaking scientific research and development, including world-class supercomputing; support for the Nation's nuclear weapons, non-proliferation, and nuclear Navy programs; and critical economic development.

TITLE I

CORPS OF ENGINEERS—CIVIL

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS—CIVIL

OVERVIEW OF RECOMMENDATION

The Committee recommends $7,750,000,000 for the Corps of Engineers [Corps], an increase of $2,786,255,000 above the budget request.

The Committee's recommendation sets priorities by supporting our Nation's water infrastructure. Specifically, for the sixth consecutive year, the Committee recommendation provides adequate appropriations to utilize all of the estimated fiscal year 2020 revenues from the Inland Waterways Trust Fund and meets the target prescribed in the Water Resources Reform and Development Act of 2014 [WRRDA], as amended, for Corps projects eligible for Harbor Maintenance Trust Funds.

INTRODUCTION

The Corps' civil works mission is to provide quality, responsive engineering services to the Nation in peace and war. Approximately 23,000 civilians and about 290 military officers are responsible for executing the civil works mission. This bill only funds the civil works functions of the Corps.

The Corps maintains our inland waterways, keeps our ports open, manages a portion of our drinking water supply, provides emission free electricity from dams, looks after many of our recreational waters, helps manage the river levels during flooding, provides environmental stewardship, and emergency response to natural disasters. The annual net economic benefit generated by the Corps' civil works mission is estimated to be $109,830,000,000, which equates to a return of about $16.60 for every $1 expended.

The Corps' responsibilities include:

—Navigation systems, including 13,000 miles of deep draft channels, 12,000 miles of inland waterways, 239 lock chambers, and 1,067 harbors, which handle over 2.3 billion tons of cargo annually;

—Flood risk management infrastructure, including 709 dams, 14,700 miles of levees, and multiple hurricane and storm damage risk reduction projects along the coast;

—Municipal and industrial water supply storage at 136 projects spread across 25 States;

—Environmental stewardship, infrastructure, and ecosystem restoration;

—Recreation for approximately 370 million recreation visits per year to Corps projects;
—Regulation of waters under Federal statutes; and
—Maintaining hydropower capacity of nearly 24,000 megawatts at 75 projects.

BUDGET STRUCTURE CHANGES

The fiscal year 2020 budget request for the Corps proposed numerous structural changes, including the creation of two new accounts—Harbor Maintenance Trust Fund and Inland Waterways Trust Fund—and the shifting of various studies and projects between accounts. The Committee rejects all such proposed changes and instead recommends funding for the requested studies and projects in the accounts in which funding has traditionally been provided. Unless expressly noted, the Committee recommends studies and projects remain at the funding levels included in the budget request, but in different accounts than in the budget request. In particular:

—Projects requested in the Harbor Maintenance Trust Fund account are shown in the Construction, Mississippi River and Tributaries, or Operation and Maintenance accounts, as appropriate;
—Projects requested in the Inland Waterways Trust Fund account are shown in the Construction account;
—Dredged material management plans requested in the Investigations account are shown in the Operation and Maintenance account;
—Dam safety modification studies requested in the Investigations account are shown in the Dam Safety and Seepage/Stability Correction Program in the Construction account;
—Dam Safety and Seepage/Stability Correction Program management costs requested in the Expenses account are shown in the Construction account;
—Sand mitigation projects requested in the Harbor Maintenance Trust Fund account are shown in the Construction account;
—National Shoreline Management Study and Interagency and International Support activities are not consolidated within the Coordination with Other Water Resource Agencies remaining item in Investigations;
—Disposition studies will continue to be funded under the remaining line item Disposition of Completed Projects in the Investigations account;
—Tribal Partnership projects will continue to be funded under the Tribal Partnership Program remaining line item in the Investigations account; and
—Inspection of Completed Works, Project Condition Surveys, and Scheduling of Reservoir Operations will continue to be funded under States instead of consolidated into a national program as requested in the Operation and Maintenance account.

Additionally, the recommendation includes the Poplar Island, Maryland beneficial use of dredged material project within the Environmental Restoration business line as in previous years.

If the Corps proposes budget structure changes in future fiscal years, the proposal shall be accompanied by a display of the funding request in the traditional budget structure.

DEEP DRAFT NAVIGATION

The budget request this year fails to adequately fund our nation's harbors. The Committee is disappointed the fiscal year 2020 budget request only proposes to spend $965,000,000 for Harbor Maintenance Trust Fund [HMTF]-related activities, which is $631,500,000 below the spending target of $1,596,500,000 established by WRRDA, as amended. For fiscal year 2020, the Committee recommends an estimated $1,670,000,000 for HMTF-related activities, which exceeds the WRRDA spending target.

INLAND WATERWAYS SYSTEM

The Committee notes that the budget request only proposed to spend $55,500,000 of the estimated $105,000,000 deposits for fiscal year 2020 into the Inland Waterways Trust Fund [IWTF]. This would leave an estimated $49,500,000 of fiscal year 2020 deposits unspent. By only proposing to fund one of the four ongoing construction projects that were funded last year, the budget request disregards the existing Capital Investment Strategy and the advice and recommendations of industry experts and professional engineers.

The Committee rejects the budget request's proposal to reform inland waterways financing by increasing the amount paid by commercial navigation users of inland waterways, particularly when the administration fails to make full use of the fees already collected for this purpose.

The Committee understands the fiscal year 2020 capability for ongoing IWTF cost-shared construction projects is $307,000,000. Therefore, the Committee recommends appropriations making use of all estimated revenues from the IWTF for these ongoing projects.

Any report prepared pursuant to section 2002(d) of WRRDA will need to be reviewed by Congress prior to the Corps incorporating any part of the report into funding decisions. Therefore, when allocating the additional funding recommended for projects cost-shared with the IWTF, the Corps shall continue to use, as appropriate, the Inland and Intracoastal Waterways Twenty-Year Capital Investment Strategy dated March 2016, as the applicable 20-year plan. The Committee considers the 20-year Capital Investment Strategy a planning document and therefore not subject to administration budget metrics.

ADDITIONAL FUNDING

The Committee recommends funding above the budget request for Investigations, Construction, Operation and Maintenance, Mississippi River and Tributaries, Flood Control and Coastal Emergencies, and Expenses. This funding is for additional work (including new starts) that either was not included in the budget request or was inadequately budgeted. A study or project may not be excluded from evaluation for additional funding due to its inconsist-

ency with administration policy. None of the funds may be used for any item for which the Committee has specifically denied funding.

The administration is reminded these funds are in addition to its budget request, and administration budget metrics shall not be a reason to disqualify a study or project from being funded. The focus of the allocation process shall favor the obligation, rather than the expenditure, of funds for work in fiscal year 2020.

Funding associated with each category may be allocated to any eligible study or project, as appropriate, within that category; funding associated with each subcategory may be allocated only to eligible studies or projects, as appropriate, within that subcategory.

Work Plan.—Not later than 60 days after the date of enactment of this act, the Corps shall provide to the Committees on Appropriations of both Houses of Congress a work plan consistent with the following general guidance, as well as the specific direction the Committee provides within each account: (1) a detailed description of the rating system(s) developed and used to evaluate studies and projects; (2) delineation of how these funds are to be allocated; (3) a summary of the work to be accomplished with each allocation, including phase of work and the study or project's remaining cost to complete (excluding Operation and Maintenance); and (4) a list of all studies and projects that were considered eligible for funding but did not receive funding, including an explanation of whether the study or project could have used funds in fiscal year 2020 and the specific reasons each study or project was considered less competitive for an allocation of funds.

The Committee urges the Corps within its Flood and Coastal Storm Damage Reduction mission to strive for a balance between inland and coastal projects.

New Starts.—The recommendation includes six new study starts and six new construction starts to be distributed across the authorized mission areas of the Corps. Of the new starts in Investigations, two shall be for flood and storm damage reduction studies, one shall be for an environmental restoration study, one shall be for a Small, Remote, or Subsistence Harbor navigation study, and two shall be for other authorized purposes. Of the new study starts for other authorized purposes, one shall be for a multi-purpose watershed study to assess coastal resiliency. Of the new construction starts, two shall be for navigation projects, two shall be for environmental restoration projects, and two shall be for a navigation, flood and storm damage reduction, environmental restoration, or multi-purpose project.

The Corps is directed to propose a single group of new starts as a part of the work plan. The Corps may not change or substitute the new starts selected once the work plan has been provided to the Committees on Appropriations of both Houses of Congress. As all new starts are to be chosen by the Corps, all shall be considered of equal importance, and the expectation is that future budget submissions will include appropriate funding for all new starts selected. The initiation of construction of an individually authorized project funded within a programmatic line item may not require a new start designation provided that some amount of construction funding under such programmatic line item was appropriated and expended during the previous fiscal year. A study is not completed

until preconstruction engineering and design [PED] is completed. When evaluating proposals for new feasibility studies, the Corps is encouraged to give priority to those studies with executed Feasibility Cost Share Agreements and a sponsor with the ability to provide any necessary cost share for the study phase. The Corps is encouraged to support opportunities to restore critical habitat and enhance the Nation's economic development, job growth, and international competitiveness.

The following shall not require a new start or new investment decision and shall be considered ongoing work:

—When moving from feasibility to PED;
—To initiate work on a separable element of a project when construction of one or more separable elements of that project was initiated previously;
—Any authorized environmental infrastructure project;
—Study or construction activities related to individual projects authorized under section 1037 of WRRDA;
—Work undertaken to correct a design deficiency on an existing Federal project; and
—Projects that have previously received construction funding for authorized work.

ASIAN CARP

The Committee acknowledges that the Corps completed the Report of the Chief of Engineers for the Great Lakes—Mississippi River Interbasin Study—Brandon Road Recommended Plan in fiscal year 2019. As the Corps prioritizes projects, it shall consider critical projects to prevent the spread of invasive species. The Corps is reminded that this critical project is eligible to compete for additional funding within the Investigations account in order to initiate PED. The Corps is directed to provide quarterly updates to the Committees on Appropriations of both Houses of Congress on the progress and status of efforts to prevent the further spread of Asian carp, including the Brandon Road Recommended Plan, the location and density of carp populations, the use of emergency procedures previously authorized by the Congress, and the development, consideration, and implementation of new technological and structural countermeasures.

The Committee is disappointed that the administration chose to cut Corps funding for the important inter-agency collaborative work to address Asian carp. The Corps shall continue to collaborate at levels commensurate with previous years with the U.S. Coast Guard, the U.S. Fish and Wildlife Service, the State of Illinois, and members of the Asian Carp Regional Coordinating Committee, including identifying navigation protocols that would be beneficial or effective in reducing the risk of vessels inadvertently carrying aquatic invasive species, including Asian carp, through the Brandon Road Lock and Dam in Joliet, Illinois. Any findings of such an evaluation shall be included in the quarterly briefings to the Committees. The Corps is further directed to implement navigation protocols shown to be effective at reducing the risk of entrainment without jeopardizing the safety of vessels and crews. The Corps and other Federal and State agencies are conducting ongoing research on potential solutions. The Corps shall brief the Committees

on Appropriations of both Houses of Congress on such navigation protocols and potential solutions within 30 days of enactment of this act.

ADVANCED FUNDS AGREEMENTS

Under the advanced funds authority, the Corps is authorized to accept, from a State or political subdivision thereof, all funds covering both the Federal and non-Federal share of total project costs required to construct an authorized water resources development project or separable element thereof. Based on the non-Federal sponsor's commitment to provide all funds required to construct a project, or separable element thereof, the Corps may undertake construction of the project prior to a new start determination related to Federal funding for the project. In light of a non-Federal sponsor's commitment to provide all funding required for construction of the project, or separable element thereof, the Committee directs that Federal funds should not be provided for such construction. Instead, for such projects, any Federal funding may be provided only after completion of construction, as repayment of the Federal share of such construction, from funding provided for reimbursements or repayments, and would be subject to a new start designation. The Committee does not intend that this direction apply to any project with an advanced funds project partnership agreement that is currently under construction.

REGIONAL DREDGE DEMONSTRATION PROGRAM

Significant—and occasionally even historic—storm events continue to occur across the nation, impacting critical Federal commercial navigation projects throughout the United States. Those impacts have been particularly acute across the Gulf Coast region as significant and prolonged shoaling patterns resulting from these recurring storm events continue to degrade Federal navigation channel conditions and adversely impact commercial deep draft navigation. The goal of the Regional Demonstration Program is to minimize disruption to the delivery of the dredging mission, and of the vital cargo which depends on execution of this mission across the Nation, as a result of the significant shoaling in the Gulf region. The combination of extensive additional shoaling from recurring storm events on top of significant routine annual dredging demands have resulted in high utilization rates for U.S. hopper dredging assets in recent years, including both industry and Corps dredges.

High hopper dredge utilization rates have resulted in limited dredge availability for nationally significant dredging projects in recent years, in some cases critically impacting the acquisition process, particularly in the case of the Southwest Pass of the Mississippi River Baton Rouge to Gulf project. Corps dredging operations are typically planned, executed, and funded on a project-by-project basis, in an incremental fashion, on an annual cycle. To respond more effectively to critical national dredging requirements resulting from these significant recurring storm events, in combination with routine annual dredging demands, the Corps shall execute a multi-year dredging demonstration program within the Central Gulf Coast Region.

Key features of the program will explore innovative ways of executing dredging in a logical, sequenced manner, unconstrained by more traditional project-specific, account-specific, or single year restrictions. The demonstration program will leverage multi-year funding and will propose to test new approaches and concepts for constructing and maintaining deep draft harbors and waterways in a more flexible and efficient manner. The program will also seek efficiencies and cost savings by evaluating the region as a system in order to properly determine when combining work across multiple deep draft commercial navigation projects, across years, or across Construction and Operations & Maintenance [O&M] accounts is appropriate.

Considering the increasingly common recurrence of annual requirements for emergency dredging at the Southwest Pass, as well as the uncertainty that this response places on other dredging projects being executed by the U.S. hopper fleet across the entire Gulf Coast and Eastern seaboard, the Corps shall establish such a regional program, focused on the central Gulf Coast. By including the Mississippi River Baton Rouge to Gulf (Southwest Pass) and other nearby Gulf Coast commercial navigation projects, goals of the program will include being more responsive to dredging demands within the region, while minimizing disruption to critical construction and maintenance dredging requirements enterprise wide.

To demonstrate the described multi-year efficiencies, the Committee recommends $525,000,000 in a Regional Dredge Demonstration Program funding pot in the Construction account to be used for deep draft navigation projects in the Gulf of Mexico, between Louisiana and Florida. Further, additional funding has been recommended in the O&M account to support the Gulf of Mexico demonstration projects.

Within 45 days of enactment of this act, the Corps shall brief the Committees on Appropriations of both Houses of Congress on the Corps' plan to implement the demonstration program, including which projects will be included. The Corps shall provide quarterly briefings to Congress on the status of the demonstration program including regular updates on the lessons learned. Following completion of the Gulf demonstration program, or no later than 6 months after completion of the last demonstration project contract, the Corps shall submit a report to the Committees on Appropriations of both Houses of Congress documenting the critical knowledge and experience gained during this program. The report shall include the Corps' evaluation of the effectiveness of the demonstration program. The following metrics, and other appropriate metrics identified by the Corps, will be used to evaluate the success of the program during the execution period:

—Improved project schedules/faster construction execution at the demonstration projects;

—Fewer disruptions to other projects across the enterprise due to emergencies at the Southwest Pass (pulling dredges off projects);

—Fewer or no bid busts (bid higher than the Independent Government Estimate by 25%) for the demonstration projects;

—Reduced cost per cubic yard at the demonstration projects and/or across the enterprise for hopper dredge contracts;
—Efficiency of contract award process at the demonstration projects; and
—Fewer "no bid" responses at Mississippi River Baton Rouge to Gulf hopper dredge contracts.

UNMANNED AERIAL SYSTEMS

The Committee reminds the Corps that a report was required in fiscal year 2019 regarding unmanned aerial systems [UAS]. The Corps is directed to expedite completion of this required report and within 30 days of enactment of this act, brief the Committees on Appropriations of both Houses of Congress on its findings and subsequent actions, as they relate to foreign-made UAS.

REPROGRAMMING

The Committee is retaining the reprogramming legislation provided in the Energy and Water Development and Related Agencies Appropriations Act, 2019.

CONGRESSIONALLY DIRECTED SPENDING

The Committee did not accept or include congressionally directed spending, as defined in section 5(a) of rule XLIV of the Standing Rules of the Senate. However, the Committee has recommended additional programmatic funds for Investigations, Construction, Operation and Maintenance, Mississippi River and Tributaries, Flood Control and Coastal Emergencies, and Expenses to address deficiencies in the budget request. In some cases, these additional funds have been included within defined categories, as in prior years, and are described in more detail in their respective sections below.

REPORTING REQUIREMENT

The Corps shall provide a monthly report to the Committees on Appropriations of both Houses of Congress, which includes the total budget authority and unobligated balances by year for each program, project, or activity, including any prior year appropriations.

The Assistant Secretary of the Army (Civil Works) shall provide a monthly report to the Committees on Appropriations of both Houses of Congress, which includes the total budget authority and unobligated balances by year for each activity funded in the Office of the Assistant Secretary of the Army (Civil Works) account, including any prior year appropriations.

INVESTIGATIONS

Appropriations, 2019	$125,000,000
Budget estimate, 2020	77,000,000
Committee recommendation	154,880,000

The Committee recommends $154,880,000 for Investigations, an increase of $77,880,000 above the budget request. The Committee's recommendation allows the Corps to begin six new feasibility study starts.

INTRODUCTION

Funding in this account is used to develop feasibility studies and conduct PED to address the Nation's water infrastructure needs, in support of project authorization. The Committee recognizes that the budget request does not provide adequate funding for Investigations, and specifically PED funding, to allow many of America's most important waterways to move efficiently from planning to construction. The Committee, therefore, recommends additional funding to be used to seamlessly continue feasibility studies into the PED study phase.

NEW STARTS

The Corps is directed to designate new starts in accordance with the direction in the front matter under the heading "Additional Funding".

COMMITTEE RECOMMENDATION

The table below displays the budget request and the Committee's recommendation for Investigations:

CORPS OF ENGINEERS—INVESTIGATIONS

[In thousands of dollars]

Project title	Budget estimate	Committee recommendation	
ALABAMA			
MOBILE HARBOR, AL	700	700	
ALASKA			
APOON MOUTH OF YUKON, AK	46	.....	†
ELIM SUBSISTENCE HARBOR, AK	100	.....	†
ST. MICHAEL CANAL, AK	50	.....	†
ARIZONA			
BIRD SPRINGS WATERSHED ASSESSMENT, AZ	50	.....	†
ARKANSAS			
THREE RIVERS, AR	1,500	1,500	
CALIFORNIA			
LOS ANGELES COUNTY DRAINAGE AREA (CHANNELS), CA	50	.....	†
SALINAS RESERVOIR (SANTA MARGARITA LAKE), CA	243	.....	†
SOUTH SAN FRANCISCO BAY SHORELINE, CA (PHASE II)	600	600	
SAN FRANCISCO WATERFRONT STORM DAMAGE REDUCTION, CA	800	800	
WEST SACRAMENTO, CA	400	400	
ILLINOIS			
INTERBASIN CONTROL OF GREAT LAKES–MISSISSIPPI RIVER AQUATIC NUISANCE SPECIES, IL, IN, OH & WI	50	50	
INDIANA			
MISSISSINEWA LAKE, IN	1,000	.....	‡
KANSAS			
SOLDIER CREEK WATERSHED, KS	100	.....	†
MAINE			
MEDUXNEKEAG WATERSHED ASSESSMENT MANAGEMENT PLAN, ME	40	.....	†

CORPS OF ENGINEERS—INVESTIGATIONS—Continued

[In thousands of dollars]

Project title	Budget estimate	Committee recommendation	
MINNESOTA			
PRAIRIE ISLAND STURGEON LAKE HABITAT RESTORATION, MN	112	.....	†
ST. ANTHONY FALLS, MISSISSIPPI RIVER, MN	218	.....	†
NEW MEXICO			
PUEBLO OF SAN FELIPE, NM, WATERSHED ASSESSMENT	48	.....	†
PUEBLOS OF ZIA WATERSHED ASSESSMENT, NM	50	.....	†
NEW YORK			
BUFFALO HARBOR	250	.....	‡
NORTH CAROLINA			
CAPE FEAR LOCKS AND DAMS 1–3, NC	393	.....	†
OHIO			
CLEVELAND HARBOR, OH	100	.....	‡
OREGON			
COLUMBIA RIVER TREATY 2024 IMPLEMENTATION, OR & WA	9,458	.....	‡
COUGAR LAKE, OR	1,250	.....	‡
HILLS CREEK LAKE, OR	1,250	.....	‡
LOOKOUT POINT LAKE, OR	1,250	.....	‡
TEXAS			
CORPUS CHRISTI SHIP CHANNEL, TX	250	.....	‡
GRAPEVINE LAKE, TX	1,000	.....	‡
PROCTOR LAKE, TX	755	.....	‡
VIRGINIA			
NORFOLK HARBOR AND CHANNELS DEEPENING, VA	2,500	2,500	
WASHINGTON			
PUGET SOUND NEARSHORE MARINE HABITAT RESTORATION, DUCKBUSH RIVER ESTUARY, WA	1,467	1,467	
SUBTOTAL, ITEMS UNDER STATES	26,080	8,017	
REMAINING ITEMS			
ADDITIONAL FUNDING FOR ONGOING WORK FLOOD AND STORM DAMAGE REDUCTION	.....	7,000	
FLOOD CONTROL	.....	4,500	
SHORE PROTECTION	.....	5,000	
NAVIGATION	.....	8,250	
COASTAL AND DEEP-DRAFT	.....	9,000	
INLAND	.....	9,750	
OTHER AUTHORIZED PROJECT PURPOSES	.....	6,500	
ENVIRONMENTAL RESTORATION OR COMPLIANCE	.....	12,000	
ACCESS TO WATER DATA	360	360	
AUTOMATED INFORMATION SYSTEMS SUPPORT TRI–CADD	250	250	
COASTAL FIELD DATA COLLECTION	1,000	2,500	
COMMITTEE ON MARINE TRANSPORTATION SYSTEMS	50	50	
COORDINATION WITH OTHER WATER RESOURCE AGENCIES	350	2,245	
DISPOSITION OF COMPLETED PROJECTS	.....	1,000	
ENVIRONMENTAL DATA STUDIES	80	80	
FERC LICENSING	100	100	
FLOOD DAMAGE DATA	230	230	
FLOOD PLAIN MANAGEMENT SERVICES	15,000	15,000	
HYDROLOGIC STUDIES	500	500	
INTERNATIONAL WATER STUDIES	125	125	
INTERAGENCY AND INTERNATIONAL SUPPORT	.....	400	
INTERAGENCY WATER RESOURCE DEVELOPMENT	100	100	
INVENTORY OF DAMS	400	400	
NATIONAL FLOOD RISK MANAGEMENT PROGRAM	5,000	5,000	

CORPS OF ENGINEERS—INVESTIGATIONS—Continued

[In thousands of dollars]

Project title	Budget estimate	Committee recommendation
NATIONAL SHORELINE MANAGEMENT STUDY	.....	400
PLANNING ASSISTANCE TO STATES	5,000	9,000
PLANNING SUPPORT PROGRAM	3,500	3,500
PRECIPITATION STUDIES	200	200
REMOTE SENSING/GEOGRAPHIC INFORMATION SYSTEM SUPPORT	75	575
RESEARCH AND DEVELOPMENT	13,000	33,700
SCIENTIFIC AND TECHNICAL INFORMATION CENTERS	50	50
SPECIAL INVESTIGATIONS	1,000	1,000
STREAM GAGING	3,550	4,550
TRANSPORTATION SYSTEMS	1,000	1,000
TRIBAL PARTNERSHIP PROGRAM	.....	2,548
SUBTOTAL, REMAINING ITEMS	50,920	146,863
GRAND TOTAL	77,000	154,880

† Funded in remaining items.
‡ Funded under projects listed under States.

Bird Drive Basin Conveyance, Seepage Collection, and Recharge.—The Committee acknowledges the unique opportunity for Miami-Dade County to assist in land purchases and swaps to protect a vital project footprint to implement the Bird Drive Basin Conveyance, Seepage Collection, and Recharge concept and achieve the goals of the original Comprehensive Everglades Restoration Plan [CERP] Bird Drive Recharge Area project. The Committee encourages the Corps to work with the Department of the Interior and the South Florida Water Management District to quickly identify a consensus project footprint between SW 8th Street and the C–1W Canal to the south, immediately east of Krome Avenue, to enable Miami-Dade County and the Miami-Dade Expressway Authority [MDX], or any successor organization, to begin necessary land acquisitions in support of the creation of a West Kendall Everglades Buffer and progress towards completing an important element of the CERP.

Biscayne Bay Coastal Wetlands Project.—The Committee supports the administration's budget request to fund completion of Phase I and begin planning for Phase II for this vital project to protect drinking water supplies in eastern Miami-Dade County from saltwater intrusion and to enhance the coastal and marine ecology of Biscayne Bay and the offshore coral reef system. The Committee notes support from Miami-Dade County and the South Florida Water Management District to incorporate highly treated, reclaimed wastewater as an additional source of freshwater to assist the rehydration of these coastal wetlands. The Committee encourages the Corps to consider the incorporation of this potential source of freshwater into further study, design, and construction of the project and to evaluate the potential to use additional volumes of reclaimed wastewater to restore freshwater artesian springs within the Bay through underground injection to the shallow, underlying aquifer.

Bubbly Creek.—The Committee encourages the Corps to continue negotiations with the Environmental Protection Agency and the

Department of Justice, on remaining liability concerns to reach an expedited resolution that will allow the project to move forward.

Buckhorn Lake.—The Committee supports efforts to optimize regional economic benefits and enhanced downstream recreation opportunities at Buckhorn Lake. The Committee understands the Corps adjusted the drawdown schedule in 2014 allowing a pool elevation conducive to an extended fall recreation season, but to adjust the drawdown schedule any further would require the Corps to undertake a feasibility-level effort to ensure the lake's authorized purposes are adequately balanced. The Committee strongly supports these activities and reminds the Corps that efforts necessary to undertake this detailed analysis are eligible for additional funding recommended in this account.

Coastal Field Data Collection.—The Committee recommends an additional $1,500,000 to facilitate data collection and research on the impact of extreme storms in coastal regions. The Corps is encouraged to develop and test storm-resilient observation capabilities that will allow exploration of the processes driving storm impacts and the resultant coastal erosion.

Hartford and East Hartford, Connecticut Levee Systems.—The Committee recognizes the need and urgency to address the serious deficiencies of the Hartford and East Hartford, Connecticut levee systems. The Committee also recognizes that both studies require new starts.

Kanawha River Basin Study.—Section 1207, of the Water Infrastructure Improvements for the Nation Act of 2016 [WIIN], allows the Secretary to conduct studies to determine the feasibility of implementing projects for flood risk management, ecosystem restoration, navigation, water supply, recreation, and other water resource related purposes within the Kanawha River Basin in West Virginia, Virginia, and North Carolina. Within the scope of the study, the Committee also encourages the Corps to give consideration of a lake in economically distressed areas for the purpose of flood mitigation, hydroelectricity generation, and recreation.

McClellan-Kerr Arkansas River Navigation System [MKARNS].—MKARNS is an established Marine Highway for waterborne commerce, relieving our Nation's highways and bridges from additional congestion and wear and tear. MKARNS supports economic activity across a 12-State region, moving 10.9 million tons of commerce worth $3,500,000,000 annually. MKARNS is a vital corridor for agriculture commerce (soybeans and wheat) from the Gulf Coast to the Mid-West. Farmers and ranchers rely on its availability year round to move crops to markets in all seasons and facilitate the movement of fertilizer domestically to prepare for the growing season each year.

MKARNS needs to be deepened with a consistent 12-foot navigation channel to provide tow drafts that are more compatible with navigation on the Mississippi River. The current disparity results in less efficient barge operations and higher transportation costs. The Committee encourages the Corps to provide funds for nonstructural activities, such as channel deepening, with low annual funding needs in years where appropriated funds for IWTF cost shared projects are sufficient to accommodate such projects without impacting ongoing construction projects. When updating the Cap-

ital Investment Strategy pursuant to section 2002(d) of WRRDA, the Corps is encouraged to consider how smaller non-structural requirements can be addressed while continuing to prioritize ongoing construction projects.

Natural Infrastructure Options.—The Committee directs the Corps to engage with State and local government and non-profit organizations, where appropriate, on projects in diverse geographic areas to evaluate the effectiveness of a variety of natural infrastructure options, such as shellfish reef and natural vegetation to promote resiliency and reduce damage from coastal erosion, storm surge, and flooding. Such features should be incorporated into projects during the project formulation phase, where appropriate and effective.

Planning Assistance to States.—The Committee is concerned the administration is limiting the use of this program to only those activities related to flood risk management. The administration is reminded that this program encompasses many types of studies and technical assistance dealing with a number of water resource issues, including but not limited to, sediment management, State water planning, water distribution, and water supply evaluations.

Puget Sound Nearshore Study.—The Committee encourages the Corps to proceed with the tiered implementation strategy using all existing authorities as outlined in the Puget Sound Nearshore Ecosystem Restoration Project Feasibility Study, Completion Strategy Guidance dated June 2015. The Corps is further directed to recognize the Puget Sound Nearshore Study as the feasibility component for the purposes of section 544 of the Water Resources Development Act of 2000. The Committee notes that WIIN authorized construction of the Puget Sound Nearshore Ecosystem Restoration Project, and reminds the Corps that no new start, new investment decision, or new phase decision shall be required to move this project from feasibility to PED.

Research and Development.—The Committee recommends additional funding for increasing collaboration research partnerships to advance the capability to evaluate methods for restoring ecosystem restoration conservation.

Additional funding has been recommended to continue research using geophysical computational modeling and to use those processes to create simulations of changing environmental processes, sea level rise, and habitat degradation.

The Corps is reminded that activities related to innovative materials, as required under section 1208 of the America's Water Infrastructure Act of 2018 [AWIA], can be funded under this line item.

Research and Development, Oyster Restoration for Navigation Channel and Shoreline Stabilization.—The Committee recognizes the importance of sustainable oyster reefs and the potential role these hardened structures could play in the stability of navigation channels and coastal infrastructure. Recent restoration efforts have not achieved the intended success for U.S. oyster populations, and the identification of effective restoration strategies remains a critical gap. The Corps is encouraged to develop partnerships with research universities to leverage expertise and enhance the Engineer Research and Development Center's mission. Not later than 120 days after enactment of this act, the Corps shall brief the Commit-

tees on Appropriations of both Houses of Congress on how the Corps can address research gaps by leveraging internal and external expertise.

Scientific and Technical Information Centers.—The Committee is aware of concerns that the Corps is not strictly adhering to 2 CFR 200, Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards, in all of the grants and cooperative agreements that it executes with institutions of higher education. The concerns also apply to the Corps' utilization of the Cooperative Ecosystem Unit network. The Committee acknowledges that the Corps has developed new standard operating procedures for implementation of its grants and cooperative agreements and supports these actions.

Selma, Alabama.—The Committee supports the current feasibility flood and storm damage reduction study being conducted for Selma, Alabama. The Committee encourages the Corps to consider the value of the landmark threatened by shoreline erosion as part of the benefits to the Nation.

South Atlantic Coastal Study.—The Committee acknowledges the importance of engaging State, local, and tribal officials throughout the study process to ensure the methodology, focus, and results are implementable by States and communities. The Corps shall consult with industry groups, academia, and non-governmental organizations who can provide specialized expertise and coordinate appropriate attention and interest in the study's design and implementation from relevant stakeholders, including coastal State agencies, local officials, and private coastal scientists and engineers. The Committee encourages the Corps to ensure due consideration of near-shore marine habitat with potential impacts of coastal flooding and inundation, including coral reefs, oyster reefs, mangrove forests, and saltwater marsh, within the scope of this comprehensive study. To enhance the value and reach of this vital planning effort, the Committee strongly urges the Corps, where possible, to ensure the full interoperability of modeling work and data analysis conducted for the South Atlantic Coastal Study and other inland flood control and aquatic ecosystem restoration projects bordering the study area, including the Central & Southern Florida Project and South Florida Ecosystem Restoration.

Study of Water Resources Development Projects by Non-Federal Interests.—Section 1126 of WIIN allows the Secretary, at the request of a non-Federal interest, to provide technical assistance relating to any aspect of a feasibility study if the non-Federal interest contracts with the Secretary to pay all costs of providing such technical assistance. The Committee has heard concerns that the Corps is not providing technical assistance consistent with the spirit of this provision and directs the Corps to better define and standardize technical assistance provided to non-Federal project interests undertaking feasibility studies pursuant to section 203 of the Water Resources Development Act of 1986, as amended.

Upper Des Plaines River and Tributaries Project.—The Committee is aware of local concerns about the impact the proposed Foxconn project in Wisconsin may have on flooding in communities downriver in Illinois surrounding the Des Plaines River. As the

Corps reevaluates the project, the Committee encourages the Corps to take the impacts of the proposed project into consideration.

Upper Mississippi River-Illinois Waterway System.—The Committee recognizes the importance of advancing the Navigation and Ecosystem Sustainability Program [NESP] for the Upper Mississippi region and the nation's economy and notes that Congress has already appropriated more than $62,000,000 in PED funding for this program. The Committee directs the Corps to expeditiously complete the Economic Reevaluation Report to move forward with PED and advance the projects authorized in Title VIII of the Water Resources and Development Act of 2007.

Upper Mississippi River Restoration Program [UMRR].—The Committee encourages the Corps to continue working with the local community in Quincy, Illinois for a potential environmental restoration project in Quincy Bay through the Upper Mississippi River Restoration Program.

Upper Missouri River Basin Flood and Drought Monitoring.—Additional funding above the budget is recommended in the Stream Gaging remaining line item for soil moisture and snowpack monitoring.

Water Quality and Salinity Impacts on Oyster Reefs.—The Committee encourages the Corps, when conducting or reviewing environmental assessments or environmental impact statements for navigation or coastal restoration projects in areas where oyster reefs exist, to consider water quality and salinity impacts on those reefs and, when appropriate, to mitigate any negative impacts.

Willamette River.—The Committee directs the Corps to prioritize environmental restoration for urban area floodplain and aquatic habitat through cost effective means, such as fish passage and culvert replacement, for all Columbia River and Willamette River salmon and steelhead listed under the Endangered Species Act [ESA] and for Pacific Lamprey, which is a culturally, ecologically important species and treaty reserved resource to the Pacific Northwest Tribal Nations.

Additional Funding.—The Committee recommendation includes $77,880,000 in additional funds above the budget request for Investigations. From these additional funds, the Corps shall begin six new feasibility studies. The Corps is directed to allocate these additional funds in accordance with the direction in the front matter under the heading "Additional Funding". Of the additional funds recommended, the Corps shall allocate not less than $4,500,000 for PED of inland waterway lock and dam navigation and ecosystem restoration projects authorized by title VIII of the Water Resources Development Act of 2007, including equitable consideration of ecosystem restoration components. Of the additional funding recommended in this account, $905,000 is for the PED phase of beach renourishment projects that have been authorized by Congress for construction. Of the additional funding recommended for environmental restoration or compliance and other authorized project purposes, the Corps shall allocate not less than $2,000,000 for ecosystem restoration projects that are modifications to flood protection project authorizations to address degraded conditions due to prior flood protection work. Of the additional funding recommended in this account, the Corps shall allocate not less than $200,000 to

PED activities for ecosystem restoration projects that also provide additional flood storage capacity by restoring the natural habitat. The Corps is reminded that the Great Lakes—Mississippi River Interbasin Study—Brandon Road is eligible to compete for additional funding within the Investigations account in order to initiate PED. Additionally, the Corps shall comply with the following direction in allocating funds recommended for Investigations:

—When evaluating ongoing studies for funding, the Corps shall consider completing or accelerating ongoing studies or initiating new studies that will enhance the Nation's economic development, job growth, and international competitiveness; are for projects located in areas that have suffered recent natural disasters; are for projects that protect life and property; or are for projects to address legal requirements;

—The Corps shall include appropriate requests for funding in future budget submissions for PED and new feasibility studies initiated in fiscal year 2020. The Corps shall prepare the budget to reflect study completions, defined as completion of PED.

CONSTRUCTION

Appropriations, 2019	$2,183,000,000
Budget estimate, 2020	1,306,945,000
Committee recommendation	2,795,148,000

The Committee recommends $2,795,148,000 for Construction, an increase of $1,488,203,000 above the budget request. The Committee's recommendation requires the Corps to select six new construction starts to begin in fiscal year 2020.

INTRODUCTION

Funding in this account is used for construction, major rehabilitation, and related activities for water resources development projects having navigation, flood and storm damage reduction, water supply, hydroelectric, environmental restoration, and other attendant benefits to the Nation. Funds to be derived from the HMTF will be applied to cover the Federal share of the Dredged Material Disposal Facilities Program.

NEW STARTS

The Corps is directed to designate new starts in accordance with the direction in the front matter under the heading "Additional Funding".

COMMITTEE RECOMMENDATION

The table below displays the budget request and Committee's recommendation for Construction:

CORPS OF ENGINEERS—CONSTRUCTION

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
CALIFORNIA			
AMERICAN RIVER COMMON FEATURES, NATOMAS BASIN, CA	59,000	59,000	
FLORIDA			
SOUTH FLORIDA ECOSYSTEM RESTORATION (EVERGLADES), FL	200,000	200,000	
GEORGIA			
SAVANNAH HARBOR EXPANSION, GA	130,280	130,280	
ILLINOIS			
MELVIN PRICE LOCK AND DAM, IL & MO (DEFICIENCY CORRECTION)	24,087	24,087	
UPPER MISSISSIPPI RIVER RESTORATION, IL, IA, MN, MO & WI	33,170	33,170	
IOWA			
MISSOURI RIVER FISH AND WILDLIFE RECOVERY, IA, KS, MO, MT, NE, ND & SD	17,775	17,775	
KENTUCKY			
ROUGH RIVER LAKE, KY (MAJOR REHABILITATION)	50,000	50,000	
MARYLAND			
ASSATEAGUE, MD		600	*
POPLAR ISLAND, MD		17,300	*
MASSACHUSETTS			
BOSTON HARBOR, MA	34,814	34,814	
MICHIGAN			
SAULT STE MARIE (NEW CONSTRUCTION), MI	75,333	75,333	
NEW JERSEY			
CAPE MAY INLET TO LOWER TOWNSHIP, NJ		200	*
LOWER CAPE MAY MEADOWS, CAPE MAY POINT, NJ		7,400	*
RARITAN RIVER BASIN, GREEN BROOK SUB–BASIN, NJ	25,000	25,000	
OREGON			
COLUMBIA RIVER AT THE MOUTH, OR & WA	36,000	36,000	
PENNSYLVANIA			
LOCKS AND DAMS 2, 3 AND 4, MONONGAHELA RIVER, PA	55,500	111,000	*
SOUTH CAROLINA			
CHARLESTON HARBOR (DEEPENING AND WIDENING), SC	138,040	138,040	
TEXAS			
CORPUS CHRISTI SHIP CHANNEL, TX	53,313	53,313	
WASHINGTON			
COLUMBIA RIVER FISH MITIGATION, WA, OR & ID (CRFM)	21,602	21,602	
MUD MOUNTAIN DAM, WA	15,694	15,694	
SUBTOTAL, ITEMS UNDER STATES	969,608	1,050,608	
REMAINING ITEMS			
ADDITIONAL FUNDING FLOOD AND STORM DAMAGE REDUCTION		115,000	
FLOOD CONTROL		118,000	
SHORE PROTECTION		45,000	
NAVIGATION		387,698	
INLAND WATERWAYS TRUST FUND REVENUES		72,500	
REGIONAL DREDGE DEMONSTRATION PROGRAM		525,000	
OTHER AUTHORIZED PROJECT PURPOSES		70,000	
ENVIRONMENTAL RESTORATION OR COMPLIANCE		70,000	
ENVIRONMENTAL INFRASTRUCTURE		80,000	

CORPS OF ENGINEERS—CONSTRUCTION—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
ALTERNATIVE DELIVERY		100,000	
AQUATIC PLANT CONTROL PROGRAM		15,000	
BENEFICIAL USE OF DREDGED MATERIAL PILOT PROGRAM		7,500	
CONTINUING AUTHORITIES PROGRAM AQUATIC ECOSYSTEM RESTORATION (SECTION 206)	1,000	12,000	
BENEFICIAL USES OF DREDGED MATERIAL (SECTION 204)		10,000	*
EMERGENCY STREAMBANK AND SHORELINE PROTECTION (SECTION 14)		8,000	
FLOOD CONTROL PROJECTS (SECTION 205)	1,000	8,000	
MITIGATION OF SHORE DAMAGES (SECTION 111)		8,000	
NAVIGATION PROGRAM (SECTION 107)		8,000	
PROJECT MODIFICATIONS FOR IMPROVEMENT OF THE ENVIRONMENT (SECTION 1135)	1,000	8,000	
REMOVAL OF OBSTRUCTIONS (SECTION 208)			
SHORE PROTECTION (SECTION 103)		4,000	
DAM SAFETY AND SEEPAGE/STABILITY CORRECTION PROGRAM	17,002	23,507	*
EMPLOYEES' COMPENSATION	17,000	17,000	
INLAND WATERWAYS USERS BOARD—BOARD EXPENSE	60	60	
INLAND WATERWAYS USERS BOARD—CORPS EXPENSE	275	275	
INNOVATIVE FUNDING PARTNERSHIPS	150,000		
REHABILITATION OF CORPS CONSTRUCTED DAMS (SECTION 1177)		20,000	
RESTORATION OF ABANDONED MINES		2,000	
TRIBAL PARTNERSHIP PROGRAM		10,000	
WRRDA 2014, SECTION 1043 NON–FEDERAL CONSTRUCTION OF FEDERAL PROJECTS	150,000		
SUBTOTAL	337,337	1,744,540	
TOTAL	1,306,945	2,795,148	

*Includes funds requested in other accounts.

Alternative Delivery.—The Committee is disappointed the administration's fiscal year 2020 budget did not support the Corps' Water Infrastructure Finance Innovation Act program or Public-Private Partnership [P3] efforts. Instead of proposing funds for ongoing efforts, the administration proposed a new funding pot, "Innovative Funding Partnerships", where eligibility for funding is conditioned on non-Federal interests providing more than their statutory cost share requirement. Consistent with previous Congressional intent, the Committee does not support initiatives that disadvantage rural communities and other non-Federal interests who lack the financial means to pay more to get preferential priority in funding.

The Committee does support alternative delivery approaches such as P3s and split delivery methods that leverage public and private resources to reduce costs and risk to populations by delivering infrastructure sooner. The use of P3s and split delivery methods demonstrates a viable strategy to help address the Corps' backlog of projects while reducing scheduling and funding risk to the Federal Government. Alternative Delivery funding is recommended in this account under the new funding line "Alternative Delivery" for ongoing and planned P3s and projects that utilize a split-delivery approach. The Committee also encourages the Corps to continue the rulemaking process for WIFIA.

Aquatic Plant Control Program.—Of the funding recommended for the Aquatic Plant Control Program: $1,000,000 shall be for activities for monitoring, surveys, and control of flowering rush; $5,000,000 shall be for nationwide research and development to ad-

dress invasive aquatic plants, within which the Corps is encouraged to support cost-shared aquatic plant management programs; $5,000,000 shall be for watercraft inspection stations and rapid response, as authorized by section 1039 of WRRDA, as amended; and $1,000,000 shall be for related monitoring.

Barrow Alaska Coastal Erosion.—The North Slope Borough experiences frequent flooding and erosion resulting from decreased ice cover and severe coastal storms. The flooding and erosion experienced in Barrow, Alaska presents significant risks to life and safety, threatens the community's only drinking water source, and risks from environmental contamination. The Committee understands the Corps is finalizing the Director's Report for Barrow under section 116 of Public Law 111–85, which authorizes the Secretary to carry out structural and non-structural projects for storm damage prevention and reduction, coastal erosion, and ice and glacial damage in Alaska. The Committee supports these efforts and directs the Corps to complete the report and expeditiously proceed to PED. The Corps is reminded this project is eligible to receive additional funds recommended in this account and is urged to include funding in future budget submissions.

Beneficial Use of Dredged Material Pilot Program.—The Committee is pleased to see the Corps' selection of 10 pilot projects under section 1122 of WIIN to carry out beneficial use of dredged sediment, including the selection of the Resilient San Francisco Bay Pilot Project. The Committee's recommendation provides additional funds within "Beneficial Use of Dredged Material Pilot Program" to pursue the next phase for the selected projects.

Camp Ellis Beach, Saco, Maine.—The Committee is concerned by the continued delay in implementing a solution at Camp Ellis Beach in Saco, Maine. To address continued erosion which has destroyed 37 homes to date, the Committee is aware that the Corps' initial study recommended a shore damage mitigation project consisting of a 750-foot-long spur jetty, and placement of about 360,000 cubic yards of beach fill along the beach. The Committee is further aware that the Corps is working with the city on detailing a path ahead on the project. Accordingly, the Committee directs the Secretary to continue collaborative efforts to address the continued erosion.

Caño Martin Peña Ecosystem Restoration Project, San Juan, Puerto Rico.—The Committee recognizes the importance of the Caño Martin Peña Ecosystem Restoration Project to residents' health and well-being, the local economy and environment, and the reduction of coastal flood and storm damage risk. The Committee understands that the PED phase of the project is on track to conclude by the end of fiscal year 2019. The Committee encourages the Corps to include appropriate funding in future budget requests and to coordinate closely with non-Federal interests in Puerto Rico to establish a project partnership agreement to continue to advance this critical project for environmental restoration, economic revitalization, and flood protection in a timely manner.

Central Everglades Planning Project.—The Committee recognizes the importance of restoring America's Everglades, and commends the administration's budget request expediting PED and construction on the Central Everglades Planning Project to complement the

initiative of the South Florida Water Management District in jumpstarting elements of PPA South, PPA New Water, and the Everglades Agricultural Area Storage Reservoir.

Charleston Harbor, South Carolina.—The Committee supports the budget request for the Charleston Harbor Deepening Project and understands the requested level will be used to fund the project to completion once an amendment to the existing Project Partnership Agreement is executed. The Corps shall expedite the necessary measures identified in the budget request to fully fund, up to the budget request, the remaining construction activities.

Chesapeake Bay Comprehensive Water Resources Restoration Plan.—The Committee supports the Corps' Chesapeake Bay Comprehensive Water Resources and Restoration Plan.

Chicago Sanitary and Ship Canal Dispersal Barrier, Illinois.—Hydrologic separation issues should be fully studied by the Corps, vetted by the appropriate congressional authorizing committees, and specifically enacted into law. No funds recommended in this act may be used for construction of hydrologic separation measures.

Columbia River Fish Mitigation.—The Committee understands that the Corps, along with the Bonneville Power Administration, have an agreement with affected Tribes to seek funds so that identified Pacific Lamprey passage improvements can be implemented at Corps-owned dams on the Columbia and Snake Rivers. To that end, the Corps is encouraged to pursue funds to improve Pacific Lamprey passage.

CERP—Indian River Lagoon-South.—The Committee recognizes the importance of eliminating discharges from Lake Okeechobee that help fuel harmful algal blooms [HABs] in the St. Lucie River and Indian River Lagoon. The Committee supports the administration's budget request to accelerate design work on the C–23 and C–24 Reservoirs and Stormwater Treatment Areas that, along with continued construction of the C–44 Reservoir, will serve as crucial elements of the Indian River Lagoon-South project to collect and clean Lake Okeechobee discharges and basin runoff before excess nutrients are able to enter the fragile lagoon ecosystem.

Continuing Authorities Program.—The Committee recommends $66,000,000 for the Continuing Authorities Program [CAP], an increase of $63,000,000 above the budget request. CAP is a useful tool for the Corps to undertake small localized projects without being encumbered by the lengthy study and authorization phases typical of most Corps projects. Within the CAP and to the extent already authorized by law, the Corps is encouraged to consider projects that enhance coastal and ocean ecosystem resiliency. The management of CAP should continue consistent with direction provided in previous fiscal years.

The Committee encourages the Corps to expedite the implementation of feasibility studies approved in 2019 under section 206 of the Flood Control Act of 1958.

The Corps shall allow for the advancement of flood control projects in combination with ecological benefits using natural and nature-based solutions alone, or in combination with built infrastructure where appropriate for reliable risk reduction during the development of projects under section 205 of CAP.

Within the section 1135 CAP authority, and to the extent already authorized by law, the Committee urges the Corps to give priority to projects that restore degraded wetland habitat and stream habitat impacted by construction of Corps levees with executed feasibility cost share agreements.

Environmental Infrastructure.—Authorized Environmental Infrastructure projects shall not require a new start designation. The Committee reminds the Corps that Environmental Infrastructure authorities include caps on Federal participation, but do not provide a guarantee that the project authorization level will be met. Environmental Infrastructure projects shall only receive funding if there is a separable element that can be funded to completion in a fiscal year without the requirement for continued funding in future years. The Corps is directed to develop metrics for the selection of Environmental Infrastructure projects that receive funds and provide a report on such metrics to the Committees on Appropriations of both Houses of Congress within 180 days of enactment of this act.

Great Lakes Fishery and Ecosystem Restoration Program.—The Corps is reminded that the Great Lakes Fishery and Ecosystem Restoration Program is eligible to receive funds recommended in this account.

Howard Hanson Dam.—The Committee is aware that the National Marine Fisheries Service [NMFS] has issued a jeopardy Biological Opinion [BiOp] determining the impact of ongoing operations of Howard Hanson Dam, including the Howard Hanson Dam—Additional Water Storage Project, on ESA-listed species and that the BiOp requires the completion of a downstream fish passage facility by 2030. The Committee encourages the Corps to continue consultations with NMFS and begin the next phase of implementing the BiOp's findings, and urges the Corps to work with resource co-managers to develop long-term measures to maintain fish runs past Howard Hanson Dam, while upholding ESA and municipal and industrial water supply responsibilities.

McCook and Thornton Reservoirs, Illinois.—The Committee acknowledges that the Project Partnership Agreement between the Corps and the Metropolitan Water Reclamation District of Greater Chicago for McCook Reservoir was executed under the authority of section 1043 of WRRDA. The agreement transferred the funds and the authority to construct the remainder of the McCook Reservoir to the non-Federal sponsor, thereby limiting the Federal exposure to the transferred amount and shifting the responsibility for any cost overruns to the local sponsor. The Corps is directed to provide an annual briefing to the Committees on Appropriations of both Houses of Congress on the progress of the project and the oversight conducted by the Corps.

Mud Mountain Dam.—The Committee commends the Corps for initiating construction to support the October 2014 Mud Mountain BiOp and mitigate the impact of the ongoing operation of Mud Mountain Dam on species listed under ESA by replacing the barrier structure and building a new fish passage facility. The Committee encourages the Corps to uphold the agency's ESA and Tribal treaty responsibilities and fully implement the BiOp requirements.

Non-Federal Implementation Pilot Program.—Section 1043(b) of WRRDA, as amended, authorized the Secretary to establish and implement a pilot program to evaluate the cost effectiveness and project delivery efficiency of allowing non-Federal interests to carry out flood risk management, hurricane and storm damage, coastal harbor and channel inland navigation, and aquatic ecosystem restoration projects. The Committee is aware of two projects that have been identified for implementation prior to the authority's expiration on June 10, 2019.

The administration's fiscal year 2020 budget proposes $150,000,000 for construction projects under this authority and issued implementation guidance dated June 24, 2019. The Committee has several concerns regarding the implementation of this authority that are not addressed in the implementation guidance. The guidance (1) does not include metrics for measuring pilot program success; (2) fails to address the selection and implementation of additional projects; (3) fails to address the significant risks associated with a non-Federal interest undertaking construction of a Federal project, including situations where the non-Federal interest fails to meet design and quality standards; (4) fails to address compliance with all laws and regulations that would apply if the Secretary were carrying out the project; and (5) fails to address liability in the event a project fails. Due to these concerns, the Corps shall notify the Committees on Appropriations of both Houses of Congress upon receiving any proposal from a non-Federal interest requesting to utilize the section 1043 authority. The Corps shall not negotiate or enter into a project partnership agreement to transfer funds to a non-Federal interest utilizing the 1043(b) authority unless approval is received from the Committee on Appropriations of both Houses of Congress. None of the funds recommended in this act shall be used under this authority for a project where construction has been started but not completed. The Corps shall brief the Committees not later than 45 days after enactment of this act on activities carried out under the section 1043 pilot program, including the Corps' implementation guidance and any existing or potential agreements.

Oyster Restoration.—The Committee supports Gulf Coast oyster restoration efforts and the Chesapeake Bay Oyster Restoration Program and encourages the Corps to provide sufficient funding in future budget submissions or the fiscal year 2020 work plan.

Prioritization of Projects in Drought-Stricken Areas.—The Committee urges the Corps to prioritize any authorized projects that would alleviate water supply issues in areas that have been afflicted by severe droughts in the last three fiscal years, to include projects focused on the treatment of brackish water.

Regional Dredge Demonstration Program.—The Committee recognizes the limitations that incremental funding provided on an annual basis places on the Corps' ability to effectively and efficiently execute port deepening projects that are imperative for maintaining global competitiveness. The impacts are further exacerbated by competing dredging demands, including emergency work to address extensive shoaling from recurring storm events, routine annual maintenance, and shore protection work.

The uncertainty of receiving efficient funding has resulted in higher project costs and significant schedule delays. In recent years, these impacts are reflected in considerably higher than estimated bid prices and in some cases a lack of bid responses altogether. Despite industry bringing new and more efficient dredges online to meet increasing demands, the traditional approach to funding and executing dredge work continues to contribute the greatest amount of uncertainty enterprise-wide.

In response to these challenges, the Corps has proposed an innovative approach to execute dredging in a logical, sequenced manner that leverages multi-year funding and is unconstrained by traditional project-specific, account-specific, or single year restrictions. To demonstrate these efficiencies, the Committee recommends $525,000,000 in this account for deep draft navigation projects in the Gulf of Mexico, between Louisiana and Florida in accordance with the direction in the front matter under the heading "Regional Dredge Demonstration Program".

Rehabilitation of Corps Constructed Dams.—The Committee directs the Corps to undertake recommendations for construction resulting from a Risk Assessment or Dam Safety Modification Report completed under section 542 of the Water Resources Development Act of 2000, as amended, or section 1177 of WIIN, as amended, using the funds in this line item.

South Florida Ecosystem Restoration [SFER].—For fiscal year 2020, the Committee directs the Corps to make publicly available a comprehensive snapshot of all SFER cost share accounting down to the project level and directs the Corps to ensure the accuracy of all budget justification sheets that inform SFER Integrated Financial Plan documents by September 30, 2020.

The Dalles Dam.—Funding was allocated to complete the Village Development Plan for the Dalles Tribal housing village in fiscal year 2019. The Corps is directed to use this funding to move forward expeditiously with completion of this phase of the project.

Urban Flooding.—The Committee encourages the Corps to expeditiously complete the urban flooding report authorized by Congress in section 1211 of AWIA.

Waterbury Dam, Vermont.—The Corps is reminded that Waterbury Dam is eligible to use previously appropriated funds to complete a Risk Assessment and Dam Safety Action Classification pursuant to section 542 of the Water Resources Development Act of 2000, as amended.

WRRDA Section 4001, River Basin Commissions.—The Committee urges the Secretary to follow through on previous direction provided by Congress to financially support the Susquehanna, Delaware, and Potomac River Basin Commissions. Congress has made clear its intent and expects the Corps to budget accordingly.

Additional Funding.—The Committee recommendation includes $1,488,203,000 in additional funds for Construction above the budget request. The Corps shall allocate these additional funds in accordance with the direction in the front matter under the heading "Additional Funding". The Corps shall not condition these funds, or any funds appropriated in this act, on a non-Federal interest paying more than their required share in any phase of a project. Of the additional funds recommended in this account, the

Corps shall allocate not less than $20,000,000 for the construction of projects that principally address drainage in urban areas. Of the additional funds recommended in this account for flood and storm damage reduction, navigation, and other authorized project purposes (excluding environmental infrastructure), the Corps shall allocate not less than $35,000,000 to authorized reimbursements for projects with executed project partnership agreements and that have completed construction or where non-Federal sponsors intend to use the funds for additional water resource development activities. Of the additional funding recommended under the heading "Environmental Restoration or Compliance", not less than $20,000,000 shall be for multistate ecosystem restoration programs for which a comprehensive restoration plan is in development or has been completed.

When allocating the additional funding provided in this account, the Corps is encouraged to evaluate authorized reimbursements in the same manner as if the projects were being evaluated for new or ongoing construction and shall consider giving priority to the following:

—Benefits of the funded work to the national economy;
—Extent to which the work will enhance national, regional, or local economic development;
—Number of jobs created directly by the funded activity;
—Ability to obligate the funds allocated within the calendar year, including consideration of the ability of the non-Federal sponsor to provide any required cost share;
—Ability to complete the project, separable element, or project phase with the funds allocated;
—Legal requirements, including responsibilities to Tribes;
—For flood and storm damage reduction projects (including authorized nonstructural measures and periodic beach renourishments): Population, economic activity, or public infrastructure at risk, as appropriate; the severity of risk of flooding or the frequency with which an area has experienced flooding; and preservation of historically significant communities, culture, and heritage;
—For shore protection projects, projects in areas where there is risk to life and public health and safety, and risk of environmental contamination;
—For ecosystem restoration projects, projects that restore degraded wetland and stream habitat negatively impacted by the construction of Corps levees;
—For navigation projects, the number of jobs or level of economic activity to be supported by completion of the project, separable element, or project phase;
—For projects cost shared with the IWTF, the economic impact on the local, regional, and national economy if the project is not funded, as well as discrete elements of work that can be completed within the funding provided in this line item;
—For other authorized project purposes and environmental restoration or compliance projects, the beneficial use of dredged material; and
—For environmental infrastructure, projects in rural communities, projects with greater economic impact, projects in coun-

ties or parishes with high poverty rates, projects owed past reimbursements, and projects that provide backup raw water supply in the event of an emergency.

The Committee recommendation includes the full use of all estimated fiscal year 2020 annual revenues in the IWTF as well as the sufficient additional IWTF prior year revenues to ensure ongoing new construction projects may proceed with an efficient funding profile. Funds recommended herein for inland waterways shall only be available for ongoing new construction projects, which have a fiscal year 2020 estimate of $196,000,000 above the administration's budget request. The Corps shall allocate all funds recommended in the IWTF Revenues line item along with the statutory cost share from funds provided in the Navigation line item prior to allocating the remainder of funds in the Navigation line item.

MISSISSIPPI RIVER AND TRIBUTARIES

Appropriations, 2019	$368,000,000
Budget estimate, 2020	209,872,000
Committee recommendation	368,000,000

The Committee recommends $368,000,000 for Mississippi River and Tributaries, an increase of $158,128,000 above the budget request. Funds recommended in this account are for planning, construction, and operation and maintenance activities associated with water resource projects located in the lower Mississippi River Valley from Cape Girardeau, Missouri to the Gulf of Mexico.

The table below displays the budget request and Committee's recommendation:

MISSISSIPPI RIVER AND TRIBUTARIES

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
CONSTRUCTION			
CHANNEL IMPROVEMENT, AR, IL, KY, LA, MS, MO & TN	38,649	38,649	
MISSISSIPPI RIVER LEVEES, AR, IL, KY, LA, MS, MO &TN	16,300	16,300	
ATCHAFALAYA BASIN, LA	1,500	1,500	
ATCHAFALAYA BASIN FLOODWAY SYSTEM, LA	300	300	
SUBTOTAL, CONSTRUCTION	56,749	56,749	
OPERATION AND MAINTENANCE			
CHANNEL IMPROVEMENT, AR, IL, KY, LA, MS, MO & TN	70,041	70,041	
HELENA HARBOR, PHILLIPS COUNTY, AR	.....	540	*
INSPECTION OF COMPLETED WORKS, AR	.....	290	†
LOWER ARKANSAS RIVER, NORTH BANK, AR	1,012	1,012	
LOWER ARKANSAS RIVER, SOUTH BANK, AR	148	148	
RED-OUACHITA RIVER BASIN LEVEES, AR &LA	141	141	
MISSISSIPPI RIVER LEVEES, AR, IL, KY, LA, MS, MO &TN	8,651	8,651	
ST FRANCIS BASIN, AR & MO	5,100	5,100	
TENSAS BASIN, BOEUF AND TENSAS RIVERS, AR & LA	1,342	1,342	
WHITE RIVER BACKWATER, AR	1,000	1,000	
INSPECTION OF COMPLETED WORKS, IL	.....	15	†
INSPECTION OF COMPLETED WORKS, KY	.....	41	†
ATCHAFALAYA BASIN, LA	10,965	10,965	
ATCHAFALAYA BASIN FLOODWAY SYSTEM, LA	1,792	1,792	
BATON ROUGE HARBOR, DEVIL SWAMP, LA	.....	555	*
BAYOU COCODRIE AND TRIBUTARIES, LA	48	48	

MISSISSIPPI RIVER AND TRIBUTARIES—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
BONNET CARRE, LA	4,205	4,205	
INSPECTION OF COMPLETED WORKS, LA	.....	701	†
LOWER RED RIVER, SOUTH BANK LEVEES, LA	438	438	
MISSISSIPPI DELTA REGION, LA	490	490	
OLD RIVER, LA	9,479	9,479	
TENSAS BASIN, RED RIVER BACKWATER, LA	1,805	1,805	
GREENVILLE HARBOR, MS	.....	930	*
INSPECTION OF COMPLETED WORKS, MS	.....	152	†
VICKSBURG HARBOR, MS	.....	940	*
YAZOO BASIN, ARKABUTLA LAKE, MS	5,531	5,531	
YAZOO BASIN, BIG SUNFLOWER RIVER, MS	188	188	
YAZOO BASIN, ENID LAKE, MS	4,663	4,663	
YAZOO BASIN, GREENWOOD, MS	747	747	
YAZOO BASIN, GRENADA LAKE, MS	4,829	4,829	
YAZOO BASIN, MAIN STEM, MS	1,135	1,135	
YAZOO BASIN, SARDIS LAKE, MS	5,290	5,290	
YAZOO BASIN, TRIBUTARIES, MS	675	675	
YAZOO BASIN, WILL M WHITTINGTON AUX CHAN, MS	280	280	
YAZOO BASIN, YAZOO BACKWATER AREA, MS	404	404	
YAZOO BASIN, YAZOO CITY, MS	514	514	
INSPECTION OF COMPLETED WORKS, MO	.....	190	†
WAPPAPELLO LAKE, MO	4,524	4,524	
INSPECTION OF COMPLETED WORKS, TN	.....	28	†
MEMPHIS HARBOR, MCKELLAR LAKE, TN	.....	2,163	*
SUBTOTAL, OPERATION AND MAINTENANCE	145,437	151,982	
REMAINING ITEMS			
ADDITIONAL FUNDING FOR ONGOING WORK DREDGING	.....	3,000	
FLOOD CONTROL	.....	100,000	
OTHER AUTHORIZED PURPOSES	.....	50,000	
COLLECTION AND STUDY OF BASIC DATA	4,960	4,960	
MAPPING	1,219	1,219	
MISSISSIPPI RIVER COMMISSION	90	90	
INSPECTION OF COMPLETED WORKS (OPERATION)	1,417	.....	
SUBTOTAL, REMAINING ITEMS	7,686	159,269	
TOTAL, MISSISSIPPI RIVER AND TRIBUTARIES	209,872	368,000	

*Includes funds requested in other accounts.
†Funded in remaining items.

Lower Mississippi River Main Stem.—The budget request proposes to consolidate several activities across multiple States into one line item. The Committee does not support this change and instead recommends continuing to fund these activities as separate line items.

Additional Funding for Ongoing Work.—When allocating the additional funding recommended in this account, the Corps shall consider giving priority to completing or accelerating ongoing work that will enhance the nation's economic development, job growth, and international competitiveness, or to studies or projects located in areas that have suffered recent natural disasters. The Corps shall use such sums as are necessary to carry out remaining unconstructed features of projects authorized by law, in response to recent flood disasters. While this funding is shown under remaining items, the Corps shall use these funds in investigations, construction, and operation and maintenance, as applicable.

When allocating the additional funding recommended in this account the Corps shall allocate not less than $30,000,000 for additional flood control construction projects outside of the Lower Mississippi River Main Stem, of which $15,560,000 shall be for those projects with flood control, water quality, and sediment reduction benefits. Of the additional funds recommended in this account for other authorized project purposes, the Corps shall allocate not less than $1,160,000 for operation and maintenance of facilities that are educational or to continue land management of mitigation features. Of the additional funds recommended in this account, the Corps shall allocate not less than $3,000,000 for dredging of ports and harbors.

OPERATION AND MAINTENANCE

Appropriations, 2019	$3,739,500,000
Budget estimate, 2020	1,930,428,000
Committee recommendation	3,798,972,000

The Committee recommends $3,798,972,000 for Operation and Maintenance, an increase of $1,868,544,000 above the budget request.

INTRODUCTION

Funding in this account is used to fund operations, maintenance, and related activities at water resource projects that the Corps operates and maintains. These activities include dredging, repair, and operation of structures and other facilities, as authorized in the various river and harbor, flood control, and water resources development acts. Related activities include aquatic plant control, monitoring of completed projects where appropriate, removal of sunken vessels, and the collection of domestic waterborne commerce statistics.

COMMITTEE RECOMMENDATION

The table below displays the budget request and Committee's recommendation for Operation and Maintenance:

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
ALABAMA			
ALABAMA RIVER LAKES, AL	13,890	13,890	
BLACK WARRIOR AND TOMBIGBEE RIVERS, AL	25,953	25,953	
GULF INTRACOASTAL WATERWAY, AL	5,290	5,290	
INSPECTION OF COMPLETED WORKS, AL		168	†
MOBILE HARBOR, AL		26,031	*
PERDIDO PASS CHANNEL, AL		5	*
PROJECT CONDITION SURVEYS, AL		150	*
SCHEDULING RESERVOIR OPERATIONS, AL		85	†
TENNESSEE—TOMBIGBEE WATERWAY WILDLIFE MITIGATION, AL & MS	1,800	1,800	
TENNESSEE—TOMBIGBEE WATERWAY, AL & MS	37,389	37,389	
WALTER F GEORGE LOCK AND DAM, AL & GA	9,099	9,099	
ALASKA			
ANCHORAGE HARBOR, AK		10,485	*
AURORA HARBOR, AK		75	*

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
CHENA RIVER LAKES, AK	7,236	7,236	
DILLINGHAM HARBOR, AK		875	*
INSPECTION OF COMPLETED WORKS, AK		200	†
HOMER HARBOR, AK		615	*
JUNEAU HARBOR, AK		75	*
NINILCHIK HARBOR, AK		650	*
NOME HARBOR, AK		2,220	*
PROJECT CONDITION SURVEYS, AK		750	*
ARIZONA			
ALAMO LAKE, AZ	2,905	2,905	
INSPECTION OF COMPLETED WORKS, AZ		250	†
PAINTED ROCK DAM, AZ	1,165	1,165	
SCHEDULING RESERVOIR OPERATIONS, AZ		117	†
WHITLOW RANCH DAM, AZ	559	559	
ARKANSAS			
BEAVER LAKE, AR	11,099	11,099	
BLAKELY MT DAM, LAKE OUACHITA, AR	7,858	7,858	
BLUE MOUNTAIN LAKE, AR	1,762	1,762	
BULL SHOALS LAKE, AR	7,466	7,466	
DEGRAY LAKE, AR	7,148	7,148	
DEQUEEN LAKE, AR	1,579	1,579	
DIERKS LAKE, AR	1,410	1,410	
GILLHAM LAKE, AR	2,545	2,545	
GREERS FERRY LAKE, AR	9,043	9,043	
HELENA HARBOR, AR		15	*
INSPECTION OF COMPLETED WORKS, AR		1,151	†
MCCLELLAN–KERR ARKANSAS RIVER NAVIGATION SYSTEM, AR	52,475	52,475	
MILLWOOD LAKE, AR	3,245	3,245	
NARROWS DAM, LAKE GREESON, AR	5,732	5,732	
NIMROD LAKE, AR	2,009	2,009	
NORFORK LAKE, AR	7,342	7,342	
OSCEOLA HARBOR, AR		15	*
OUACHITA AND BLACK RIVERS, AR & LA	7,339	7,339	
PROJECT CONDITION SURVEYS, AR		5	*
WHITE RIVER, AR	25	25	
CALIFORNIA			
BLACK BUTTE LAKE, CA	8,050	8,050	
BUCHANAN DAM, HV EASTMAN LAKE, CA	4,977	4,977	
CHANNEL ISLANDS HARBOR, CA		5,290	*
COYOTE VALLEY DAM, LAKE MENDOCINO, CA	3,704	3,704	
DRY CREEK (WARM SPRINGS) LAKE AND CHANNEL, CA	6,816	6,816	
FARMINGTON DAM, CA	712	712	
HIDDEN DAM, HENSLEY LAKE, CA	2,638	2,638	
HUMBOLDT HARBOR AND BAY, CA		3,962	*
INSPECTION OF COMPLETED WORKS, CA		3,173	†
ISABELLA LAKE, CA	1,696	1,696	
LOS ANGELES COUNTY DRAINAGE AREA, CA	13,108	13,108	
MERCED COUNTY STREAMS, CA	470	470	
MOJAVE RIVER DAM, CA	1,329	1,329	
MORRO BAY HARBOR, CA		2,750	*
NEW HOGAN LAKE, CA	3,583	3,583	
NEW MELONES LAKE, DOWNSTREAM CHANNEL, CA	2,197	2,197	
OAKLAND HARBOR (50 FOOT PROJECT), CA		20,563	*
OCEANSIDE HARBOR, CA		2,650	*
PINE FLAT LAKE, CA	4,226	4,226	
PROJECT CONDITION SURVEYS, CA		1,494	*
REDWOOD CITY HARBOR, CA		475	*
RICHMOND HARBOR, CA		14,519	*
SACRAMENTO RIVER (30 FOOT PROJECT), CA		2,030	*

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
SACRAMENTO RIVER AND TRIBUTARIES (DEBRIS CONTROL), CA	909	1,621	*
SACRAMENTO RIVER SHALLOW DRAFT CHANNEL, CA	.....	175	*
SAN FRANCISCO BAY DELTA MODEL STRUCTURE, CA	743	743	
SAN FRANCISCO BAY LONG TERM MANAGEMENT STRATEGY, CA	.....	405	*
SAN FRANCISCO HARBOR AND BAY, CA (DRIFT REMOVAL)	.....	3,538	*
SAN FRANCISCO HARBOR, CA	.....	4,530	*
SAN JOAQUIN RIVER, PORT OF STOCKTON, CA	.....	4,530	*
SAN PABLO BAY AND MARE ISLAND STRAIT, CA	.....	2,880	*
SAN RAFAEL CREEK, CA	.....	28	*
SANTA ANA RIVER BASIN, CA	6,158	6,158	
SANTA BARBARA HARBOR, CA	.....	3,620	*
SCHEDULING RESERVOIR OPERATIONS, CA	.....	1,464	†
SUCCESS LAKE, CA	2,729	2,729	
SUISUN BAY CHANNEL, CA	.....	5,800	*
TERMINUS DAM, LAKE KAWEAH, CA	3,205	3,205	
YUBA RIVER, CA	203	1,519	*
COLORADO			
BEAR CREEK LAKE, CO	646	646	
CHATFIELD LAKE, CO	1,961	1,961	
CHERRY CREEK LAKE, CO	1,061	1,061	
INSPECTION OF COMPLETED WORKS, CO	.....	435	†
JOHN MARTIN RESERVOIR, CO	3,865	3,865	
TRINIDAD LAKE, CO	2,305	2,305	
SCHEDULING RESERVOIR OPERATIONS, CO	.....	601	†
CONNECTICUT			
BLACK ROCK LAKE, CT	657	657	
COLEBROOK RIVER LAKE, CT	779	779	
HANCOCK BROOK LAKE, CT	586	586	
HOP BROOK LAKE, CT	1,214	1,214	
INSPECTION OF COMPLETED WORKS, CT	.....	303	†
MANSFIELD HOLLOW LAKE, CT	880	880	
NORTHFIELD BROOK LAKE, CT	836	836	
PROJECT CONDITION SURVEYS, CT	.....	800	*
STAMFORD HURRICANE BARRIER, CT	851	851	
THOMASTON DAM, CT	1,139	1,139	
WEST THOMPSON LAKE, CT	811	811	
DELAWARE			
INDIAN RIVER INLET & BAY, DE	.....	33	*
INSPECTION OF COMPLETED WORKS, DE	.....	71	†
INTRACOASTAL WATERWAY, DELAWARE RIVER TO CHESAPEAKE BAY, DE & MD	.....	22,255	*
INTRACOASTAL WATERWAY, REHOBOTH BAY DELAWARE BAY	.....	150	*
PROJECT CONDITION SURVEYS, DE	.....	200	*
WILMINGTON HARBOR, DE	.....	7,740	*
DISTRICT OF COLUMBIA			
INSPECTION OF COMPLETED WORKS, DC	.....	85	†
POTOMAC AND ANACOSTIA RIVERS, DC (DRIFT REMOVAL)	.....	1,075	*
PROJECT CONDITION SURVEYS, DC	.....	30	*
WASHINGTON HARBOR, DC	.....	25	*
FLORIDA			
CANAVERAL HARBOR, FL	.....	1,474	*
CENTRAL AND SOUTHERN FLORIDA, FL	19,318	20,230	*
ESCAMBIA AND CONECUH RIVERS, FL & AL	.....	45	*
INSPECTION OF COMPLETED WORKS, FL	.....	1,173	†
INTRACOASTAL WATERWAY, JACKSONVILLE TO MIAMI, FL	3,480	3,480	
JACKSONVILLE HARBOR, FL	.....	8,310	*
JIM WOODRUFF LOCK AND DAM, LAKE SEMINOLE, FL, AL & GA	8,202	8,202	
MANATEE HARBOR, FL	.....	230	*

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
MIAMI HARBOR, FL	.....	230	*
OKEECHOBEE WATERWAY, FL	1,212	2,736	*
PALM BEACH HARBOR, FL	.....	3,970	*
PORT EVERGLADES HARBOR, FL	.....	373	*
PROJECT CONDITION SURVEYS, FL	.....	1,275	*
REMOVAL OF AQUATIC GROWTH, FL	.....	3,410	*
SCHEDULING RESERVOIR OPERATIONS, FL	.....	120	†
SOUTH FLORIDA ECOSYSTEM RESTORATION (EVERGLADES), FL	5,454	5,454	
TAMPA HARBOR, FL	.....	8,530	*
GEORGIA			
ALLATOONA LAKE, GA	8,747	8,747	
APALACHICOLA, CHATTAHOOCHEE AND FLINT RIVERS, GA, AL & FL	1,622	1,622	
ATLANTIC INTRACOASTAL WATERWAY, GA	200	200	
BRUNSWICK HARBOR, GA	.....	5,783	*
BUFORD DAM AND LAKE SIDNEY LANIER, GA	10,262	10,262	
CARTERS DAM AND LAKE, GA	7,366	7,366	
HARTWELL LAKE, GA & SC	10,415	10,450	*
INSPECTION OF COMPLETED WORKS, GA	.....	161	†
J STROM THURMOND LAKE, GA & SC	10,644	10,713	*
PROJECT CONDITION SURVEYS, GA	.....	100	†
RICHARD B RUSSELL DAM AND LAKE, GA & SC	9,231	9,231	
SAVANNAH HARBOR, GA	.....	28,640	*
SAVANNAH RIVER BELOW AUGUSTA, GA	.....	169	*
WEST POINT DAM AND LAKE, GA & AL	7,825	7,825	
HAWAII			
BARBERS POINT HARBOR, HI	297	297	
HILO HARBOR, HI	.....	582	*
HONOLULU HARBOR, HI	.....	460	*
INSPECTION OF COMPLETED WORKS, HI	.....	613	†
PORT ALLEN HARBOR, KAUAI, HI	.....	460	*
PROJECT CONDITION SURVEYS, HI	.....	581	*
IDAHO			
ALBENI FALLS DAM, ID	1,179	1,179	
DWORSHAK DAM AND RESERVOIR, ID	4,431	4,431	
INSPECTION OF COMPLETED WORKS, ID	.....	382	†
LUCKY PEAK LAKE, ID	3,402	3,402	
SCHEDULING RESERVOIR OPERATIONS, ID	.....	721	†
ILLINOIS			
CALUMET HARBOR AND RIVER, IL & IN	.....	2,630	*
CARLYLE LAKE, IL	5,737	5,737	
CHICAGO HARBOR, IL	.....	3,080	*
CHICAGO RIVER, IL	612	612	
CHICAGO SANITARY AND SHIP CANAL DISPERSAL BARRIER, IL	13,943	13,943	
FARM CREEK RESERVOIRS, IL	537	537	
ILLINOIS WATERWAY (MVR PORTION), IL & IN	78,968	78,968	
ILLINOIS WATERWAY (MVS PORTION), IL & IN	2,065	2,065	
INSPECTION OF COMPLETED WORKS, IL	.....	2,397	†
KASKASKIA RIVER NAVIGATION, IL	2,228	2,228	
LAKE MICHIGAN DIVERSION, IL	.....	860	*
LAKE SHELBYVILLE, IL	5,161	5,161	
MISSISSIPPI RIVER BETWEEN MISSOURI RIVER AND MINNEAPOLIS (MVR PORTION), IL	50,759	50,759	
MISSISSIPPI RIVER BETWEEN MISSOURI RIVER AND MINNEAPOLIS (MVS PORTION), IL	25,159	25,159	
PROJECT CONDITION SURVEYS, IL	.....	75	*
REND LAKE, IL	5,133	5,133	
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, IL	.....	709	*
WAUKEGAN HARBOR, IL	.....	1,489	*

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
INDIANA			
BROOKVILLE LAKE, IN	5,584	5,584	
BURNS WATERWAY HARBOR, IN		4,335	*
CAGLES MILL LAKE, IN	1,218	1,218	
CECIL M HARDEN LAKE, IN	1,203	1,203	
INDIANA HARBOR, IN		8,352	*
INSPECTION OF COMPLETED WORKS, IN		985	†
J EDWARD ROUSH LAKE, IN	1,866	1,866	
MISSISSINEWA LAKE, IN	2,298	2,298	
MONROE LAKE, IN	1,433	1,433	
PATOKA LAKE, IN	1,371	1,371	
SALAMONIE LAKE, IN	2,213	2,213	
PROJECT CONDITION SURVEYS, IN		152	*
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, IN		141	*
IOWA			
CORALVILLE LAKE, IA	4,447	4,447	
INSPECTION OF COMPLETED WORKS, IA		1,422	†
MISSOURI RIVER FISH AND WILDLIFE RECOVERY, IA, KS, MO, MT, NE, ND & SD	4,743	4,743	
MISSOURI RIVER—SIOUX CITY TO THE MOUTH, IA, KS, MO & NE	10,543	10,543	
PROJECT CONDITION SURVEYS, IA		2	*
RATHBUN LAKE, IA	2,504	2,504	
RED ROCK DAM AND LAKE RED ROCK, IA	5,178	5,178	
SAYLORVILLE LAKE, IA	5,762	5,762	
KANSAS			
CLINTON LAKE, KS	3,531	3,531	
COUNCIL GROVE LAKE, KS	2,183	2,183	
EL DORADO LAKE, KS	948	948	
ELK CITY LAKE, KS	1,508	1,508	
FALL RIVER LAKE, KS	1,302	1,302	
HILLSDALE LAKE, KS	1,222	1,222	
INSPECTION OF COMPLETED WORKS, KS		1,617	†
JOHN REDMOND DAM AND RESERVOIR, KS	1,879	1,879	
KANOPOLIS LAKE, KS	5,799	5,799	
MARION LAKE, KS	2,290	2,290	
MELVERN LAKE, KS	3,021	3,021	
MILFORD LAKE, KS	2,775	2,775	
PEARSON—SKUBITZ BIG HILL LAKE, KS	1,457	1,457	
PERRY LAKE, KS	2,874	2,874	
POMONA LAKE, KS	2,560	2,560	
SCHEDULING RESERVOIR OPERATIONS, KS		686	†
TORONTO LAKE, KS	729	729	
TUTTLE CREEK LAKE, KS	2,711	2,711	
WILSON LAKE, KS	1,800	1,800	
KENTUCKY			
BARKLEY DAM AND LAKE BARKLEY, KY & TN	11,091	11,091	
BARREN RIVER LAKE, KY	4,087	4,087	
BIG SANDY HARBOR, KY		2,054	*
BUCKHORN LAKE, KY	2,299	2,299	
CARR CREEK LAKE, KY	2,422	2,422	
CAVE RUN LAKE, KY	1,551	1,551	
DEWEY LAKE, KY	1,956	1,956	
ELVIS STAHR (HICKMAN) HARBOR, KY		935	*
FALLS OF THE OHIO NATIONAL WILDLIFE, KY & IN	29	29	
FISHTRAP LAKE, KY	2,719	2,719	
GRAYSON LAKE, KY	2,000	2,000	
GREEN AND BARREN RIVERS, KY	2,797	2,797	
GREEN RIVER LAKE, KY	3,455	3,455	
INSPECTION OF COMPLETED WORKS, KY		887	†

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
KENTUCKY RIVER, KY	217	217	
LAUREL RIVER LAKE, KY	2,441	2,441	
MARTINS FORK LAKE, KY	1,734	1,734	
MIDDLESBORO CUMBERLAND RIVER BASIN, KY	273	273	
NOLIN LAKE, KY	3,203	3,203	
OHIO RIVER LOCKS AND DAMS, KY, IL, IN & OH	50,577	50,577	
OHIO RIVER OPEN CHANNEL WORK, KY, IL, IN, OH, PA & WV	6,891	6,891	
PAINTSVILLE LAKE, KY	1,362	1,362	
PROJECT CONDITION SURVEYS, KY		5	*
ROUGH RIVER LAKE, KY	3,404	3,404	
TAYLORSVILLE LAKE, KY	1,166	1,166	
WOLF CREEK DAM, LAKE CUMBERLAND, KY	10,647	10,647	
YATESVILLE LAKE, KY	1,689	1,689	
LOUISIANA			
ATCHAFALAYA RIVER AND BAYOUS CHENE, BOEUF & BLACK, LA		8,484	*
BAYOU BODCAU RESERVOIR, LA	1,209	1,209	
BAYOU LAFOURCHE AND LAFOURCHE JUMP WATERWAY, LA		850	*
BAYOU PIERRE, LA	33	33	
BAYOU SEGNETTE WATERWAY, LA		10	*
BAYOU TECHE AND VERMILION RIVER, LA		30	*
BAYOU TECHE, LA		60	*
CADDO LAKE, LA	218	218	
CALCASIEU RIVER AND PASS, LA		17,400	*
CHEFUNCTE RIVER & BOGUE FALIA, LA		20	*
FRESHWATER BAYOU, LA		1,800	*
GULF INTRACOASTAL WATERWAY, LA	16,018	16,018	
HOUMA NAVIGATION CANAL, LA		1,050	*
INSPECTION OF COMPLETED WORKS, LA		1,330	†
J BENNETT JOHNSTON WATERWAY, LA	8,436	8,436	
LAKE PROVIDENCE HARBOR, LA		30	*
MERMENTAU RIVER, LA		1,800	*
MISSISSIPPI RIVER OUTLETS AT VENICE, LA		1,350	*
MISSISSIPPI RIVER, BATON ROUGE TO THE GULF OF MEXICO, LA		91,970	*
PROJECT CONDITION SURVEYS, LA		25	*
REMOVAL OF AQUATIC GROWTH, LA		200	*
WALLACE LAKE, LA	267	267	
WATERWAY FROM EMPIRE TO THE GULF, LA		20	*
WATERWAY FROM INTRACOASTAL WATERWAY TO BAYOU DULAC, LA		10	*
MAINE			
DISPOSAL AREA MONITORING, ME		1,050	*
INSPECTION OF COMPLETED WORKS, ME		108	†
PROJECT CONDITION SURVEYS, ME		1,000	*
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, ME		30	*
UNION RIVER, ME		250	*
MARYLAND			
BALTIMORE HARBOR AND CHANNELS (50 FOOT), MD		20,400	*
BALTIMORE HARBOR, MD (DRIFT REMOVAL)		565	*
CUMBERLAND, MD AND RIDGELEY, WV	214	214	
INSPECTION OF COMPLETED WORKS, MD		175	†
JENNINGS RANDOLPH LAKE, MD & WV	4,382	4,382	
NANTICOKE RIVER NORTHWEST FORK, MD		3	*
OCEAN CITY HARBOR AND INLET AND SINEPUXENT BAY, MD		1,100	*
POCOMOKE RIVER, MD		3	*
PROJECT CONDITION SURVEYS, MD		500	*
SCHEDULING RESERVOIR OPERATIONS, MD		164	†
WICOMICO RIVER, MD		4,025	*
MASSACHUSETTS			
BARRE FALLS DAM, MA	1,140	1,140	

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
BIRCH HILL DAM, MA	1,196	1,196	
BUFFUMVILLE LAKE, MA	1,141	1,141	
CAPE COD CANAL, MA	2,071	2,071	
CAPE COD CANAL, MA		9,834	*
CHARLES RIVER NATURAL VALLEY STORAGE AREA, MA	402	402	
CONANT BROOK LAKE, MA	416	416	
EAST BRIMFIELD LAKE, MA	1,024	1,024	
HODGES VILLAGE DAM, MA	1,221	1,221	
INSPECTION OF COMPLETED WORKS, MA		417	†
KNIGHTVILLE DAM, MA	1,104	1,104	
LITTLEVILLE LAKE, MA	832	832	
NEW BEDFORD FAIRHAVEN AND ACUSHNET HURRICANE BARRIER, MA	915	915	
PROJECT CONDITION SURVEYS, MA		1,050	*
TULLY LAKE, MA	1,245	1,245	
WELLFLEET HARBOR, MA		5,000	*
WEST HILL DAM, MA	926	926	
WESTVILLE LAKE, MA	1,284	1,284	
MICHIGAN			
CHANNELS IN LAKE ST CLAIR, MI		192	*
DETROIT RIVER, MI	34	6,003	*
GRAND HAVEN HARBOR, MI	19	619	*
INSPECTION OF COMPLETED WORKS, MI		267	†
KEWEENAW WATERWAY, MI	35	35	
PROJECT CONDITION SURVEYS, MI		530	*
SAGINAW RIVER, MI		2,747	*
SEBEWAING RIVER, MI	60	60	
ST CLAIR RIVER, MI		1,572	*
ST MARYS RIVER, MI	6,518	34,714	*
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, MI		2,890	*
MINNESOTA			
BIG STONE LAKE AND WHETSTONE RIVER, MN & SD	254	254	
DULUTH—SUPERIOR HARBOR, MN & WI	584	5,870	*
INSPECTION OF COMPLETED WORKS, MN		526	†
LAC QUI PARLE LAKES, MINNESOTA RIVER, MN	1,239	1,239	
MISSISSIPPI RIVER BETWEEN MISSOURI RIVER AND MINNEAPOLIS (MVP PORTION), MN	54,752	54,752	
ORWELL LAKE, MN	519	519	
PROJECT CONDITION SURVEYS, MN		84	†
RED LAKE RESERVOIR, MN	195	195	
RESERVOIRS AT HEADWATERS OF MISSISSIPPI RIVER, MN	4,436	4,436	
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, MN		530	*
TWO HARBORS, MN		1,000	*
MISSISSIPPI			
EAST FORK, TOMBIGBEE RIVER, MS	290	290	
GULFPORT HARBOR, MS		4,355	*
INSPECTION OF COMPLETED WORKS, MS		109	†
MOUTH OF YAZOO RIVER, MS		307	*
OKATIBBEE LAKE, MS	1,716	1,716	
PASCAGOULA HARBOR, MS		3,860	*
PEARL RIVER, MS & LA	140	140	
PROJECT CONDITION SURVEYS, MS		155	*
ROSEDALE HARBOR, MS		35	*
YAZOO RIVER, MS		111	*
MISSOURI			
CARUTHERSVILLE HARBOR, MO		15	*
CLARENCE CANNON DAM AND MARK TWAIN LAKE, MO	6,786	6,786	
CLEARWATER LAKE, MO	3,487	3,487	
HARRY S TRUMAN DAM AND RESERVOIR, MO	11,262	11,262	

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
INSPECTION OF COMPLETED WORKS, MO		949	†
LITTLE BLUE RIVER LAKES, MO	1,410	1,410	
LONG BRANCH LAKE, MO	888	888	
MISSISSIPPI RIVER BETWEEN THE OHIO AND MISSOURI RIVERS (REG WORKS), MO & IL	25,045	25,045	
NEW MADRID COUNTY HARBOR, MO		10	*
NEW MADRID HARBOR, MO (MILE 889)		15	*
POMME DE TERRE LAKE, MO	2,822	2,822	
PROJECT CONDITION SURVEYS, MO		5	*
SCHEDULING RESERVOIR OPERATIONS, MO		181	†
SMITHVILLE LAKE, MO	3,600	3,600	
SOUTHEAST MISSOURI PORT, MISSISSIPPI RIVER, MO		9	*
STOCKTON LAKE, MO	4,773	4,773	
TABLE ROCK LAKE, MO & AR	9,979	9,979	
MONTANA			
FT PECK DAM AND LAKE, MT	5,744	5,744	
INSPECTION OF COMPLETED WORKS, MT		588	†
LIBBY DAM, MT	2,213	2,213	
SCHEDULING RESERVOIR OPERATIONS, MT		126	†
NEBRASKA			
GAVINS POINT DAM, LEWIS AND CLARK LAKE, NE & SD	10,083	10,083	
HARLAN COUNTY LAKE, NE	2,514	2,514	
INSPECTION OF COMPLETED WORKS, NE		1,222	†
MISSOURI RIVER—KENSLERS BEND, NE TO SIOUX CITY, IA	113	113	
PAPILLION CREEK, NE	962	962	
SALT CREEKS AND TRIBUTARIES, NE	1,142	1,142	
NEVADA			
INSPECTION OF COMPLETED WORKS, NV		70	†
MARTIS CREEK LAKE, NV & CA	1,332	1,332	
PINE AND MATHEWS CANYONS LAKES, NV	1,210	1,210	
NEW HAMPSHIRE			
BLACKWATER DAM, NH	1,020	1,020	
EDWARD MACDOWELL LAKE, NH	888	888	
FRANKLIN FALLS DAM, NH	1,157	1,157	
HOPKINTON—EVERETT LAKES, NH	2,015	2,015	
INSPECTION OF COMPLETED WORKS, NH		70	†
OTTER BROOK LAKE, NH	899	899	
PROJECT CONDITION SURVEYS, NH		300	*
RYE HARBOR, NH		200	*
SURRY MOUNTAIN LAKE, NH	932	932	
NEW JERSEY			
BARNEGAT INLET, NJ		9	*
CHEESEQUAKE CREEK, NJ		50	*
COLD SPRING INLET, NJ		20	*
DELAWARE RIVER AT CAMDEN, NJ		15	*
DELAWARE RIVER, PHILADELPHIA TO THE SEA, NJ, PA & DE		32,358	*
INSPECTION OF COMPLETED WORKS, NJ		559	†
MANASQUAN RIVER, NJ		432	*
NEW JERSEY INTRACOASTAL WATERWAY, NJ		895	*
NEWARK BAY, HACKENSACK AND PASSAIC RIVERS, NJ		16,600	*
PASSAIC RIVER FLOOD WARNING SYSTEMS, NJ	668	668	
PROJECT CONDITION SURVEYS, NJ		2,494	*
RARITAN RIVER, NJ		50	*
SALEM RIVER, NJ		100	*
SANDY HOOK BAY AT LEONARD, NJ		10	*
SHOAL HARBOR AND COMPTON CREEK, NJ		25	*
SHREWSBURY RIVER, MAIN CHANNEL, NJ		25	*

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
NEW MEXICO			
ABIQUIU DAM, NM	3,330	3,330	
COCHITI LAKE, NM	4,188	4,188	
CONCHAS LAKE, NM	4,446	4,446	
GALISTEO DAM, NM	1,075	1,075	
INSPECTION OF COMPLETED WORKS, NM		318	†
JEMEZ CANYON DAM, NM	978	978	
MIDDLE RIO GRANDE ENDANGERED SPECIES COLLABORATIVE PROGRAM, NM	1,190	1,190	
SANTA ROSA DAM AND LAKE, NM	1,830	1,830	
SCHEDULING RESERVOIR OPERATIONS, NM		205	†
TWO RIVERS DAM, NM	708	708	
UPPER RIO GRANDE WATER OPERATIONS MODEL STUDY, NM	1,315	1,315	
NEW YORK			
ALMOND LAKE, NY	826	826	
ARKPORT DAM, NY	491	491	
BAY RIDGE AND RED HOOK CHANNELS, NY		25	*
BLACK ROCK CHANNEL AND TONAWANDA HARBOR, NY	5	2,077	*
BRONX RIVER, NY		30	*
BROWNS CREEK, NY		30	*
BUFFALO HARBOR, NY		250	*
BUTTERMILK CHANNEL, NY		30	*
EAST RIVER, NY		455	*
EAST SIDNEY LAKE, NY	685	685	
FIRE ISLAND INLET TO JONES INLET, NY		50	*
FLUSHING BAY AND CREEK, NY		280	*
GLEN COVE CREEK, NY		15	*
GREAT KILLS HARBOR, NY		20	*
GREAT SOUTH BAY, NY		25	*
HUDSON RIVER CHANNEL, NY		50	*
HUDSON RIVER, NY (MAINT)		9,300	*
HUDSON RIVER, NY (O & C)		1,350	*
INSPECTION OF COMPLETED WORKS, NY		1,742	†
JONES INLET, NY		50	*
LAKE MONTAUK HARBOR, NY		50	*
MATTITUCK HARBOR, NY		15	*
MOUNT MORRIS DAM, NY	3,604	3,604	
NEW YORK AND NEW JERSEY CHANNELS, NY & NJ		14,100	*
NEW YORK AND NEW JERSEY HARBOR, NY & NJ		16,200	*
NEW YORK HARBOR, NY		6,965	*
NEW YORK HARBOR, NY & NJ (DRIFT REMOVAL)		11,171	*
NEW YORK HARBOR, NY (PREVENTION OF OBSTRUCTIVE DEPOSITS)		1,748	*
PORTCHESTER HARBOR, NY		30	*
PROJECT CONDITION SURVEYS, NY		2,602	*
SOUTHERN NEW YORK FLOOD CONTROL PROJECTS, NY	884	884	
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, NY		780	*
WHITNEY POINT LAKE, NY	943	943	
NORTH CAROLINA			
ATLANTIC INTRACOASTAL WATERWAY, NC	2,155	2,155	
B EVERETT JORDAN DAM AND LAKE, NC	1,912	1,912	
CAPE FEAR RIVER ABOVE WILMINGTON, NC	140	495	*
FALLS LAKE, NC	1,777	1,777	
INSPECTION OF COMPLETED WORKS, NC		190	†
MANTEO (SHALLOWBAG) BAY, NC		806	*
MASONBORO INLET AND CONNECTING CHANNELS, NC		25	*
MOREHEAD CITY HARBOR, NC		7,540	*
NEW RIVER INLET, NC		30	*
PROJECT CONDITION SURVEYS, NC		700	*
ROLLINSON CHANNEL, NC		650	*
SILVER LAKE HARBOR, NC		60	*

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
W KERR SCOTT DAM AND RESERVOIR, NC	3,351	3,351	
WILMINGTON HARBOR, NC		16,560	*
NORTH DAKOTA			
BOWMAN HALEY, ND	317	317	
GARRISON DAM, LAKE SAKAKAWEA, ND	16,001	16,001	
HOMME LAKE, ND	352	352	
INSPECTION OF COMPLETED WORKS, ND		512	†
LAKE ASHTABULA AND BALDHILL DAM, ND	1,588	1,588	
PIPESTEM LAKE, ND	706	706	
SCHEDULING RESERVOIR OPERATIONS, ND		124	†
SOURIS RIVER, ND	386	386	
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, ND		160	*
OHIO			
ALUM CREEK LAKE, OH	1,981	1,981	
ASHTABULA HARBOR, OH		108	*
BERLIN LAKE, OH	2,762	2,762	
CAESAR CREEK LAKE, OH	2,937	2,937	
CLARENCE J BROWN DAM, OH	1,481	1,481	
CLEVELAND HARBOR, OH		8,066	*
CONNEAUT HARBOR, OH		1,216	*
DEER CREEK LAKE, OH	3,397	3,397	
DELAWARE LAKE, OH	1,746	1,746	
DILLON LAKE, OH	2,204	2,204	
FAIRPORT HARBOR, OH		1,130	*
INSPECTION OF COMPLETED WORKS, OH		590	†
MASSILLON LOCAL PROTECTION PROJECT, OH	115	115	
MICHAEL J KIRWAN DAM AND RESERVOIR, OH	1,481	1,481	
MOSQUITO CREEK LAKE, OH	1,452	1,452	
MUSKINGUM RIVER LAKES, OH	12,459	12,459	
NORTH BRANCH KOKOSING RIVER LAKE, OH	731	731	
OHIO–MISSISSIPPI FLOOD CONTROL, OH	1,537	1,537	
PAINT CREEK LAKE, OH	2,980	2,980	
PROJECT CONDITION SURVEYS, OH		318	*
ROSEVILLE LOCAL PROTECTION PROJECT, OH	54	54	
SANDUSKY HARBOR, OH		913	*
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, OH		300	*
TOLEDO HARBOR, OH		4,659	*
TOM JENKINS DAM, OH	1,455	1,455	
WEST FORK OF MILL CREEK LAKE, OH	1,202	1,202	
WILLIAM H HARSHA LAKE, OH	2,666	2,666	
OKLAHOMA			
ARCADIA LAKE, OK	507	507	
BIRCH LAKE, OK	1,111	1,111	
BROKEN BOW LAKE, OK	3,897	3,897	
CANTON LAKE, OK	1,760	1,760	
COPAN LAKE, OK	1,172	1,172	
EUFAULA LAKE, OK	7,223	7,223	
FORT GIBSON LAKE, OK	5,488	5,488	
FORT SUPPLY LAKE, OK	1,260	1,260	
GREAT SALT PLAINS LAKE, OK	343	343	
HEYBURN LAKE, OK	824	824	
HUGO LAKE, OK	1,939	1,939	
HULAH LAKE, OK	1,010	1,010	
INSPECTION OF COMPLETED WORKS, OK		275	†
KAW LAKE, OK	2,388	2,388	
KEYSTONE LAKE, OK	5,043	5,043	
MCCLELLAN–KERR ARKANSAS RIVER NAVIGATION SYSTEM, OK	19,187	19,187	
OOLOGAH LAKE, OK	3,104	3,104	
OPTIMA LAKE, OK	95	95	

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
PENSACOLA RESERVOIR, LAKE OF THE CHEROKEES, OK	160	160	
PINE CREEK LAKE, OK	1,455	1,455	
SARDIS LAKE, OK	2,528	2,528	
SCHEDULING RESERVOIR OPERATIONS, OK	.....	2,060	†
SKIATOOK LAKE, OK	1,482	1,482	
TENKILLER FERRY LAKE, OK	4,769	4,769	
WAURIKA LAKE, OK	1,604	1,604	
WISTER LAKE, OK	900	900	
OREGON			
APPLEGATE LAKE, OR	1,266	1,266	
BLUE RIVER LAKE, OR	1,093	1,093	
BONNEVILLE LOCK AND DAM, OR & WA	1,919	7,657	*
CHETCO RIVER, OR	.....	954	*
COLUMBIA RIVER AT THE MOUTH, OR & WA	.....	23,759	*
COOS BAY, OR	.....	4,802	*
COQUILLE RIVER, OR	.....	515	*
COTTAGE GROVE LAKE, OR	1,516	1,516	
COUGAR LAKE, OR	3,986	3,986	
DEPOE BAY, OR	.....	24	*
DETROIT LAKE, OR	1,054	1,054	
DORENA LAKE, OR	1,499	1,499	
ELK CREEK LAKE, OR	305	305	
FALL CREEK LAKE, OR	1,504	1,504	
FERN RIDGE LAKE, OR	2,078	2,078	
GREEN PETER—FOSTER LAKES, OR	2,631	2,631	
HILLS CREEK LAKE, OR	1,441	1,441	
INSPECTION OF COMPLETED WORKS, OR	.....	1,001	†
JOHN DAY LOCK AND DAM, OR & WA	5,964	5,964	
LOOKOUT POINT LAKE, OR	2,187	2,187	
LOST CREEK LAKE, OR	3,862	3,862	
MCNARY LOCK AND DAM, OR & WA	9,904	9,904	
NEHALEM BAY, OR	.....	20	*
PORT ORFORD, OR	.....	1,302	*
PROJECT CONDITION SURVEYS, OR	.....	477	*
ROGUE RIVER AT GOLD BEACH, OR	.....	942	*
SCHEDULING RESERVOIR OPERATIONS, OR	.....	100	†
SIUSLAW RIVER, OR	.....	975	*
SKIPANON CHANNEL, OR	.....	3	*
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, OR	.....	9,898	*
TILLAMOOK BAY & BAR, OR	.....	25	*
UMPQUA RIVER, OR	.....	1,099	*
WILLAMETTE RIVER AT WILLAMETTE FALLS, OR	65	65	
WILLAMETTE RIVER BANK PROTECTION, OR	203	203	
WILLOW CREEK LAKE, OR	1,013	1,013	
YAQUINA BAY AND HARBOR, OR	.....	4,075	*
PENNSYLVANIA			
ALLEGHENY RIVER, PA	7,177	7,177	
ALVIN R BUSH DAM, PA	1,049	1,049	
AYLESWORTH CREEK LAKE, PA	359	359	
BELTZVILLE LAKE, PA	1,881	1,881	
BLUE MARSH LAKE, PA	2,840	2,840	
CONEMAUGH RIVER LAKE, PA	1,851	1,851	
COWANESQUE LAKE, PA	2,117	2,117	
CROOKED CREEK LAKE, PA	3,538	3,538	
CURWENSVILLE LAKE, PA	939	939	
DELAWARE RIVER, PHILADELPHIA, PA TO TRENTON, NJ	.....	4,130	*
EAST BRANCH CLARION RIVER LAKE, PA	2,167	2,167	
FOSTER JOSEPH SAYERS DAM, PA	6,653	6,653	
FRANCIS E WALTER DAM, PA	1,543	1,543	
GENERAL EDGAR JADWIN DAM AND RESERVOIR, PA	335	335	

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
INSPECTION OF COMPLETED WORKS, PA	.....	1,112	†
JOHNSTOWN, PA	21	21	
KINZUA DAM AND ALLEGHENY RESERVOIR, PA	1,582	1,582	
LOYALHANNA LAKE, PA	8,316	8,316	
MAHONING CREEK LAKE, PA	1,435	1,435	
MONONGAHELA RIVER, PA	16,866	16,866	
OHIO RIVER LOCKS AND DAMS, PA, OH & WV	32,771	32,771	
OHIO RIVER OPEN CHANNEL WORK, PA, OH & WV	959	959	
PROJECT CONDITION SURVEYS, PA	.....	172	*
PROMPTON LAKE, PA	555	555	
PUNXSUTAWNEY, PA	862	862	
RAYSTOWN LAKE, PA	4,584	4,584	
SCHEDULING RESERVOIR OPERATIONS, PA	.....	78	†
SCHUYLKILL RIVER, PA	.....	4,083	*
SHENANGO RIVER LAKE, PA	2,844	2,844	
STILLWATER LAKE, PA	638	638	
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, PA	.....	120	*
TIOGA—HAMMOND LAKES, PA	3,061	3,061	
TIONESTA LAKE, PA	5,510	5,510	
UNION CITY LAKE, PA	538	538	
WOODCOCK CREEK LAKE, PA	1,110	1,110	
YORK INDIAN ROCK DAM, PA	926	926	
YOUGHIOGHENY RIVER LAKE, PA & MD	3,238	3,238	
PUERTO RICO			
INSPECTION OF COMPLETED WORKS, PR	.....	185	†
PROJECT CONDITION SURVEYS, PR	.....	100	*
SAN JUAN HARBOR, PR	.....	730	*
RHODE ISLAND			
FOX POINT BARRIER, NARRANGANSETT BAY, RI	2,790	2,790	
INSPECTION OF COMPLETED WORKS, RI	.....	95	†
PROJECT CONDITION SURVEYS, RI	.....	300	*
PROVIDENCE RIVER AND HARBOR, RI	.....	1,500	*
WOONSOCKET, RI	698	698	
SOUTH CAROLINA			
ATLANTIC INTRACOASTAL WATERWAY, SC	285	285	
CHARLESTON HARBOR, SC	.....	19,476	*
COOPER RIVER, CHARLESTON HARBOR, SC	.....	3,994	*
INSPECTION OF COMPLETED WORKS, SC	.....	65	†
PROJECT CONDITION SURVEYS, SC	.....	875	*
SOUTH DAKOTA			
BIG BEND DAM, LAKE SHARPE, SD	9,688	9,688	
COLD BROOK LAKE, SD	413	413	
COTTONWOOD SPRINGS LAKE, SD	346	346	
FORT RANDALL DAM, LAKE FRANCIS CASE, SD	12,398	12,398	
INSPECTION OF COMPLETED WORKS, SD	.....	771	†
LAKE TRAVERSE, SD & MN	648	648	
OAHE DAM, LAKE OAHE, SD & ND	13,723	13,723	
SCHEDULING RESERVOIR OPERATIONS, SD	.....	144	†
TENNESSEE			
CENTER HILL LAKE, TN	7,577	7,577	
CHEATHAM LOCK AND DAM, TN	8,272	8,272	
CORDELL HULL DAM AND RESERVOIR, TN	8,059	8,059	
DALE HOLLOW LAKE, TN	7,656	7,656	
INSPECTION OF COMPLETED WORKS, TN	.....	178	†
J PERCY PRIEST DAM AND RESERVOIR, TN	5,837	5,837	
NORTHWEST TENNESSEE REGIONAL HARBOR, LAKE COUNTY, TN	.....	15	*
OLD HICKORY LOCK AND DAM, TN	13,310	13,310	

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
PROJECT CONDITION SURVEYS, TN		5	*
TENNESSEE RIVER, TN	23,792	23,792	
WOLF RIVER HARBOR, TN		655	*
TEXAS			
AQUILLA LAKE, TX	1,211	1,211	
ARKANSAS—RED RIVER BASINS CHLORIDE CONTROL—AREA VIII, TX	1,797	1,797	
BARDWELL LAKE, TX	2,193	2,193	
BELTON LAKE, TX	5,766	5,766	
BENBROOK LAKE, TX	3,220	3,220	
BRAZOS ISLAND HARBOR, TX		3,000	*
BUFFALO BAYOU AND TRIBUTARIES, TX	3,060	3,060	
CANYON LAKE, TX	3,314	3,314	
CHANNEL TO HARLINGEN, TX		50	*
CORPUS CHRISTI SHIP CHANNEL, TX		8,550	*
DENISON DAM, LAKE TEXOMA, TX	9,053	9,053	
ESTELLINE SPRINGS EXPERIMENTAL PROJECT, TX	39	39	
FERRELLS BRIDGE DAM, LAKE O' THE PINES, TX	3,643	3,643	
FREEPORT HARBOR, TX		4,700	*
GALVESTON HARBOR AND CHANNEL, TX		10,900	*
GIWW, CHANNEL TO VICTORIA, TX		4,000	*
GIWW, CHOCOLATE BAYOU, TX		50	*
GRANGER DAM AND LAKE, TX	3,038	3,038	
GRAPEVINE LAKE, TX	3,059	3,059	
GULF INTRACOASTAL WATERWAY, TX	35,275	35,275	
HORDS CREEK LAKE, TX	1,485	1,485	
HOUSTON SHIP CHANNEL, TX		22,000	*
INSPECTION OF COMPLETED WORKS, TX		1,569	†
JIM CHAPMAN LAKE, TX	2,072	2,072	
JOE POOL LAKE, TX	1,415	1,415	
LAKE KEMP, TX	268	268	
LAVON LAKE, TX	3,915	3,915	
LEWISVILLE DAM, TX	3,583	3,583	
MATAGORDA SHIP CHANNEL, TX		4,450	*
NAVARRO MILLS LAKE, TX	2,361	2,361	
NORTH SAN GABRIEL DAM AND LAKE GEORGETOWN, TX	3,267	3,267	
O C FISHER DAM AND LAKE, TX	1,687	1,687	
PAT MAYSE LAKE, TX	1,102	1,102	
PROCTOR LAKE, TX	2,458	2,458	
PROJECT CONDITION SURVEYS, TX		325	*
RAY ROBERTS LAKE, TX	1,717	1,717	
SABINE—NECHES WATERWAY, TX		11,675	*
SAM RAYBURN DAM AND RESERVOIR, TX	7,278	7,278	
SCHEDULING RESERVOIR OPERATIONS, TX		510	†
SOMERVILLE LAKE, TX	3,014	3,014	
STILLHOUSE HOLLOW DAM, TX	4,752	4,752	
TEXAS CITY SHIP CHANNEL, TX		500	*
TOWN BLUFF DAM, B A STEINHAGEN LAKE, TX	4,826	4,826	
WACO LAKE, TX	3,220	3,220	
WALLISVILLE LAKE, TX	2,793	2,793	
WHITNEY LAKE, TX	7,084	7,084	
WRIGHT PATMAN DAM AND LAKE, TX	4,389	4,389	
UTAH			
INSPECTION OF COMPLETED WORKS, UT		25	†
SCHEDULING RESERVOIR OPERATIONS, UT		500	†
VERMONT			
BALL MOUNTAIN, VT	2,206	2,206	
INSPECTION OF COMPLETED WORKS, VT		159	*
NORTH HARTLAND LAKE, VT	1,012	1,012	
NORTH SPRINGFIELD LAKE, VT	1,350	1,350	

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
TOWNSHEND LAKE, VT	863	863	
UNION VILLAGE DAM, VT	992	992	
VIRGIN ISLANDS			
INSPECTION OF COMPLETED WORKS, VI		18	†
PROJECT CONDITION SURVEYS, VI		50	*
VIRGINIA			
ATLANTIC INTRACOASTAL WATERWAY—ACC, VA	679	679	
ATLANTIC INTRACOASTAL WATERWAY—DSC, VA	640	640	
CHINCOTEAGUE INLET, VA		400	*
GATHRIGHT DAM AND LAKE MOOMAW, VA	2,612	2,612	
HAMPTON ROADS, NORFOLK & NEWPORT NEWS HARBOR, VA (DRIFT REMOVAL)		1,700	*
HAMPTON ROADS, VA (PREVENTION OF OBSTRUCTIVE DEPOSITS)		120	*
INSPECTION OF COMPLETED WORKS, VA		440	†
JAMES RIVER CHANNEL, VA		3,360	*
JOHN H KERR LAKE, VA & NC	11,594	11,594	
JOHN W FLANNAGAN DAM AND RESERVOIR, VA	2,433	2,433	
NORFOLK HARBOR, VA		15,965	*
NORTH FORK OF POUND RIVER LAKE, VA	765	765	
PHILPOTT LAKE, VA	5,504	5,504	
PROJECT CONDITION SURVEYS, VA		1,125	*
RAPPAHANNOCK RIVER, VA		210	*
RUDEE INLET, VA		320	*
WATER AND ENVIRONMENTAL CERTIFICATIONS, VA		150	*
WASHINGTON			
BELLINGHAM HARBOR, WA		30	*
CHIEF JOSEPH DAM, WA	588	588	
COLUMBIA AND LOWER WILLAMETTE RIVERS BELOW VANCOUVER, WA & PORTLAND, OR		52,236	*
COLUMBIA RIVER AT BAKER BAY, WA & OR		1,828	*
COLUMBIA RIVER BETWEEN VANCOUVER, WA AND THE DALLES, OR		1,057	*
COLUMBIA RIVER FISH MITIGATION, WA, OR & ID	2,597	2,597	
EVERETT HARBOR AND SNOHOMISH RIVER, WA		2,137	*
GRAYS HARBOR, WA		10,828	*
HOWARD HANSON DAM, WA	4,347	4,347	
ICE HARBOR LOCK AND DAM, WA	7,003	7,003	
INSPECTION OF COMPLETED WORKS, WA		1,019	†
KENMORE NAVIGATION CHANNEL, WA		6,645	*
LAKE CROCKETT (KEYSTONE HARBOR), WA		1,728	*
LAKE WASHINGTON SHIP CANAL, WA	1,260	9,319	*
LITTLE GOOSE LOCK AND DAM, WA	4,473	4,473	
LOWER GRANITE LOCK AND DAM, WA	3,309	3,309	
LOWER MONUMENTAL LOCK AND DAM, WA	2,919	2,919	
MILL CREEK LAKE, WA	2,746	2,746	
MOUNT SAINT HELENS SEDIMENT CONTROL, WA	266	266	
MUD MOUNTAIN DAM, WA	6,546	6,546	
PROJECT CONDITION SURVEYS, WA		1,046	*
PUGET SOUND AND TRIBUTARY WATERS, WA		1,725	*
QUILLAYUTE RIVER, WA		280	*
SCHEDULING RESERVOIR OPERATIONS, WA		469	†
SEATTLE HARBOR, WA		211	*
STILLAGUAMISH RIVER, WA	297	297	
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, WA		66	*
SWINOMISH CHANNEL, WA		50	*
TACOMA HARBOR, WA		50	*
TACOMA, PUYALLUP RIVER, WA	184	184	
THE DALLES LOCK AND DAM, WA & OR	3,607	3,607	
WILLAPA RIVER AND HARBOR, WA		530	*

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
WEST VIRGINIA			
BEECH FORK LAKE, WV	1,711	1,711	
BLUESTONE LAKE, WV	2,240	2,240	
BURNSVILLE LAKE, WV	2,720	2,720	
EAST LYNN LAKE, WV	2,644	2,644	
ELKINS, WV	25	25	
INSPECTION OF COMPLETED WORKS, WV	.....	423	†
KANAWHA RIVER LOCKS AND DAMS, WV	12,641	12,641	
OHIO RIVER LOCKS AND DAMS, WV, KY & OH	24,361	24,361	
OHIO RIVER OPEN CHANNEL WORK, WV, KY & OH	2,710	2,710	
R D BAILEY LAKE, WV	2,492	2,492	
STONEWALL JACKSON LAKE, WV	1,466	1,466	
SUMMERSVILLE LAKE, WV	2,571	2,571	
SUTTON LAKE, WV	2,980	2,980	
TYGART LAKE, WV	1,667	1,667	
WISCONSIN			
EAU GALLE RIVER LAKE, WI	1,055	1,055	
FOX RIVER, WI	11,457	11,457	
GREEN BAY HARBOR, WI	.....	3,437	*
INSPECTION OF COMPLETED WORKS, WI	.....	45	†
KEWAUNEE HARBOR, WI	13	13	
MILWAUKEE HARBOR, WI	.....	1,341	*
PROJECT CONDITION SURVEYS, WI	.....	230	*
STURGEON BAY HARBOR AND LAKE MICHIGAN SHIP CANAL, WI	7	7	
SURVEILLANCE OF NORTHERN BOUNDARY WATERS, WI	.....	550	*
WYOMING			
INSPECTION OF COMPLETED WORKS, WY	.....	189	†
JACKSON HOLE LEVEES, WY	1,135	1,135	
SCHEDULING RESERVOIR OPERATIONS, WY	.....	109	†
SUBTOTAL, PROJECTS LISTED UNDER STATES	1,774,747	2,735,308	
REMAINING ITEMS			
ADDITIONAL FUNDING FOR ONGOING WORK NAVIGATION MAINTENANCE	.....	23,907	
DEEP-DRAFT HARBOR AND CHANNEL	.....	607,625	
DONOR AND ENERGY TRANSFER PORTS	.....	50,000	
INLAND WATERWAYS	.....	50,000	
SMALL, REMOTE, OR SUBSISTENCE NAVIGATION	.....	54,000	
OTHER AUTHORIZED PURPOSES	.....	58,525	
AQUATIC NUISANCE CONTROL RESEARCH	675	10,000	
ASSET MANAGEMENT/FACILITIES AND EQUIP MAINT (FEM)	3,285	4,285	
CIVIL WORKS WATER MANAGEMENT SYSTEM (CWWMS)	7,650	7,650	
COASTAL INLET RESEARCH PROGRAM	2,430	10,975	
COASTAL OCEAN DATA SYSTEM (CODS)	2,250	7,500	
CULTURAL RESOURCES	900	900	
CYBERSECURITY	3,600	3,600	
DREDGE MACFARLAND READY RESERVE	.....	11,690	*
DREDGE WHEELER READY RESERVE	.....	15,000	*
DREDGING DATA AND LOCK PERFORMANCE MONITORING SYSTEM	1,010	3,120	
DREDGING OPERATIONS AND ENVIRONMENTAL RESEARCH (DOER)	5,000	5,000	
DREDGING OPERATIONS TECHNICAL SUPPORT PROGRAM (DOTS)	2,550	2,550	
EARTHQUAKE HAZARDS REDUCTION PROGRAM	300	300	
FACILITY PROTECTION	4,182	4,182	
FISH & WILDLIFE OPERATING FISH HATCHERY REIMBURSEMENT	5,400	5,400	
HARBOR MAINTENANCE FEE DATA COLLECTION	.....	795	*
INAND WATERWAY NAVIGATION CHARTS	4,050	4,050	
INSPECTION OF COMPLETED FEDERAL FLOOD CONTROL PROJECTS	15,000	15,000	
INSPECTION OF COMPLETED WORKS	32,784	.....	‡
MONITORING OF COMPLETED NAVIGATION PROJECTS	3,780	11,780	
NATIONAL COASTAL MAPPING PROGRAM	4,875	10,000	

CORPS OF ENGINEERS—OPERATION AND MAINTENANCE—Continued

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	
NATIONAL DAM SAFETY PROGRAM (PORTFOLIO RISK ASSESSMENT)	7,650	13,900	
NATIONAL EMERGENCY PREPAREDNESS PROGRAM (NEPP)	4,500	4,500	
NATIONAL (LEVEE) FLOOD INVENTORY	4,500	15,000	
NATIONAL (MULTIPLE PROJECT) NATURAL RESOURCES MANAGEMENT ACTIVITIES	3,330	3,330	
NATIONAL PORTFOLIO ASSESSMENTS FOR REALLOCATIONS	500	500	
OPTIMIZATION TOOLS FOR NAVIGATION	392	600	
PERFORMANCE-BASED BUDGETING SUPPORT PROGRAM	2,000	2,000	
RECREATION MANAGEMENT SUPPORT PROGRAM	1,400	1,400	
REGIONAL SEDIMENT MANAGEMENT PROGRAM	3,500	8,500	
RESPONSE TO CLIMATE CHANGE AT CORPS PROJECTS	.....	5,000	
REVIEW OF NON-FEDERAL ALTERATIONS OF CIVIL WORKS PROJECTS (SECTON 408)	8,500	8,500	
SCHEDULING OF RESERVOIR OPERATIONS	8,564	5,000	‡
STEWARDSHIP SUPPORT PROGRAM	900	900	
SUSTAINABLE RIVERS PROGRAM (SRP)	500	500	
VETERAN'S CURATION PROGRAM AND COLLECTIONS MANAGEMENT	5,025	6,500	
WATERBORNE COMMERCE STATISTICS	4,200	4,200	
WATER OPERATIONS TECHNICAL SUPPORT (WOTS)	500	5,500	
SUBTOTAL, REMAINING ITEMS	1,930,429	3,798,972	
ACCOUNTING ADJUSTMENT	−1	.....	
TOTAL, OPERATION AND MAINTENANCE	1,930,428	3,798,972	

*Includes funds requested in other accounts.
†Funded in remaining items.
‡Funded under projects listed under States.

Harmful Algal Blooms [HABs].—The Committee is concerned about the increasing threat to human health and public safety from HABs on our Nation's surface waters. As many of these surface waters have a nexus with Corps water resource projects, the Committee encourages the Corps to work with the appropriate Federal, State, and local agencies to attempt, to the extent practical, to reduce the conditions that allow HABs to occur. When these blooms occur, the committee urges the Corps to work with these same agencies, where appropriate, to provide notice to the public to minimize threats to public health and safety. The Committee recommends additional funds in Aquatic Nuisance Control Research to supplement Corps activities to address HABs, including research and development into the formation, rapid detection, protection methods, and remediation of HABs to enhance protection of vital U.S. water resources.

Calumet Harbor.—The Committee encourages the Corps to take greater consideration of the concerns of the local communities when considering potential locations for a new Calumet Harbor Dredge Material Facility.

Coastal Inlet Research Program.—The Committee understands that communities, infrastructure, commerce, and resources that are tied to the coastal nearshore region are all vulnerable to damage from extreme coastal events and long-term coastal change. Funding in addition to the budget request is recommended for the Corps-led multi-university effort to identify engineering frameworks to address coastal resilience needs, to develop adaptive pathways that lead to coastal resilience, that measure the coastal forces that lead to infrastructure damage and erosion during extreme storm events, and to improve coupling of terrestrial and coastal models. Funding

in addition to the budget request is also recommended for the Corps to continue work with the National Oceanic and Atmospheric Administration's National Water Center on protecting the Nation's water resources.

Debris Removal.—The Corps is reminded that debris removal activities, including those in urban waterways, are eligible for additional funding. The Corps is directed to provide a briefing to the Committees on Appropriations of both Houses of Congress within 90 days of enactment of this act on the findings-to-date from the study required under section 1210 of the AWIA.

Donor and Energy Transfer Ports.—The additional funding recommended in this account for donor and energy transfer ports shall be allocated in accordance with 33 U.S.C. 2238c. The Committee notes the Corps issued implementation guidance for section 1110 of WIIN, but has not completed the necessary work to execute all authorized uses for this funding. The Committee directs the Corps to fully execute subsection (c) of 33 U.S.C. 2238c within 90 days of enactment of this act.

Regional Dredge Demonstration Program.—Additional funds have been recommended in this account to support the demonstration program in accordance with the direction in the front matter under the heading "Regional Dredge Demonstration Program".

Dredging Data and Lock Performance Monitoring System.—The Committee is concerned with the interruptions in commerce due to flooding and other silting activities and resulting closures of navigation, and recommends an additional $2,000,000 to support enhanced modeling that can lead to improved operational and maintenance scenarios.

Enhanced Options for Sand Acquisition for Beach Renourishment Projects.—The Committee urges the Corps to provide States with guidance and recommendations to implement cost effective measures and planning for sand management.

Invasive Mussels.—The Committee recognizes that dreissenid mussels, highly invasive species, threaten water delivery systems and hydroelectric facilities operated by the Corps. Additional funds are recommended in this account to prevent the introduction and removal of invasive species like dreissenid mussels at Corps-owned reservoirs.

Isle of Shoals North and Cape Arundel Dredged Material Placement Site.—The Cape Arundel Disposal Site in Maine selected by the Department of the Army as an alternative dredged material disposal site under section 103(b) of the Marine Protection Research and Sanctuaries Act of 1972, shall remain open until April 15, 2024, until the remaining disposal capacity of the site has been utilized, or until final designation of an Ocean Dredged Material Disposal Site for southern Maine under section 102(c) of the Marine Protection Research and Sanctuaries Act of 1972, whichever first occurs, provided that the site conditions remain suitable for such purpose and that the site may not be used for disposal of more than 80,000 cubic yards from any single dredging project.

J. Percy Priest Greenway.—The Committee understands the city of Murfreesboro has been working in partnership with the Corps since 2007 for the development of a greenway trail that provides recreational and wellness opportunities, and an alternate form of

transportation. The Committee supports completion of the J. Percy Priest Greenway trail improvements and reminds the Corps that greenway trail improvements are eligible to compete for additional funding recommended in this account.

Kennebec River Long-Term Maintenance Dredging.—The Committee supports the Memorandum of Agreement signed in January 2019 denoting responsibilities between the Department of the Army and the Department of the Navy for the regular maintenance of the Kennebec River Federal Navigation Channel. Maintenance dredging of the Kennebec is essential to the safe passage of newly constructed Navy guided missile destroyers to the Atlantic Ocean. The Committee directs the Secretary to maintain its collaboration with the Department of the Navy to ensure regular maintenance dredging of the Kennebec.

Lake Oahe and Lake Sakakawea.—The Committee is aware of the deterioration of recreational facilities around Lake Oahe and Lake Sakakawea and urges the Corps to develop, using input from local stakeholders, a sustainable long-term plan to restore and maintain these facilities.

Manatee Harbor South Channel.—The Committee understands an Integral Determination Report for inclusion of the South Channel as part of the Federal authorized project and an assumption of maintenance was completed and approved on April 11, 2019. The Committee also understands the Corps is preparing the appropriate agreements to allow for the assumption of maintenance dredging of the South Channel and for reimbursement to Port Manatee of the Federal share of the construction work completed. The Corps is reminded this project is eligible for additional funding recommended in this account once the appropriate agreement has been executed.

Monitoring of Completed Navigation Projects—Fisheries.—The Committee is concerned that a reduction in or elimination of navigational lock operations on the Nation's inland waterways is having a negative impact on river ecosystems, particularly the ability of a number of endangered, threatened, and game fish species to migrate through waterways, particularly during critical spawning periods. The Committee is aware of preliminary research that indicates reduced lock operations on certain Corps designated low-use waterways is directly impacting migration and that there are effective means to mitigate the impacts. The Committee believes maximizing the ability of fish to use these locks to move past the dams has the potential to restore natural and historic long-distance river migrations that may be critical to species survival. In fiscal year 2019, the Committee recommended funding to continue preliminary research on the impact of reduced lock operations on riverine fish.

The Committee understands the research underway is proving valuable and, within available funds for ongoing work, directs the Corps to continue this research at no less than the fiscal year 2019 level. The goal of the continued funding is to support the ongoing research and, where appropriate, expand the work to look at ecosystem level impacts and additional waterways, lock structures, lock operation methods, and fish species that will more fully inform the Corps' operations.

Monitoring of Completed Navigation Projects—Non-Destructive Testing.—The Committee supports the Corps' efforts to cost-effectively improve the safety, efficiency, and reliability of critical and aging infrastructure. The Committee understands that the Corps continues to explore non-destructive testing methods of inspection that can assist in performing this vital mission with increased safety and accuracy and at significantly less cost than current methods. The Committee recommends $2,000,000 for the Corps to complete an asset management plan regarding non-destructive testing methods.

Monitoring of Completed Navigation Projects—Structural Health Monitoring.—Of the funding recommended, $4,000,000 shall be to support the structural health monitoring program to facilitate research to maximize operations, enhance efficiency, and protect asset life through catastrophic failure mitigation.

National (Levee) Flood Inventory.—Funding in addition to the budget request is recommended to meet the requirements under WRRDA section 3016. Within these funds, the Corps is directed to finalize and submit the implementation plan required in the Consolidated Appropriations Act, 2018, within 30 days of enactment of this act. The Corps is also directed to include in the plan any initiatives required under WRRDA, section 3016 that have the potential to be duplicative and recommendations of how to streamline these requirements.

Ready Reserve Fleet.—The Secretary is directed to submit to the Committees on Appropriations of both Houses of Congress a report detailing the capacity of the current Corps and Ready Reserve Fleets to: (1) prevent or minimize the impact of national emergencies or disasters on ports, harbors, and other U.S. waterways for navigation; and (2) adequately restore those waterways quickly post-disaster, within 120 days of enactment of this act.

Regional Sediment Management.—The Committee recommends additional funding in this account for "Regional Sediment Management" for Corps research and development into enhanced forecasting capabilities to implement proactive strategies for flood risk management to enhance the resiliency of coastal communities and mitigate socioeconomic and environmental consequences of extreme coastal hazards.

Rollinson Channel, North Carolina.—The Committee is aware of the continual shoaling issue in Dare County between Hatteras and Ocracoke. The shoaling has resulted in a longer route for the ferry, leading to increased costs and decreased services. The Committee encourages the Corps to continue coordination with the other relevant agencies to move forward with a solution to the shoaling issue in a timely manner.

San Rafael Channel, California.—The Committee is aware that the last full dredging of the San Rafael Channel was in 2002. This lack of dredging is becoming a public safety issue at the San Rafael Police and Fire Department, who are based in the channel and need access and capacity for bay patrols, rescues, and other public safety activity. Given public safety concerns, the Committee urges the Corps to prioritize dredging of the San Rafael Channel.

Small, Remote, or Subsistence Harbors.—The Committee emphasizes the importance of ensuring that our country's small and low-

use ports remain functional. In the fiscal year 2020 Work Plan, the Committee urges the Corps to consider expediting scheduled maintenance at small and low-use ports that have experienced unexpected levels of deterioration since their last dredging.

The Committee is concerned that small Corps-owned navigation projects across the country are in critical need of investment (in many cases to mitigate public safety concerns) but continue to suffer neglect. The Committee, therefore, directs the Corps to prioritize projects for emerging harbors that have public safety concerns.

The Committee is concerned that the administration's criteria for navigation maintenance disadvantage small, remote, or subsistence harbors and waterways from competing for scarce navigation maintenance funds. The Committee directs the Corps to revise the criteria used for determining which navigation maintenance projects are funded and to develop a reasonable and equitable allocation under the Operation and Maintenance account. The Committee supports including criteria to evaluate economic impact that these projects provide to local and regional economies.

South Florida Ecosystem Restoration [Operation and Maintenance].—The Committee strongly encourages the Corps and the Office of Management and Budget to include an annual line item for O&M costs under the SFER programmatic budget. The Committee further emphasizes the responsibility of the Corps' to provide annual payments of the Federal share of such costs to local sponsors of SFER projects, as provided for by statute and contract, for O&M activities reviewed by the Corps Jacksonville District. The Committee notes that the lack of SFER O&M funding has significantly impacted local partners including the South Florida Water Management District and the Seminole Tribe of Florida and serves as an unnecessary bureaucratic impediment to the restoration of America's Everglades.

Water Control Manuals.—The Committee has heard concerns that some water control manuals are decades old and in need of update, particularly in light of recent dam disasters and improvements in forecast-informed reservoir operations. Therefore, additional funds are recommended in the Other Authorized Project Purposes funding pot for water control manual updates for projects located in states where a Reclamation project is also located. The Committee directs that not less than $1,000,000 be used to develop a comprehensive list of water control manuals at Corps-owned projects located in states where a Reclamation project is also located, including a prioritized list of needed updates of those manuals. The Corps is directed to provide a briefing to the Committees on Appropriations of both Houses of Congress within 30 days of completion of this list.

Water Operations Technical Support.—Funding in addition to the budget request is recommended for research into atmospheric rivers first funded in fiscal year 2015.

WRRDA Section 6002, Review of Corps Assets.—The Committee is frustrated by the lack of progress of the Corps in performing a review of its inventory, in accordance with section 6002 of the WRRDA, as has been directed in previous Committee Reports. The

Committee recommends $1,000,000 under the Asset Management/Facilities and Equipment Maintenance to perform this review.

Additional Funding for Ongoing Work.—The Committee cannot support a level of funding that does not fund O&M of our Nation's aging infrastructure sufficiently to ensure continued competitiveness in a global marketplace. Federal navigation channels maintained at only a fraction of authorized dimensions and navigation locks and hydropower facilities well beyond their design life results in economic inefficiencies and risks infrastructure failure, which can cause substantial economic losses. The Committee recommendation includes additional funds for projects and activities to enhance the Nation's economic growth and international competitiveness.

The Committee recommends not less than $4,000,000 of the additional funds recommended in the Scheduling of Reservoir Operations line be for a water control manual update for a non-Corps owned high hazard dam where: (1) the Corps has a responsibility for flood control operations under section 7 of the Flood Control Act of 1944; (2) the dam requires coordination of water releases with one or more other high-hazard dams for flood control purposes; and (3) the dam owner is actively investigating the feasibility of applying forecast informed reservoir operations technology. Of the additional funds recommended in this account for other authorized project purposes, not less than $2,200,000 shall be used to continue greenway trail improvements at Federal projects in partnership with a non-Federal agency. Of the additional funds recommended in this account for other authorized project purposes, not less than $2,000,000 shall be for efforts to combat invasive mussels at Corps-owned reservoirs.

When allocating the additional funding recommended in this account, the Corps shall consider giving priority to the following:

—Ability to complete ongoing work maintaining authorized depths and widths of harbors and shipping channels (including small, remote, or subsistence harbors), including where contaminated sediments are present;
—Ability to address critical maintenance backlog;
—Presence of the U.S. Coast Guard;
—Extent to which the work will enhance national, regional, or local economic development;
—Extent to which the work will promote job growth or international competitiveness;
—Number of jobs created directly by the funded activity;
—Ability to obligate the funds allocated within the fiscal year;
—Ability to complete the project, separable element, project phase, or useful increment of work within the funds allocated; and
—For harbor maintenance activities:
  —Total tonnage handled;
  —Total exports;
  —Total imports;
  —Dollar value of cargo handled;
  —Energy infrastructure and national security needs served;
  —Designation as strategic seaports;
  —Lack of alternative means of freight movement;

—Savings over alternative means of freight movement; and
—Improvements to dredge disposal facilities which will result in long-term savings, including a reduction in regular maintenance costs.

REGULATORY PROGRAM

Appropriations, 2019	$200,000,000
Budget estimate, 2020	200,000,000
Committee recommendation	200,000,000

The Committee recommends $200,000,000 for the Regulatory Program, the same as the budget request.

Regional General Permits.—Not later than 60 days after the enactment of this act, the Secretary shall provide to the Committees on Appropriations of both Houses of Congress a report detailing the five-year duration limitation on regional general permits under 33 U.S.C. 1344(e)(2), and the resulting undue hardship on economic development efforts. Additionally, the Corps is encouraged to outline the potential benefits of the following: (1) establishing a process by which non-Federal entities can negotiate permitting agreements with the Corps on pre-decisional permitting processes; and (2) allowing regional general permits to be granted for a time period sufficient for the permittee to complete the work specified in the application.

Salton Sea.—The Committee encourages the Corps to expedite the State of California's pending request for Salton Sea's ordinary high water mark jurisdictional determination to ensure that Salton Sea mitigation projects may proceed expeditiously.

FORMERLY UTILIZED SITES REMEDIAL ACTION PROGRAM

Appropriations, 2019	$150,000,000
Budget estimate, 2020	
Committee recommendation	200,000,000

The Committee recommends $200,000,000 for the Formerly Utilized Sites Remedial Action Program.

FLOOD CONTROL AND COASTAL EMERGENCIES

Appropriations, 2019	$35,000,000
Budget estimate, 2020	27,000,000
Committee recommendation	35,000,000

The Committee recommends $35,000,000 for Flood Control and Coastal Emergencies, an increase of $8,000,000 above the budget request.

Hurricane Dorian.—The Committee acknowledges the severe coastal impacts of Hurricane Dorian along the southeastern U.S. from Florida through Virginia. The Committee urges the Corps to expedite assessment, rehabilitation, and renourishment of federally authorized shore protection projects along Hurricane Dorian's path to minimize the potential for future losses of life and property through the remainder of the 2019 Atlantic hurricane season.

EXPENSES

Appropriations, 2019	$193,000,000
Budget estimate, 2020	187,000,000
Committee recommendation	193,000,000

The Committee recommends $193,000,000 for Expenses, an increase of $6,000,000 above the budget request. No funding is recommended for creation of an Office of Congressional Affairs.

Deauthorizations.—Within 90 days of enactment of this act, the Corps shall provide to the Committees on Appropriations of both Houses of Congress a list of all projects that have been deauthorized or will be deauthorized in the next two fiscal years as a result of section 1302 of WIIN.

Inventory of Corps Projects.—Within 120 days of enactment this act, the Corps shall submit to the Committees on Appropriations of both Houses of Congress an inventory of all authorized Corps studies and projects in each State. For each study and project identified, the Corps shall include by State, the specific authorization, respective mission area, remaining Federal cost to complete, and the current status.

Other Transaction Authority.—The Corps is encouraged to expand its use of Other Transaction Agreements to execute the Civil Works program.

OFFICE OF THE ASSISTANT SECRETARY OF THE ARMY (CIVIL WORKS)

Appropriations, 2019	$5,000,000
Budget estimate, 2020	5,000,000
Committee recommendation	5,000,000

The Committee recommends $5,000,000 for the Office of the Assistant Secretary of the Army (Civil Works), the same as the budget request.

The Committee is concerned about the bureaucratic process for renewing leases under the 16 U.S.C. 406d. The Committee encourages the Secretary to consider the efficiencies that may be gained by allowing Corps Districts to authorize lease renewals under this section, including lease applications in excess of 25 years.

The Committee counts on a timely and accessible executive branch in the course of fulfilling its constitutional role in the appropriations process. The requesting and receiving of basic, factual information is vital to maintain a transparent and open governing process. The Committee recognizes that some discussions internal to the executive branch are pre-decisional in nature and, therefore, not subject to disclosure. However, the access to facts, figures, and statistics that inform these decisions are not subject to the same sensitivity and are critical to the appropriations process. The administration needs to do more to ensure timely and complete responses to these inquiries.

GENERAL PROVISIONS—CORPS OF ENGINEERS—CIVIL

Section 101. The bill includes a provision related to reprogramming.

Section 102. The bill includes a provision related to allocation of funds.

Section 103. The bill includes a provision related to contract awards and modifications.

Section 104. The bill includes a provision related to the Fish and Wildlife Service.

Section 105. The bill includes a provision related to open lake disposal of dredged material.

Section 106. The bill includes a provision related to the reorganization or transfer of the Corps of Engineers.

Section 107. The bill includes a provision related to permitting for the discharge of dredged or fill material.

TITLE II

DEPARTMENT OF THE INTERIOR

CENTRAL UTAH PROJECT COMPLETION ACCOUNT

Appropriations, 2019	$15,000,000
Budget estimate, 2020	10,000,000
Committee recommendation	20,000,000

The Committee recommends $20,000,000 for the Central Utah Project Completion Account, which includes $1,800,000 for the Utah Reclamation Mitigation and Conservation Account for use by the Utah Reclamation Mitigation and Conservation Commission, $1,500,000 for necessary expenses of the Secretary of the Interior, and up to $1,500,000 for the Commission's administrative expenses. This allows the Department of the Interior to develop water supply facilities that will continue to sustain economic growth and an enhanced quality of life in the western States, the fastest growing region in the United States. The Committee remains committed to complete the Central Utah Project, which would enable the project to initiate repayment to the Federal Government.

BUREAU OF RECLAMATION

OVERVIEW OF RECOMMENDATION

The Committee recommends $1,730,000,000 for the Bureau of Reclamation [Reclamation], an increase of $620,151,000 above the budget request. The Committee recommendation sets priorities by supporting our Nation's water infrastructure.

INTRODUCTION

In addition to the traditional missions of bringing water and power to the West, Reclamation continues to develop programs, initiatives, and activities that will help meet new water needs and balance the multitude of competing uses of water in the West. Reclamation is the largest wholesaler of water in the country, operating 338 reservoirs with a total storage capacity of 140 million acre-feet. Reclamation projects deliver 10 trillion gallons of water to more than 31 million people each year, and provide 1 out of 5 western farmers with irrigation water for 11 million acres of farmland that produce 60 percent of the Nation's vegetables and 25 percent of its fruits and nuts. Reclamation manages, with partners, 289 recreation sites that have 90 million visits annually.

FISCAL YEAR 2020 WORK PLAN

The Committee recommends $620,151,000 funding above the budget request for Water and Related Resources. Reclamation is directed to submit a work plan, not later than 60 days after the date

of enactment of this act, to the Committees on Appropriations of both Houses of Congress proposing its allocation of these additional funds. The work plan shall be consistent with the following general guidance:

—None of the funds may be used for any item for which the Committee has specifically denied funding;

—The additional funds are recommended for studies or projects that were either not included in the budget request or for which the budget request was inadequate;

—Funding associated with a category may be allocated to eligible studies or projects within that category; and

—Reclamation may not withhold funding from a study or project because it is inconsistent with administration policy. The Committee notes that these funds are in excess of the administration's budget request, and that administration budget metrics shall not disqualify a study or project from being funded.

REPROGRAMMING

The Committee is retaining the reprogramming legislation provided in the Energy and Water Development and Related Agencies Appropriations Act, 2019.

DROUGHT RESILIENCY

Congress has invested approximately $700,000,000 over the past 5 years in drought and water supply-related activities. The Committee remains intently focused on the need for substantially increased investment in improving drought resiliency as well as in finding opportunities for agencies to combine water supply benefits with other mission priorities. In the Energy and Water Development and Related Agencies Appropriations Act, 2017, the Committee began the transition from mitigating an ongoing drought in the West to preparing for the next one. The Committee continues that approach in this year's bill by recommending $206,000,000 for the drought resiliency programs authorized in WIIN.

The Committee directs Reclamation to continue working with the U.S. Fish and Wildlife Service, the NMFS, and relevant State agencies to undertake comprehensive, around the clock, real-time monitoring of water supply conditions and their impact on endangered species during critical periods in the winter and spring.

The Committee believes that the only answer to these chronic droughts is a combination of additional storage, substantial investments in desalination and recycling, improved conveyance, and increased efficiencies in the uses of water both for agriculture and potable purposes. As the West has consistently been the fastest growing part of the country, it is incumbent on Reclamation to lead the way in increasing the water that is available from year to year and to incentivize more efficient use of the water that is available.

UNMANNED AERIAL SYSTEMS

The Committee reminds Reclamation that a report was required in fiscal year 2019 regarding unmanned aerial systems [UAS]. Reclamation is directed to expedite completion of this report and within 30 days of enactment of this act, brief the Committees on Appro-

priations of both Houses of Congress on its findings and subsequent actions, as they relate to foreign-made UAS.

CONGRESSIONALLY DIRECTED SPENDING

The Committee did not accept or include congressionally directed spending, as defined in section 5(a) of rule XLIV of the Standing Rules of the Senate. However, the Committee has recommended additional programmatic funds above the budget request for the Water and Related Resources account. In some cases, these additional funds have been included within defined categories, as in prior years, and are described in more detail in their respective sections below.

WATER AND RELATED RESOURCES

Appropriations, 2019	$1,391,992,000
Budget estimate, 2020	962,000,000
Committee recommendation	1,582,151,000

The Committee recommends $1,582,151,000 for Water and Related Resources, an increase of $620,151,000 above the budget request.

INTRODUCTION

The Water and Related Resources account supports the development, management, and restoration of water and related natural resources in the 17 western States. The account includes funds for operating and maintaining existing facilities to obtain the greatest overall level of benefits, to protect public safety, and to conduct studies on ways to improve the use of water and related natural resources. Work will be done in partnership and cooperation with non-Federal entities and other Federal agencies.

BUREAU OF RECLAMATION—WATER AND RELATED RESOURCES

[In thousands of dollars]

Project title	Budget estimate		Committee recommendation	
	Resources management	Facilities OM&R	Resources management	Facilities OM&R
ARIZONA				
AK CHIN INDIAN WATER RIGHTS SETTLEMENT ACT PROJECT	.....	15,311	.....	15,311
COLORADO RIVER BASIN—CENTRAL ARIZONA PROJECT	5,744	648	5,744	648
COLORADO RIVER FRONT WORK AND LEVEE SYSTEM	2,303	.....	2,303	.....
SALT RIVER PROJECT	649	250	649	250
SAN CARLOS APACHE TRIBE WATER SETTLEMENT ACT PROJECT	1,550	.....	1,550	.....
YUMA AREA PROJECTS	1,125	22,789	1,125	22,789
CALIFORNIA				
CACHUMA PROJECT	746	898	746	898
CENTRAL VALLEY PROJECT:	.....	.....	.....	.....
AMERICAN RIVER DIVISION, FOLSOM DAM UNIT/MORMON ISLAND	1,577	8,837	1,577	8,837
AUBURN–FOLSOM SOUTH UNIT	35	2,184	35	2,184
DELTA DIVISION	5,075	5,644	5,075	5,644
EAST SIDE DIVISION	1,290	2,772	1,290	2,772
FRIANT DIVISION	1,508	3,411	1,508	3,411

BUREAU OF RECLAMATION—WATER AND RELATED RESOURCES—Continued

[In thousands of dollars]

Project title	Budget estimate		Committee recommendation	
	Resources management	Facilities OM&R	Resources management	Facilities OM&R
SAN JOAQUIN RIVER RESTORATION SETTLEMENT	28,264		28,264	
MISCELLANEOUS PROJECT PROGRAMS	7,770	370	7,770	370
REPLACEMENTS, ADDITIONS, AND EXTRAORDINARY MAINT. PROGRAM		28,780		28,780
SACRAMENTO RIVER DIVISION	1,675	495	1,675	495
SAN FELIPE DIVISION	218	73	218	73
SHASTA DIVISION	474	8,343	474	8,343
TRINITY RIVER DIVISION	10,371	4,077	10,371	4,077
WATER AND POWER OPERATIONS	2,628	10,793	2,628	10,793
WEST SAN JOAQUIN DIVISION, SAN LUIS UNIT	2,758	4,908	2,758	4,908
ORLAND PROJECT		873		873
SALTON SEA RESEARCH PROJECT	300		300	
SOLANO PROJECT	1,162	2,233	1,162	2,233
VENTURA RIVER PROJECT	380	54	380	54
COLORADO				
ANIMAS–LA PLATA PROJECT	5,234	5,004	5,234	5,004
ARMEL UNIT, P–SMBP	4	384	4	384
COLLBRAN PROJECT	205	1,850	205	1,850
COLORADO–BIG THOMPSON PROJECT	96	13,513	96	13,513
FRUITGROWERS DAM PROJECT	75	120	75	120
FRYINGPAN–ARKANSAS PROJECT	135	9,884	135	9,884
GRAND VALLEY UNIT, CRBSCP, TITLE II	275	1,743	275	1,743
LEADVILLE/ARKANSAS RIVER RECOVERY PROJECT		30,000		30,000
MANCOS PROJECT	100	678	100	678
NARROWS UNIT, P–SMBP		30		30
PARADOX VALLEY UNIT, CRBSCP, TITLE II	1,080	2,967	1,080	2,967
PINE RIVER PROJECT	120	295	120	295
SAN LUIS VALLEY PROJECT, CLOSED BASIN	118	2,832	118	2,832
SAN LUIS VALLEY PROJECT, CONEJOS DIVISION	9	20	9	20
UNCOMPAHGRE PROJECT	708	150	708	150
UPPER COLORADO RIVER OPERATIONS PROGRAM	729		729	
IDAHO				
BOISE AREA PROJECTS	2,642	2,409	2,642	2,409
COLUMBIA AND SNAKE RIVER SALMON RECOVERY PROJECT	16,000		16,000	
LEWISTON ORCHARDS PROJECT	1,476	20	1,476	20
MINIDOKA AREA PROJECTS	2,037	3,151	2,037	3,151
PRESTON BENCH PROJECT	14	47	14	47
KANSAS				
ALMENA UNIT, P–SMBP	41	438	41	438
BOSTWICK UNIT, P–SMBP	211	887	211	887
CEDAR BLUFF UNIT, P–SMBP	13	497	13	497
GLEN ELDER UNIT, P–SMBP	104	1,147	104	1,147
KANSAS RIVER UNIT, P–SMBP		100		100
KIRWIN UNIT, P–SMBP	14	371	14	371
WEBSTER UNIT, P–SMBP	11	17,457	11	17,457
WICHITA PROJECT—CHENEY DIVISION	36	352	36	352
MONTANA				
CANYON FERRY UNIT, P–SMBP	188	5,126	188	5,126
EAST BENCH UNIT, P–SMBP	162	646	162	646
FORT PECK RESERVATION / DRY PRAIRIE RURAL WATER SYSTEM	2,431		2,431	
HELENA VALLEY UNIT, P–SMBP	52	238	52	238
HUNGRY HORSE PROJECT		476		476
HUNTLEY PROJECT	38	57	38	57
LOWER MARIAS UNIT, P–SMBP	86	2,186	86	2,186

BUREAU OF RECLAMATION—WATER AND RELATED RESOURCES—Continued

[In thousands of dollars]

Project title	Budget estimate		Committee recommendation	
	Resources management	Facilities OM&R	Resources management	Facilities OM&R
LOWER YELLOWSTONE PROJECT	699	23	699	23
MILK RIVER PROJECT	400	3,051	400	3,051
MISSOURI BASIN O&M, P–SMBP	1,030	110	1,030	110
ROCKY BOYS/NORTH CENTRAL MT RURAL WATER SYSTEM	1,984	.....	1,984	.....
SUN RIVER PROJECT	107	398	107	398
YELLOWTAIL UNIT, P–SMBP	105	8,495	105	8,495
NEBRASKA				
AINSWORTH UNIT, P–SMBP	59	98	59	98
FRENCHMAN–CAMBRIDGE UNIT, P–SMBP	139	1,788	139	1,788
MIRAGE FLATS PROJECT	10	74	10	74
NORTH LOUP UNIT, P–SMBP	90	159	90	159
NEVADA				
LAHONTAN BASIN PROJECT	4,992	4,401	4,992	4,401
LAKE TAHOE REGIONAL DEVELOPMENT PROGRAM	115	.....	115	.....
LAKE MEAD/LAS VEGAS WASH PROGRAM	595	.....	595	.....
NEW MEXICO				
CARLSBAD PROJECT	2,108	1,342	2,108	1,342
MIDDLE RIO GRANDE PROJECT	12,461	10,121	12,461	10,121
RIO GRANDE PROJECT	2,153	11,668	2,153	11,668
RIO GRANDE PUEBLOS PROJECT	68	.....	68	.....
TUCUMCARI PROJECT	15	5	15	5
NORTH DAKOTA				
DICKINSON UNIT, P–SMBP	.....	564	.....	564
GARRISON DIVERSION UNIT, P–SMBP	7,666	12,199	7,666	12,199
HEART BUTTE UNIT, P–SMBP	10	969	10	969
OKLAHOMA				
ARBUCKLE PROJECT	39	203	39	203
MCGEE CREEK PROJECT	20	826	20	826
MOUNTAIN PARK PROJECT	31	600	31	600
NORMAN PROJECT	77	360	77	360
WASHITA BASIN PROJECT	54	1,091	54	1,091
W.C. AUSTIN PROJECT	39	503	39	503
OREGON				
CROOKED RIVER PROJECT	444	420	444	420
DESCHUTES PROJECT	420	261	420	261
EASTERN OREGON PROJECTS	772	567	772	567
KLAMATH PROJECT	13,079	3,040	13,079	3,040
ROGUE RIVER BASIN PROJECT, TALENT DIVISION	1,801	1,055	1,801	1,055
TUALATIN PROJECT	283	303	283	303
UMATILLA PROJECT	388	2,877	388	2,877
SOUTH DAKOTA				
ANGOSTURA UNIT, P–SMBP	30	968	30	968
BELLE FOURCHE UNIT, P–SMBP	376	841	376	841
KEYHOLE UNIT, P–SMBP	.....	567	.....	567
LEWIS AND CLARK RURAL WATER SYSTEM	100	.....	100	.....
MID–DAKOTA RURAL WATER PROJECT	.....	15	.....	15
MNI WICONI PROJECT	.....	13,101	.....	13,101
OAHE UNIT, P–SMBP	.....	110	.....	110
RAPID VALLEY PROJECT	.....	71	.....	71
RAPID VALLEY UNIT, P–SMBP	.....	199	.....	199
SHADEHILL UNIT, P–SMBP	1	501	1	501

BUREAU OF RECLAMATION—WATER AND RELATED RESOURCES—Continued

[In thousands of dollars]

Project title	Budget estimate		Committee recommendation	
	Resources management	Facilities OM&R	Resources management	Facilities OM&R
TEXAS				
BALMORHEA PROJECT	22	10	22	10
CANADIAN RIVER PROJECT	40	82	40	82
LOWER RIO GRANDE WATER CONSERVATION PROGRAM	50	.....	50	.....
NUECES RIVER PROJECT	54	921	54	921
SAN ANGELO PROJECT	24	571	24	571
UTAH				
HYRUM PROJECT	95	228	95	228
MOON LAKE PROJECT	21	101	21	101
NEWTON PROJECT	65	120	65	120
OGDEN RIVER PROJECT	165	196	165	196
PROVO RIVER PROJECT	1,462	906	1,462	906
SANPETE PROJECT	29	50	29	50
SCOFIELD PROJECT	313	128	313	128
STRAWBERRY VALLEY PROJECT	858	70	858	70
WEBER BASIN PROJECT	1,409	1,119	1,409	1,119
WEBER RIVER PROJECT	1,698	134	1,698	134
WASHINGTON				
COLUMBIA BASIN PROJECT	5,296	15,367	5,296	15,367
WASHINGTON AREA PROJECTS	381	84	381	84
YAKIMA PROJECT	1,311	6,001	1,311	6,001
YAKIMA RIVER BASIN WATER ENHANCEMENT PROJECT	10,760	.....	10,760	.....
WYOMING				
BOYSEN UNIT, P–SMBP	154	2,256	154	2,256
BUFFALO BILL DAM, DAM MODIFICATION, P–SMBP	33	3,514	33	3,514
KENDRICK PROJECT	68	5,477	68	5,477
NORTH PLATTE PROJECT	57	1,484	57	1,484
NORTH PLATTE AREA, P–SMBP	72	5,526	72	5,526
OWL CREEK UNIT, P–SMBP	4	71	4	71
RIVERTON UNIT, P–SMBP	8	604	8	604
SHOSHONE PROJECT	34	942	34	942
SUBTOTAL, ITEMS UNDER STATES	189,289	358,724	189,289	358,724
REMAINING ITEMS				
ADDITIONAL FUNDING FOR ONGOING WORK RURAL WATER	.....	.....	125,000	.....
FISH PASSAGE AND FISH SCREENS	.....	.....	13,500	.....
WATER CONSERVATION AND DELIVERY	.....	.....	274,000	.....
ENVIRONMENTAL RESTORATION AND COMPLIANCE	.....	.....	50,000	.....
FACILITIES OPERATION, MAINTENANCE, AND REHABILITATION	.....	.....	.....	4,000
COLORADO RIVER COMPLIANCE ACTIVITIES	21,400	.....	.....	.....
COLORADO RIVER BASIN SALINITY CONTROL PROJECT, TITLE I	.....	14,739	.....	14,739
COLORADO RIVER BASIN SALINITY CONTROL PROJECT, TITLE II	10,000	.....	10,000	.....
COLORADO RIVER STORAGE PROJECT (CRSP), SECTION 5	3,153	6,848	3,153	6,848
COLORADO RIVER STORAGE PROJECT (CRSP), SECTION 8	3,078	.....	3,078	.....
COLORADO RIVER WATER QUALITY IMPROVEMENT PROJECT	740	.....	740	.....
DAM SAFETY PROGRAM DEPARTMENT OF THE INTERIOR DAM SAFETY PROGRAM	.....	1,300	.....	1,300
INITIATE SAFETY OF DAMS CORRECTIVE ACTION	.....	72,187	.....	79,872

BUREAU OF RECLAMATION—WATER AND RELATED RESOURCES—Continued

[In thousands of dollars]

Project title	Budget estimate		Committee recommendation	
	Resources management	Facilities OM&R	Resources management	Facilities OM&R
SAFETY EVALUATION OF EXISTING DAMS	.....	19,284	.....	19,284
EMERGENCY PLANNING & DISASTER RESPONSE PROGRAM	.....	1,250	.....	1,250
ENDANGERED SPECIES RECOVERY IMPLEMENTATION PROGRAM				
ENDANGERED SPECIES RECOVERY IMPLEMENTATION PROGRAM (Bureauwide)	2,500	.....	5,500	.....
ENDANGERED SPECIES RECOVERY IMPLEMENTATION PROGRAM (Platte River)	4,000	.....	4,000	.....
ENDANGERED SPEC RECOVERY IMPL PROG (Upper Colo & San Juan Riv Basins)	2,850	.....	2,850	.....
ENVIRONMENTAL PROGRAM ADMINISTRATION	1,523	.....	1,523	.....
EXAMINATION OF EXISTING STRUCTURES	.....	9,349	.....	9,349
GENERAL PLANNING ACTIVITIES	2,132	.....	2,132	.....
INDIAN WATER RIGHTS SETTLEMENTS AAMODT LITIGATION SETTLEMENT	8,301	.....	8,301	.....
BLACKFEET SETTLEMENT	10,000	.....	10,000	.....
CROW TRIBE RIGHTS	12,772	.....	12,772	.....
NAVAJO–GALLUP	66,182	3,000	66,182	3,000
LAND RESOURCES MANAGEMENT PROGRAM	10,060	.....	10,060	.....
LOWER COLORADO RIVER OPERATIONS PROGRAM	31,299	.....	31,299	.....
MISCELLANEOUS FLOOD CONTROL OPERATIONS	.....	832	.....	832
NATIVE AMERICAN AFFAIRS PROGRAM	11,685	.....	11,685	.....
NEGOTIATION & ADMINISTRATION OF WATER MARKETING	2,308	.....	2,308	.....
OPERATION & PROGRAM MANAGEMENT	922	1,707	1,934	1,707
POWER PROGRAM SERVICES	2,121	307	2,121	307
PUBLIC ACCESS AND SAFETY PROGRAM	646	206	646	206
RECLAMATION LAW ADMINISTRATION	2,078	.....	2,078	.....
RECREATION & FISH & WILDLIFE PROGRAM ADMINISTRATION	3,249	.....	6,497	.....
RESEARCH AND DEVELOPMENT:				
DESALINATION AND WATER PURIFICATION PROGRAM	1,475	1,150	28,850	1,150
SCIENCE AND TECHNOLOGY PROGRAM	11,014	.....	20,000	.....
SITE SECURITY ACTIVITIES	.....	36,359	.....	36,359
UNITED STATES/MEXICO BORDER ISSUES—TECHNICAL SUPPORT	80	.....	80	.....
WATERSMART PROGRAM WATERSMART GRANTS	10,000	.....	60,000	.....
WATER CONSERVATION FIELD SERVICES PROGRAM	1,750	.....	4,179	.....
COOPERATIVE WATERSHED MANAGEMENT	250	.....	5,250	.....
BASIN STUDIES	2,000	.....	5,200	.....
DROUGHT RESPONSE & COMPREHENSIVE DROUGHT PLANS	2,901	.....	4,000	.....
TITLE XVI WATER RECLAMATION & REUSE PROGRAM	3,000	.....	65,017	.....
SUBTOTAL, REMAINING ITEMS	245,469	168,518	853,935	180,203
TOTAL	434,758	527,242	1,043,224	538,927

Aamodt Litigation Settlement Act.—The Committee encourages Reclamation to expeditiously conclude negotiations with the settlement parties to reach an agreement pursuant to section 611(g) of the Settlement Act (Public Law 111–291) to ensure there is no delay in construction. Under the Settlement Act, construction of

the Pojoaque Basin Regional Water System must be "substantially complete" by 2024.

Anadromous Fish Screen Program.—The Committee is concerned that insufficient resources are being devoted to completing work on the last two remaining priority unscreened diversions on the Sacramento River, both of which have been specifically identified as priorities in the California Natural Resources Agency Sacramento Valley Salmon Resiliency Strategy. The Committee strongly urges Reclamation to allocate sufficient resources from within available funds to complete the screening of these high priority diversions.

Aquifer Recharge.—The Committee directs Reclamation to work closely with project beneficiaries to identify and resolve any barriers to aquifer recharge projects when appropriate, while utilizing full authority to prioritize funds for ongoing projects through completion.

CALFED Water Storage Feasibility Studies.—In testimony before the Subcommittee last year, the Commissioner of Reclamation asserted that the agency would complete feasibility studies for the Sites and Temperance Flat reservoirs by the end of August 2019 and would complete the feasibility study for the Los Vaqueros reservoir by November 2019. The Committee notes that these studies have taken more than 15 years and expects Reclamation to take such steps as are necessary to ensure that each of these studies is completed as soon as possible. The Committee directs Reclamation to expeditiously complete any financial assistance agreements requested by the non-Federal sponsors of these projects to help move the projects forward more efficiently.

Columbia Basin Project.—The Committee is aware of the Odessa Groundwater Replacement Project as part of the larger Columbia Basin Irrigation Project. The Odessa Groundwater Replacement project exists to address the severely declining Odessa groundwater aquifer within the Columbia Basin Irrigation Project boundary. The 2013 Odessa Groundwater Replacement Project Environmental Impact Statement and Record of Decision developed by Washington State Department of Ecology's Office of Columbia River and Reclamation provides the legal and regulatory framework to implement the Odessa Groundwater Replacement Project. The Committee is supportive of the Odessa Groundwater Replacement Project and encourages Reclamation to move forward on implementing authorized components of the plan.

Dam Infrastructure.—The Committee recognizes that dams and dam infrastructure must be upgraded to be in line with safety and environmental requirements before Reclamation can take title. Therefore, the Committee encourages Reclamation to allocate additional funds to study modernization needs for dams that are proposed for transfer to Reclamation under existing agreements.

Drought Contingency Plans.—The Committee commends Reclamation, the Department of Interior, and the seven Colorado River Basin states for completing drought contingency plans to conserve water and reduce risks from ongoing drought for the Upper and Lower Colorado River basins. The completion of these plans mark a major milestone in protecting a critical water source in the western United States. The Committee encourages Reclamation to provide sufficient funding for activities that support these plans.

Groundwater Banking.—The Committee is aware of the continuing regional efforts across the West to design and implement groundwater banking storage projects to enhance water supply reliability and to help mitigate drought impacts. The Committee fully supports these efforts and believes such projects are a cost effective approach to addressing critical water supply management challenges. The Committee strongly encourages Reclamation, within available funds, to continue to foster and enhance existing partnerships with local and State water agencies and to undertake new partnerships where practicable. Reclamation's contributions to these partnerships should include technical, logistical, and financial support, as appropriate, for the planning, design, and construction of groundwater banking storage projects.

Loan Program.—The Committee urges Reclamation to complete the agreement with the Environmental Protection Agency required by section 4301 of AWIA, no later than the statutory deadline of October 23, 2019. If Reclamation does not complete the required agreement by the deadline, the Committee directs Reclamation to report to the Committees on Appropriations of both Houses of Congress by November 1, 2019, on the obstacles that prevented meeting the statutory deadline and the projected timeline for completing the agreement.

Mni Wiconi Project, South Dakota.—Reclamation is directed to continue working with the Tribes and relevant Federal agencies to coordinate use of all existing authorities and funding sources to finish needed community system upgrades and connections, as well as transfers of those systems, as quickly as possible. The administration is encouraged to include appropriate funding for upgrades and transferred community systems in future budget requests.

Pick-Sloan Ability-to-Pay.—The Committee is aware of the significant financial impacts to more than 20 Pick-Sloan irrigation districts if Reclamation moves forward with the proposal to change the eligibility requirements for the program related to users' "ability to pay" [ATP] contrary to the original intent of the program. The Committee believes that to be consistent with the 1944 Flood Control Act and ensure the continued operation of irrigation districts that rely on Pick-Sloan power, total Pick-Sloan power costs delivered to Pick-Sloan Irrigation Districts should not exceed their longstanding ATP threshold, as included in all previous power contracts. Therefore, Reclamation is directed to continue to consider irrigation district ATP consistent with the original intent of Congress and the 1944 Flood Control Act. Reclamation shall not raise rates unless an ATP study shows there is the ability to pay.

Projects Serving Military Installations.—The Committee is concerned that Reclamation's criteria for allocating funding have not adequately accounted for projects that would directly benefit military base operations and national security facilities. The Committee directs Reclamation to brief the Committees on Appropriations of both Houses of Congress within 30 days of delivering the report to Congress, which was required in fiscal year 2019, on the recommendations contained within that report.

Refuge Water Supplies.—The Committee is concerned by the lack of water infrastructure in wildlife refuges along the Pacific Flyway, which can limit Reclamation's ability to deliver full contract water

supplies to refuges. The Committee encourages Reclamation to make every reasonable effort to dedicate funds to improving refuge water delivery infrastructure in the Pacific Flyway.

Rural Water Projects.—Voluntary funding in excess of legally required cost shares for rural water projects is acceptable but shall not be used by Reclamation as a criterion for allocating additional funding recommended by the Committee or for budgeting in future years.

San Joaquin River Restoration.—The Committee is concerned that Reclamation's fiscal year 2020 budget request proposes a $7,200,000 million cut to the San Joaquin River Restoration Program, even though Reclamation's 2018 Funding-Constrained Framework for Implementation identifies over $643,000,000 in needed program work through fiscal year 2024. The Committee encourages Reclamation to continue to seek annual appropriated funding at recent levels for the program. Permanent appropriations, newly available for the program in fiscal year 2020, should not supplant continued annual appropriations.

Scoggins Dam, Tualatin Project, Oregon.—The Committee supports the budget request for preconstruction activities at Scoggins Dam under the Safety of Dams program. Given the scheduled acceleration of activities to advance this project, the Committee anticipates that the administration will be proposing increased funding in future budgets. Consistent with the Tualatin Project Water Supply Feasibility Study authorized in Public Law 108–137 and statutory authority granted by Public Law 114–113 allowing for additional benefits to be conducted concurrently with dam safety improvements, the Committee directs Reclamation to evaluate alternatives, including new or supplementary works, provided that safety remains the paramount consideration, to address dam safety modifications and increased storage capacity. Considering the high risk associated with Scoggins Dam, the Committee urges Reclamation to work with local stakeholders and repayment contractors to prioritize this joint project, including a selection of the engineering preferred alternative by the end of 2019 and commencement of the NEPA review process in early 2020. The Committee understands that a replacement structure downstream could significantly reduce project costs for both the Federal Government and local stakeholders. Reclamation may accept contributed funds from non-Federal contractors to expedite completion of any level of review. The Committee understands Reclamation and the non-Federal project partners intend to finalize a Contributed Funds Act agreement in advance of the selection of the engineering preferred alternative.

Research and Development: Desalination and Water Purification Program.—Of the funding recommended for this program, $12,000,000 shall be for desalination projects as authorized in section 4009(a) of WIIN.

St. Mary's Diversion Dam and Conveyance Works.—The Committee recognizes the financial difficulty of upgrading, repairing, and replacing the century-old water infrastructure of the Milk River Project. The Committee encourages Reclamation to continue working with local stakeholders to find innovative ways to maintain this infrastructure without undue impact to water users.

Water and Energy Efficiency Grants.—The Committee is concerned that many of the Water and Energy Efficiency Grants fund projects that may increase water scarcity at the basin scale by allowing conservation grant recipients to use conserved water for consumptive use. The Committee directs Reclamation to ensure that all projects funded under 42 U.S.C. 10364 are in compliance with 42 U.S.C. 10364(a)(3)(B) and to articulate the use of the conserved water with its annual award announcements.

WaterSMART Program.—The Committee encourages Reclamation to prioritize eligible Water Conservation projects that will provide water supplies to meet the needs of threatened and endangered species.

WaterSMART Program: Title XVI Water Reclamation & Reuse Program.—Of the funding recommended for this program, $20,000,000 shall be for water recycling and reuse projects as authorized in section 4009(c) of WIIN.

Of the funding recommended for this program, $20,000,000 shall be for Aquifer Storage and Recovery projects focused on ensuring sustainable water supplies and protecting water quality with shared or multi-use aquifers, including municipal, agricultural irrigation, industrial, recreation and domestic users of the aquifer.

Yakima River Basin Integrated Water Resource Management Plan.—The Committee supports the Yakima River Basin Integrated Water Resource Management Plan. This innovative water management plan represents years of collaboration in the Yakima River Basin among stakeholders including Reclamation, the State of Washington, the Yakama Nation, irrigators and farmers, conservation organizations, recreationists, and local governments to address water supply needs for agriculture, fish and wildlife, and municipal use. The Committee encourages Reclamation to move forward on implementing authorized components of the plan.

Additional Funding for Water and Related Resources Work.—The Committee recommendation includes an additional $620,151,000 above the budget request for Water and Related Resources studies, projects, and activities. Priority in allocating these funds shall be given to advance and complete ongoing work, including preconstruction activities, and where environmental compliance has been completed; improve water supply reliability; improve water deliveries; enhance national, regional, or local economic development; promote job growth; advance Tribal and nontribal water settlement studies and activities; or address critical backlog maintenance and rehabilitation activities. Reclamation is encouraged to allocate additional funding for aquifer recharging efforts to address the ongoing backlog of related projects. Reclamation is reminded that activities authorized under Indian Water Rights Settlements are eligible to compete for the additional funding under "Water Conservation and Delivery". Reclamation shall allocate additional funding provided in this account consistent with the following direction:

—Of the additional funds recommended, $10,000,000 shall be to continue groundwater treatment and remediation activities; such funds may only be used to support ongoing activities and may only be used to match non-Federal funds previously ex-

pended for similar groundwater treatment and remediation activities;

—Of the additional funding recommended under the heading "Water Conservation and Delivery", $134,000,000 shall be for water storage projects as authorized in section 4007 WIIN;

—Of the additional funding provided under the heading "Water Conservation and Delivery," not less than $27,000,000, shall be for construction activities related to projects found to be feasible by the Secretary and which are ready to initiate for the repair of critical Reclamation canals where operational conveyance capacity has been seriously impaired by factors such as age or land subsidence, especially those that would imminently jeopardize Reclamation's ability to meet water delivery obligations; and

—Of the additional funding recommended under the heading "Environmental Restoration or Compliance", not less than $40,000,000 shall be for activities authorized under sections 4001 and 4010 of WIIN or as set forth in Federal-State plans for restoring threatened and endangered fish species affected by the operation of Reclamation's water projects.

Buried Metallic Water Pipe.—Reclamation shall continue following its temporary design guidance.

CENTRAL VALLEY PROJECT RESTORATION FUND

GROSS APPROPRIATION

Appropriations, 2019	$62,008,000
Budget estimate, 2020	54,849,000
Committee recommendation	54,849,000

The Committee recommends $54,849,000 for the Central Valley Project Restoration Fund, the same as the budget request. This appropriation is fully offset by collections, resulting in a net appropriation of $0.

The Central Valley Project Restoration Fund was authorized in the Central Valley Project Improvement Act, title 34 of Public Law 102–575. This fund uses revenues from payments by project beneficiaries and donations for habitat restoration, improvement and acquisition, and other fish and wildlife restoration activities in the Central Valley project area of California. Payments from project beneficiaries include several required by the act (Friant Division surcharges, higher charges on water transferred to non-Central Valley Project users, and tiered water prices) and, to the extent required in appropriations acts, additional annual mitigation and restoration payments.

CALIFORNIA BAY-DELTA RESTORATION

Appropriations, 2019	$35,000,000
Budget estimate, 2020	33,000,000
Committee recommendation	33,000,000

The Committee recommends $33,000,000 for California Bay-Delta Restoration, the same as the budget request.

This account funds activities that are consistent with the CALFED Bay-Delta Program, a collaborative effort involving 18 State and Federal agencies and representatives of California's

urban, agricultural, and environmental communities. The goals of the program are to improve fish and wildlife habitat, water supply reliability, and water quality in the San Francisco Bay-San Joaquin River Delta, the principle hub of California's water distribution system.

POLICY AND ADMINISTRATION

Appropriations, 2019	$61,000,000
Budget estimate, 2020	60,000,000
Committee recommendation	60,000,000

The Committee recommends $60,000,000 for Policy and Administration, the same as the budget request.

This account funds the executive direction and management of all Reclamation activities, as performed by the Commissioner's offices in Washington, DC; Denver, Colorado; and five regional offices. The Denver office and regional offices charge individual projects or activities for direct beneficial services and related administrative and technical costs. These charges are covered under other appropriations.

Reclamation Project Reimbursability Decisions.—In September 2017, the Department of the Interior's Office of Inspector General released a report calling into question Reclamation's method of financial participation in the State of California's Bay-Delta Conservation Plan. The Committee is concerned that Reclamation was not satisfactorily transparent in its use of funds for activities that were not included in the budget request. Reclamation is directed to submit an annual report 60 days after the end of each fiscal year detailing the use of financial assistance agreements to redirect appropriated funds from their intended purpose outlined in the previous year's budget request. Reclamation is directed to review and report to the Committees on Appropriations of both Houses of Congress within 90 days after enactment of this act, on the advisability of developing additional financial controls and requiring more extensive written justifications for determinations of what costs are reimbursable for complex projects involving major Federal expenditures and multiple funding sources.

GENERAL PROVISIONS—DEPARTMENT OF THE INTERIOR

Section 201. The bill includes a provision regarding reprogramming.

Section 202. The bill includes a provision regarding the San Luis Unit and Kesterson Reservoir.

Section 203. The bill includes a provision regarding the Secure Water Act.

Section 204. The bill includes a provision regarding CALFED Bay-Delta.

Section 205. The bill includes a provision regarding the Omnibus Public Land Management Act of 2009.

TITLE III

DEPARTMENT OF ENERGY

OVERVIEW OF RECOMMENDATION

The Committee recommends $39,031,910,000 for the Department of Energy, an increase of $7,529,981,000 above the budget request.

The Committee recommendation sets priorities by supporting the Office of Science and the Advanced Research Projects Agency—Energy [ARPA–E], leading the world in scientific computing, addressing the Federal Government's responsibility for environmental cleanup and disposal of used nuclear fuel, keeping large construction projects on time and on budget, effectively maintaining our nuclear weapons stockpile, and supporting our nuclear Navy.

INTRODUCTION

The mission of the Department of Energy [Department] is to ensure America's security and prosperity by addressing its energy, environmental, and nuclear challenges through transformative science and technology solutions. To accomplish this mission, the Secretary of Energy [Secretary] relies on a world-class network of national laboratories, private industry, universities, States, and Federal agencies, which allows our brightest minds to solve our Nation's most important challenges.

The Committee's recommendation for the Department includes funding in both defense and non-defense budget categories. Defense funding is recommended for atomic energy defense activities, including the National Nuclear Security Administration, which manages our Nation's stockpile of nuclear weapons, prevents proliferation of dangerous nuclear materials, and supports the Navy's nuclear fleet; defense environmental cleanup to remediate the former nuclear weapons complex; and safeguards and security for Idaho National Laboratory. Non-defense funding is recommended for the Department's energy research and development programs (including nuclear, fossil, and renewable energy, energy efficiency, grid modernization and resiliency, and the Office of Science), power marketing administrations, the Federal Energy Regulatory Commission, and administrative expenses.

REPROGRAMMING GUIDELINES

The Committee's recommendation includes control points to ensure the Secretary spends taxpayer funds in accordance with congressional direction. The Committee's recommendation also includes reprogramming guidelines to allow the Secretary to request permission from the Committee for certain expenditures, as defined below, which would not otherwise be permissible. The Secretary's execution of appropriated funds shall be fully consistent with the

direction provided under this heading and in section 301 of the bill, unless the Committee includes separate guidelines for specific actions in the bill or report.

Prior to obligating any funds for an action defined below as a reprogramming, the Secretary shall notify and obtain approval of the Committees on Appropriations of both Houses of Congress. The Secretary shall submit a detailed reprogramming request in accordance with section 301 of the bill, which shall, at a minimum, justify the deviation from prior congressional direction and describe the proposed funding adjustments with specificity. The Secretary shall not, pending approval from the Committee, obligate any funds for the action described in the reprogramming proposal.

The Secretary is also directed to inform the Committees on Appropriations of both Houses of Congress promptly and fully when a change in program execution and funding is required during the fiscal year.

Definition.—A reprogramming includes:

—the reallocation of funds from one activity to another within an appropriation;

—any significant departure from a program, project, activity, or organization described in the agency's budget justification as presented to and approved by Congress;

—for construction projects, the reallocation of funds from one construction project identified in the agency's budget justification to another project or a significant change in the scope of an approved project;

—adoption of any reorganization proposal which includes moving prior appropriations between appropriations accounts; and

—any reallocation of new or prior year budget authority, or prior year deobligations.

DIRECTION ON RESEARCH AND DEVELOPMENT ACTIVITIES

The Department is directed throughout all of its programs to maintain a balanced portfolio of early-, mid-, and late-stage research, development, and market transformation activities that will deliver innovative energy technologies, practices, and information to American consumers and industry. While Federal investment plays a greater role in early stage research, a balanced portfolio must be inclusive of Federal investment in mid-to-late research activities, including field evaluation of early-stage technology to provide testing and data collection in a real-world setting; to attract private sector cost share that will advance technology to market; and provide a bridge to small businesses, cities, or small utilities with fewer resources and tools to participate in energy infrastructure planning. The Department is further directed to fully execute the funds appropriated in a timely manner and to keep the Committees on Appropriations of both Houses of Congress apprised of progress in implementing funded programs, projects, and activities.

CROSSCUTTING INITIATIVES

Grid Modernization.—The Department is directed to continue the ongoing work between the national laboratories, industry, and universities to improve grid reliability and resiliency through the stra-

tegic goals of the Grid Modernization Initiative [GMI] and encourages the Department to include all applied energy programs to ensure broad energy system resilience and modernization. Further, the Committee supports the Grid Modernization Laboratory Consortium and supports continued update and implementation of the Grid Multi-Year Program Plan to ensure coordination across program office investments in foundational and program-specific GMI projects. The Committee directs the Department to emphasize national energy systems resilience modeling and improved grid cyber resilience to address emerging national resilience challenges of the grid and related energy systems, planned investments in energy storage to improve grid flexibility and resilience, and advanced sensors and control paradigms that promise to improve energy system resilience of the future smart grid.

Energy Storage.—The Committee is supportive of the Department's approach to consider energy storage holistically, and focus on advances in controllable loads, hybrid systems, and new approaches to energy storage. The Committee agrees that advances in this wide range of energy storage technologies will allow for loads to be combined with generation from all sources to optimize use of existing assets to provide grid services, and increase grid reliability. The Department is directed to use all of its capabilities to accelerate the development of storage technologies, including the basic research capabilities of the Office of Science, the technology expertise of the Office of Energy Efficiency and Renewable Energy, the grid-level knowledge of the Office of Electricity, and the rapid technology development capabilities of ARPA–E. The Committee directs the Department to coordinate efforts among various existing Department programs to maximize efficiency of funds and expand vital research.

The Committee supports the Advanced Energy Storage Initiative included in the budget request, and recommends within available funds $3,500,000 to accelerate support for low-cost aqueous redox metal hybrid flow batteries to improve materials and the design of prototypes for one or more field demonstration projects.

The Committee is pleased the Department included cost and performance targets for specific battery storage technologies in the fiscal year 2020 budget request, and directs the Department to implement those targets. Further, the Department is directed to develop specific cost and performance targets for long duration and seasonal grid scale energy storage research, development, and demonstration and include those targets in the fiscal year 2021 budget request.

Cybersecurity Crosscut.—Cybersecurity activities within the Department cover a broad scope ranging from the protection of Department assets against cybersecurity threats to improving cybersecurity in the electric power and oil and natural gas sectors to other areas in the national security portfolio. As cybersecurity threats become more complex, and the Department increases its focus on cybersecurity research and development, it is vital that there be clear crosscutting objectives and coordination across the Department.

Arctic Energy Office.—The Committee supports the promotion of research, development, and deployment of electric power technology

that is cost-effective and well-suited to meet the needs of rural and remote regions of the United States, especially where permafrost is present or located nearby. In addition, the Committee further supports research, development and deployment in such regions of enhanced oil recovery technology, including heavy oil recovery, reinjection of carbon, and extended reach drilling technologies; gas-to-liquids technology and liquefied natural gas, including associated transportation systems; small hydroelectric facilities, river turbines, and tidal power; natural gas hydrates, coal bed methane, and shallow bed natural gas; and alternative energy, including wind, geothermal, and fuel cells. The Department is directed to support a renewed focus on the Arctic region, and as a cross-cutting activity, use the Arctic Energy Office as a centralized area to support the use of energy resources, but also innovative activities, including microgrids and integrated energy systems.

Small Modular Energy Solutions.—The Committee encourages the Department establish a crosscutting research initiative across the Offices of Electricity, Nuclear Energy, Energy Efficiency and Renewable Energy, and Fossil Energy to elevate research and development for small modular designs across all generation technologies and in concert with research and development for microgrids so that the grid can capture the benefits of more resilient generation technologies.

U.S. Energy Employment Report.—The Committee notes that in 2016 and 2017, the Department produced a report to survey and document energy jobs across the country, spanning a range of jobs and energy sources within the energy sector. The Department is directed to conduct and release the report annually, starting again this year for 2019, to quantify energy sector employment and explore shifts in the energy workforce over the last several years.

Strategic Energy Research Cooperation.—In order to maximize the impact of energy investments at the Department of Energy and Department of Defense, the Committee directs the Secretary to provide to the Committee a report no later than 180 days after enactment detailing outcomes from the 2010 Memorandum of Understanding Between U.S. Department of Energy and U.S. Department of Defense Concerning Cooperation in a Strategic Partnership to Enhance Energy Security, challenges to coordination, and ways that the departments can enhance collaboration to build on the goals of the Memorandum of Understanding and improve advanced energy research, U.S. energy security, energy storage, and efficiency.

NONPROFIT FOUNDATION

The Committee directs the Department to contract with the National Academy of Public Administration within two months of the date of enactment of this act in order to convene an expert panel regarding the value of creating a nonprofit foundation to assist the Department to advance its mission of addressing the nation's energy challenges. The report shall include an assessment of comparable foundations at other Federal agencies, with detail on their structure and governance and how they engage with the private sector to enhance ongoing and new efforts supporting the research, development, demonstration, and commercial application of innova-

tive energy technologies. The Academy shall issue its report not later than 180 days after entering into an agreement with the Department.

COMMUNITY REUSE ORGANIZATIONS

The Department is reminded of its authority to transfer excess personal property and equipment to Department-designated Community Reuse Organizations in order to promote economic diversification and job creation in communities where the Department's sites are located, and is encouraged to ensure that relevant agency employees throughout the Department are aware of current policies to implement this authority. The Committee directs the Department to continue personal property programs that operated in fiscal year 2019.

COMMONLY RECYCLED PAPER

The Department shall not expend funds for projects that knowingly use as a feedstock commonly recycled paper that is segregated from municipal solid waste or collected as part of a collection system that commingles commonly recycled paper with other solid waste at any point from the time of collection through materials recovery.

ENERGY PROGRAMS

ENERGY EFFICIENCY AND RENEWABLE ENERGY

(INCLUDING RESCISSION OF FUNDS)

Appropriations, 2019	$2,379,000,000
Budget estimate, 2020	343,000,000
Committee recommendation	2,800,000,000

The Committee recommends a net appropriation of $2,800,000,000 for Energy Efficiency and Renewable Energy [EERE], an increase of $2,457,000,000 above the budget request. Within available funds, the Committee recommends $165,000,000 for program direction. The recommendation also includes a rescission of $58,000,000 of unused funds previously appropriated under the Defense Production Act for biorefinery construction.

Staffing.—The Committee is concerned with the reduction of staff in EERE; there has been a reduction of approximately 90 full-time equivalents since 2017, a reduction of 14 percent. Meanwhile funding levels have increased by $289,000,000, or 14 percent. In addition, rather than using available funds to hire the Federal staff needed to responsibly manage a growing portfolio, the Committee is aware that funds are being used to pay general overhead expenses, a change in historical practice. Therefore, the Committee directs the Under Secretary for Energy to report to the Committees on Appropriations of both Houses of Congress not later than 30 days after enactment of this act on a plan for reaching a staffing level of not less than 650 full-time equivalents within the first half of fiscal year 2020. Furthermore, the Committee directs that not more than 50 percent of Working Capital Fund costs shall be paid out of the Program Direction account.

Congressional Direction.—The Committee directs the Department to maintain a diverse portfolio of early-, mid-, and late-stage research, development, and market transformation activities. Regular engagement with industry is encouraged to provide confidence that a technology can be deployed to avoid duplication of private-sector efforts. The Committee further directs the Department to fully execute the funds appropriated in this act, as directed in this report, in a timely manner and to keep Congress apprised of progress in implementing funded programs, projects, and activities. Further, the Committee directs the Department to give priority to stewarding the assets and optimizing the operations of EERE-designated user facilities across the Department's complex and commends the Department for their commitment to the transformation of the National Wind Technology Center to support a large-scale grid integration research platform linked to national laboratories, universities and industry. In future budget requests, the Committee directs the Department to demonstrate a commitment to operations and maintenance of facilities that support the Department's critical missions.

Research and Development Policy.—The budget request proposes a focus by the Department on early-stage research and development activities at the expense of later-stage research and development, field validation, deployment, demonstration, consumer education and technical assistance. The Committee restates that such a limited approach will not successfully integrate the results of early-stage research and development into the U.S. energy system and thus will not adequately deliver innovative advanced energy technologies, practices, and information to American consumers and companies. The Committee recommends funding to support a comprehensive and real-world strategy that includes mid- and later-stage research, development, deployment, and demonstration activities; and other approaches, and the Committee directs the Department to aggressively implement mid- and late-stage research and development activities to spur further innovation in the market. The Committee restates its concerns about how the Department is deploying funds and staff resources appropriated in previous fiscal years and directs the Department to implement the activities as directed in a timely manner and for EERE leadership to meet no less than quarterly with Committee staff to provide a status report on activities, including filling vacancies at EERE.

Workforce Development.—The development of a skilled workforce is critical to the successful deployment and long-term sustainability of energy efficient and renewable energy technologies. The Committee encourages funding within EERE programs to be allocated to training and workforce development programs that assist and support workers in trades and activities required for the continued growth of the U.S. energy efficiency and clean energy sectors. Furthermore, the Committee encourages the Department to work with 2-year, public community, and technical colleges for job training programs that lead to an industry-recognized credential in the energy workforce.

Within available funds, the Committee recommends $40,000,000 to partner with a land grant university to pursue leading-edge interdisciplinary research that promotes workforce development in

emerging fields by supporting a coordinated expansion of existing joint graduate education programs with national laboratories to prepare the next generation of scientists and engineers.

Cybersecurity.—The Committee believes cybersecurity vulnerabilities must be addressed as renewable energy technologies enter the marketplace. The Committee also believes there is a gap with respect to distributed generators and behind-the-substation generators, storage, smart buildings technologies and electric vehicles where the potential for cyberattacks will continue to grow and threaten the modern grid. Within funds recommended for EERE, not less than $20,000,000 is recommended to bring cybersecurity into early-stage technology research and development so that it is built into new technology.

Energy Star.—The Committee supports the Department's ongoing role in Energy Star including through Home Performance with Energy Star as well as establishing and verifying energy conservation standards and test procedures for building appliances and equipment. The Committee directs the Department to continue these activities and provide robust funding. Further, the Committee previously directed the Department to provide to the Committees on Appropriations of both Houses of Congress not later than 90 days after the enactment of the fiscal year 2018 Act, a report to review the 2009 Memorandum of Understanding related to the Energy Star Program on whether the expected efficiencies for home appliance products have been achieved. The Committee has yet to receive the report and the Department has not provided a sufficient update as to why the report is delayed. The Committee directs the Department to provide a briefing to the Committees on Appropriations of both Houses of Congress on the status of the report, and subsequently provide the report.

Energy Efficiency and Conservation Block Grant Program.—The Energy Efficiency and Conservation Block Grant [EECBG] Program was operated by the Department from 2009 to 2015 and funded through the American Reinvestment and Recovery Act. It provided grants and technical assistance to local governments, States, and territories to support a wide variety of energy efficiency and renewable energy activities, improve energy efficiency in transportation, building, and other sectors, and create and retain jobs. The Committee directs Department to conduct a comprehensive review of needed investments in energy efficiency, conservation, and renewable energy activities by engaging local governments, States, and tribes. The review shall include consideration of existing investments by other governmental entities and the private sector in planning, infrastructure, and emissions; and include estimated funding requirements. The Committee encourages the Department to provide all interested parties an opportunity to provide input. The Department shall submit its report to the Committees on Appropriations of both Houses of Congress no later than 1 year after the date of enactment of this act.

Recycling.—The Committee supports research and development activities to develop solutions for highly recyclable plastics or biodegradable bio-based plastics. Designing new chemistries and associated processes for chemical recycling of tomorrow's plastics and composite that are inherently recyclable by design.

VEHICLE TECHNOLOGIES

The Committee recommends $410,000,000 for Vehicle Technologies, including not less than $7,000,000 for operations and maintenance of the National Transportation Research Center.

Within this amount, the Committee recommends not less than $175,000,000 for Battery and Electrification Technologies to lower the cost of batteries across light-, medium- and heavy-duty vehicles through battery processing science, advanced battery chemistries, materials research, and modeling and simulation of battery performance. The Committee recommends not less than $40,000,000 for electric drive research and development, of which not less than $7,000,000 is to enable extreme fast charging and advanced battery analytics. The Committee also supports research and development to lower the cost of batteries for electric vehicles through cobalt-free materials and roll-to-roll manufacturing. Funding in this area shall also support research and development leading to improved methods for processing and integrating advanced metals into both lightweight structures and powertrain systems.

The Committee further recommends $48,700,000 for Energy Efficient Mobility Systems, including the Systems and Modeling for Accelerated Research in Transportation [SMART] Mobility, Big Data Solutions for Mobility [Big Data], and Advanced Computing for Energy [ACE] initiatives, including HPC4Mobility and HPC-enabled analytics. These investments are critical to expanding U.S. energy security, economic vitality, and quality of life. Therefore, the Committee supports continued funding for research that allows the U.S. to continue its leadership in advancing state-of-the-art transportation infrastructure.

The Committee also continues to encourage early-stage research to lower the cost of batteries for electric vehicles through battery processing science, materials research, and modeling and simulation of battery performance, including research on extreme fast charging.

The Committee recommends $75,000,000 for Advanced Engine and Fuel Technologies for research focused on advanced fuel formulations that optimize engine performance. Within this amount, not less than $12,500,000 is recommended for the Co-Optimization of Engine and Fuels Multi-Laboratory Consortium.

The Committee recommends $45,000,000 for Materials Technology. Within available funds, $35,000,000 is recommended for early-stage research on multi-material joining and propulsion materials at the national laboratories, and carbon fiber-reinforced composites at the Carbon Fiber Technology Facility. The Committee encourages the Department to continue engagement with industry, addressing all metal processing needs of the industry, including aluminum and high-strength steel work.

Within available funds, the Committee recommends $10,000,000 for continued funding of section 131 of the 2007 Energy Independence and Security Act for transportation electrification.

The Committee recommends $20,000,000 to continue the five awards under the SuperTruck II program to further improve the efficiency of heavy-duty class 8 long- and regional-haul vehicles.

Within available funds, the Committee recommends $66,300,000 for Outreach, Deployment, and Analysis. Within this amount, $37,800,000 is recommended for deployment through the Clean Cities Program. The Department is encouraged to ensure balance in the award of funds to achieve varied aims in fostering broader adoption of clean vehicles and installation of supporting infrastructure. The Committee further encourages the Department to prioritize projects in States where the transportation sector is responsible for a higher percentage of the State's total energy consumption and is the largest source of greenhouse gases. When issuing competitive grants, the Department is encouraged to include at least one Clean Cities coalition partner. Within Outreach, Deployment and Analysis, but outside of the Clean Cities Program, the Committee recommends $20,000,000 for up to four competitive grant awards to develop Electric Vehicle Community Partner Projects that support implementation of community plans to deploy more electric vehicles and charging infrastructure.

The Committee supports Advanced Vehicle Competitions, a collegiate engineering competition that provides hands-on, real-world experience to demonstrate a variety of advanced technologies and designs, and supports development of a workforce trained in advanced vehicles. The Committee recommends $2,500,000 to support the second year of funding the 4-year collegiate engineering competition, EcoCAR 4.

The Committee recommends $10,000,000 to continue improving the energy efficiency of commercial off-road vehicles, including up to $5,000,000 for fluid power systems. These funds shall be awarded through a competitive solicitation in which university/industry teams are eligible to apply.

With an abundant source of low-cost domestic natural gas, the Committee recognizes that this resource as a transportation fuel is becoming an alternative fuel of choice for high fuel use fleets and off-road vehicles, and provides a substantial reduction in nitrogen oxide emissions. Further research is needed on natural gas storage, engines, and fueling infrastructure optimization. Within available funding, the Committee recommends $15,000,000 to address technical barriers to the increased use of natural gas vehicles, including medium- and heavy-duty on-road natural gas engine research and development, energy efficiency improvements, emission after-treatment technologies, fuel system enhancements, new engine development, natural gas storage, natural gas engines, and fueling infrastructure optimization. The Committee previously directed the Department to undertake a comprehensive study, with stakeholder input, on natural gas vehicle deployment in on- and off-road transportation, identifying barriers to increased deployment of natural gas vehicles, and is currently waiting on delivery of this report. The Committee requests within available funds, up to $5,000,000 to support research and development in advanced combustion and vehicle engine technology efficiency in propane engines used for light- and medium-duty applications.

The Committee recognizes novel engine designs can achieve significant efficiency improvements and recommends that within available funds, $5,000,000 is recommended to support research

and development on two-stroke opposed piston engines to be conducted by industry led teams.

BIOENERGY TECHNOLOGIES

The Committee recommends $245,000,000 for Bioenergy Technologies. The Committee encourages the Department to continue engagement with industry to address critical problems associated with small-scale sample production, low-volume production, and process scale-up.

Within available funds, the Committee recommends not less than $30,000,000 for Advanced Algal Systems to sustain the investment in development of algal biofuels.

The Committee encourages further research and development activities to support carbon dioxide capture from the atmosphere [ambient air] into highly alkaline solutions using algae-to-energy technologies. Therefore, within funds available, the Committee recommends $10,000,000 for technology and research and development on direct air carbon capture and removal. The program is directed to collaborate with the Office of Science and the Office of Fossil Energy to develop a coordinated program, as recommended by the National Academies, that supports research, development, and demonstration projects to advance the development and commercialization of direct air capture technologies on a significant scale.

The Committee further recommends $35,000,000 for Feedstock Supply and Logistics, $60,000,000 for Demonstration and Market Transformation, and $10,000,000 for Analysis and Sustainability. Within funding available for Demonstration and Market Transformation, not less than $45,000,000 is recommended for pilot and demonstration projects and not less than $12,500,000 is recommended for the Co-Optimization of Engine and Fuels Multi-Laboratory Consortium.

The Committee further recommends $105,000,000 for Conversion Technologies. Within this amount, $20,000,000 is recommended to continue activities of the Agile Biology Foundry intended to achieve substantial improvements in conversion efficiencies and the scale-up of biological processes with lower development costs and lead times, and to expand the development of biomass-derived aviation fuel through basic research and development, including small-scale sample production, low-volume production and process scale-up.

Within available funds the Committee recommends $10,000,000 within Conversion Technologies to continue the biopower program, which makes full and innovative use of biomass, municipally-derived biosolids, and other carbon already available and impacting the environment, such as municipal solid waste, plastics, and livestock waste.

Within available funds, for Conversion Technologies, the Committee further recommends $5,000,000 to improve the efficiency of community-scale digesters with priority given for projects in States and Tribal areas that have adopted statutory requirements for the diversion of a high percentage of food material from municipal waste streams.

Within available funds, the Committee recommends $5,000,000 for continued support of the development and testing of new do-

mestic manufactured low-emission, high-efficiency, residential wood heaters that supply easily accessed and affordable renewable energy and have the potential to reduce the national costs associated with thermal energy.

Within available funds, the Committee recommends not less than $10,000,000 to continue the multi-university partnership to conduct research and enhance educational programs that improve alternative energy production derived from urban and suburban wastes. The Committee further directs the Department to collaborate with institutions in Canada and Mexico to leverage capacity and capitalize on North American resources.

Within available funds, the Committee supports research to develop the foundation for scalable technologies to use carbon dioxide produced in biorefineries to produce higher value fuels, chemicals or materials.

HYDROGEN AND FUEL CELL TECHNOLOGIES

The Committee recommends $160,000,000 for Hydrogen and Fuel Cell Technologies to maintain a diverse program which focuses on early-, mid-, and late-stage research and development and technology acceleration including market transformation. The Committee encourages regular consultation with industry to avoid duplication of private-sector activities and ensure retention of fuel cell technology and systems development in the United States.

Within the amounts recommended, the Committee recommends $49,000,000 for Hydrogen Fuel Research and Development for efforts to reduce the cost and improve the performance of hydrogen generation and storage systems, hydrogen measurement devices for fueling stations, hydrogen compressor components, and hydrogen station dispensing components. The Department shall continue to research novel onboard hydrogen tank systems, as well as trailer delivery systems to reduce cost of delivered hydrogen. Further, the Department is directed to support research and development activities that reduce the use of platinum group metals, provide improvements in electrodes and membranes and balance-of-plant components and systems.

The Committee recommends $3,000,000 for Systems Analysis, including research on in-situ metrology for process control systems for manufacturing of key hydrogen system components.

Within the amounts recommended, $26,000,000 is recommended for Hydrogen Infrastructure Research and Development with emphasis on large-scale hydrogen production, including liquefaction plants, hydrogen storage, and development of hydrogen, including pipelines. Further, the Department is directed to continue the H2@Scale Initiative, which couples current research efforts within the program with new opportunities for using hydrogen to provide grid resiliency and advance a wide range of industrial processes for the production of fuels, chemicals, and materials.

The Committee recommends $35,000,000 for Technology Acceleration activities, including $3,000,000 for manufacturing research and development, and $7,000,000 for industry-led efforts to demonstrate a hydrogen-focused integrated renewable energy production, storage, transportation fuel distribution/retailing system, and fuel cell system deployment. Funding is included to support fuel

cell and hydrogen technical and workforce development and training programs.

The Committee further recommends $10,000,000 for Safety, Codes, and Standards to maintain a robust program and engage State and local regulatory and code officials to support their technical needs relative to infrastructure and vehicle safety. The Department is encouraged to engage on codes and standards for developing fuel cell and hydrogen markets such as heavy-duty trucks. The Department is also encouraged to continue coordination between U.S. and international standard bodies to ensure there is one set of open [non-proprietary] global standards for fuel cell and hydrogen technologies.

The Committee encourages the Secretary to work with the Secretary of Transportation and industry on coordinating efforts to deploy hydrogen fueling infrastructure.

SOLAR ENERGY

The Committee recommends $260,000,000 for Solar Energy.

Within available funds, the Committee recommends $60,000,000 for Concentrating Solar Power research, development, and demonstration to reduce overall system costs, better integrate subsystem components, develop higher-temperature receivers, and improve the design of solar collection and thermal energy storage. Within this amount, $5,000,000 is recommended for competitively selected projects focused on advanced thermal desalination technologies.

The Committee recommends $70,000,000 for Photovoltaic Research and Development to develop new or improved high-performance cell materials and architectures and achieve greater than 40-percent cell efficiencies. The Department is encouraged to cooperate with industry and academia in its research and development efforts.

The Committee recommends $35,000,000 for Balance of System Soft Cost efforts focused on reducing the time and costs for permitting, inspecting, and interconnecting distributed solar and storage projects installed behind the customer's meter through standardized requirements and online application systems.

The Committee recommends not less than $1,000,000 for the joint Solar Ready Vets program within the Department of Defense as a way to train America's veterans to fill the growing need for solar industry workers.

The Department is directed to continue the Community Solar Consumer Choice Program to increase access for community solar to individuals, particularly individuals that do not have regular access to onsite solar, including low- and moderate-income individuals, businesses, nonprofit organizations, and States and local and Tribal Governments. The Department is directed to align the program with other existing Federal programs that serve low-income communities. The Department is further directed to provide technical assistance to States and local and Tribal Governments for projects to increase community solar, including assisting States and local and Tribal Governments in the development of new and innovative financial and business models that leverage competition in the marketplace in order to serve community solar, and use na-

tional laboratories to collect and disseminate data that assists private entities in the financing of, subscription to, and operation of community solar projects. The Federal Government is encouraged to participate in community solar projects, including by subscribing to community solar facilities.

The Department is encouraged to develop modeling and planning tools for distributed energy resources and continue its focus within SunShot on the resilience and reliability of solar systems, as well as continue and expand programs to reduce both market barriers and soft costs, including through research on market and regulatory analysis and new techno-economic tools and methodologies for distributed energy resources. The Department is encouraged to examine the techno-economic potential to install and operate solar energy technologies on abandoned mine lands, including land adjacent to un-reclaimed or previously reclaimed sites, and an assessment of the accessibility of potential sites to the electric transmission grid and other land use elements.

Further, the Committee recommends $40,000,000 for Systems Integration and encourages the Department to address the technical barriers to increased solar penetration on the grid, including grid reliability, dispatchability, power electronics, and communications.

The Committee recommends $35,000,000 for Innovations is Manufacturing Competitiveness. Within the available funds, the Department is directed to create a 5-year domestic manufacturing capability consortium focused on perovskite research, including inherently scalable production methods such as solution processing, roll-to-roll manufacturing, the science of inherent material stability, and ultrahigh efficiency through tandem manufacturing. Within available funds, the Committee recommends up to $20,000,000 for the first year of the consortium.

Floating Solar Technologies.—Within available funds, the Committee recommends $1,500,000 for competitively selected projects focused on floating solar powered aeration systems.

WIND ENERGY

The Committee recommends $100,000,000 for Wind Energy. Within available funding, the Committee recommends $30,000,000 for Land-Based Wind; $50,000,000 for Off-Shore Wind; $10,000,000 for Distributed Wind; and $10,000,000 for Grid Integration and Analysis.

The Committee supports research using high-performance computing, modeling and simulation, including the Atmosphere to Electrons initiative, and reliability and grid integration efforts. Further, the Department is directed to maintain a balanced research portfolio from early-stage through prototype development and give priority to stewarding the assets and optimizing the operations of the Department-owned wind research and development facilities. Within available funds, the Committee recommends not less than $30,000,000 for the National Wind Technology Center. The Committee supports the development of a large-scale research platform to support next-generation wind energy science and hybrid renewable energy systems manufacturing and systems integration of multiple energy generation, consumption, and storage

technologies as part of the Integrated Energy Systems at Scale [IESS] research agenda.

The Committee directs the Department to support the advancement of innovative technologies for offshore wind development, including freshwater, deep water, shallow water, and transitional depth installations. Within available funds, the Committee recommends not less than $30,000,000 for the Department to prioritize early-stage research on materials and manufacturing methods and advanced components that will enable accessing high-quality wind resources, on development that will enable these technologies to compete in the marketplace without the need for subsidies, and on activities that will accelerate fundamental offshore-specific research and development such as those that target technology and deployment challenges unique to U.S. waters. In addition, the Department is directed to support the innovative offshore wind demonstration projects being carried out by the Department, for which funding has been allocated in fiscal years prior to fiscal year 2019, and further supports efforts to optimize their development, design, construction methods, testing plans, and economic value proposition. The Committee recommends not less than $10,000,000 to support additional project development and pre-construction activities for the offshore wind demonstration projects, and to provide not less than 18 months of additional development period to help ensure success.

The Committee encourages the Department to prioritize distributed wind technologies that reduce costs and improve performance and to collaborate with industry to invest in the development and demonstration of technologies and practices that advance distributed wind. Within available funds, the Committee recommends $10,000,000 for distributed wind. The Committee supports the Department's research on the effects of offshore wind, especially the impact of marine sound and other stressors on marine mammals, and encourages the Department to work with nonprofit research institutions, like aquariums, to continue this work.

WATER POWER

The Committee recommends $160,000,000 for Water Power. The Committee supports the Department's emerging focus on bringing marine energy to meet near-term opportunities in the blue economy, thereby accelerating marine energy grid readiness, and encourages the Department to support research and development, testing, and partnership activities for this new Powering the Blue Economy initiative. The Committee encourages the Department to utilize existing core capabilities within its national laboratories to execute this work, in partnership with universities and industry.

Hydropower Technologies.—Within available funds, the Committee recommends $45,000,000 for conventional hydropower and pumped storage activities, including up to $8,300,000 for the purposes of section 242 of the Energy Policy Act of 2005. Within available funds, the Department is directed to continue research, development, and deployment efforts on pumped hydropower storage technologies and use cases. The Department is encouraged to continue science and modeling efforts to advance hydroelectric turbine design to increase energy production while reducing environmental

impacts, including field data collection and improvements to fish tagging technology.

Marine and Hydrokinetic Technology Research, Development, and Deployment.—The Committee recommends $115,000,000 for marine and hydrokinetic technology research, development, and deployment activities, including research into mitigation of marine ecosystem impacts of these technologies.

Within the funding available for marine and hydrokinetic technology, $40,000,000 is recommended for competitive grants to support industry- and university-led projects to validate the performance, reliability, maintainability, environmental impact, and cost of marine energy technology components, devices, and systems at a variety of scales, including full scale prototypes. Awards shall support for a balanced portfolio of marine and hydrokinetic technologies; and support wave, ocean current, tidal and in-river energy conversion components and systems across the high- and low-technology readiness spectrum to increase energy capture, reliability, survivability, and integration into local or regional grids for lower costs and to assess and monitor environmental effects. Within this amount, the Committee recommends $8,000,000 to continue the activities of the Testing Expertise and Access for Marine Energy Research [TEAMER] program. Further, $5,000,000 is recommended to prioritize infrastructure needs at marine and hydrokinetic technology testing sites operated by Marine Renewable Energy Centers.

The Committee is concerned with the increased cost estimate associated with the fully energetic wave energy test facility. However, given its unique capabilities and expected demand, the Committee continues to support the project which is comprised of four in-water berths plus one auxiliary cable with a total project cost not to exceed $85,000,000. Therefore, the Committee recommends $26,000,000 under 42 U.S.C. 16352(b)(4) to procure long lead items for the project including power cables. Not later than 60 days after the enactment of this act, the Department shall brief the Committee of Appropriations in both Houses of Congress on its plan for completing the wave energy test facility and fund its operations thereafter.

The Committee recommends not less than $5,000,000 to establish an Atlantic Marine Energy Center, a new regional design and testing center on the eastern U.S. coast as a resource for technology developers to accelerate the transition of wave and tidal energy technologies to market.

The Department shall continue its coordination with the U.S. Navy on marine energy technology development for national security applications at the Wave Energy Test Site and other locations.

Furthermore, the Committee encourages close coordination between the Department and the Federal Energy Regulatory Commission, the Bureau of Ocean Energy Management, the National Oceanic and Atmospheric Administration, other relevant agencies and industry to reduce the amount of time to permit marine energy test and validation projects.

GEOTHERMAL TECHNOLOGIES

The Committee recommends $115,000,000 for Geothermal Technologies to focus on early- through late-stage research and develop-

ment and market transformation activities. As 90 percent of known commercial geothermal resource is located on public lands, the Department is encouraged continue to support research to enable greater efficiencies in project permitting with the goal of reducing project costs while ensuring environmental stewardship. The Committee encourages the Department to work with the Department of Interior on opportunities to improve geothermal permitting.

Within available funds, $74,000,000 is recommended for Enhanced Geothermal Systems. To facilitate necessary technology development and expand understanding of subsurface dynamics, the Committee recommends $20,000,000 for the continuation of activities of the Frontier Observatory for Research in Geothermal Energy [FORGE], with activities to include ongoing novel subsurface characterization, full-scale well drilling, and technology research and development to accelerate the commercial pathway to largescale enhanced geothermal systems power generation. The Committee further recommends not less than $10,000,000 for the Wells of Opportunity program.

Further, the Committee recommends $20,000,000 for Hydrothermal, $15,000,000 for Low-Temperature and Co-produced Resources, and $6,000,000 for Systems Analysis.

The Committee directs the Department to continue its efforts to identify prospective geothermal resources in areas with no obvious surface expressions. Within available funds, not less than $10,000,000 is recommended to fund at least one demonstration project in such an area with no obvious surface expression, to develop enhanced geothermal technologies for distribution of heat through ground-source heating and cooling. Awards for geothermal exploration activities, including test drilling, should recognize the diversity of geologic terrains, resource depths, and resulting exploration costs across the United States.

ADVANCED MANUFACTURING

The Committee recommends $380,000,000 for Advanced Manufacturing.

The Committee recommends $25,000,000 for the Manufacturing Demonstration Facility and the Carbon Fiber Technology Facility for early-stage research in additive manufacturing, carbon fiber and composites development, and manufacturing of multi-material systems to reduce the energy intensity and life-cycle energy consumption of domestic manufactured products, thereby increasing the competitiveness of U.S. manufacturing industries. Within funding for the Manufacturing Demonstration Facility, $5,000,000 is recommended for the development of additive systems and automation technologies that have the potential to deposit multiple materials allowing for hybrid material solutions that enhance performance in extreme environments and enable precise property profiles.

The Committee recommends $4,000,000 to support additive manufacturing work on large offshore wind blades that will allow for rapid prototyping, tooling, fabrication, and testing.

The committee recognizes the Department's expertise in developing materials and processes for very high temperature applications. Silicon carbide ceramic matrix composites are a proven, capable material for high temperature applications. The Committee rec-

ommends $5,000,000 to develop and industrialize a low-cost polymer infiltration process for the fabrication of silicon carbide components. The Committee encourages the Department to leverage best practices from large-scale, high-rate commercial composite aerostructure manufacturing.

To remain globally competitive, the Committee recognizes the U.S. aerospace industry must continually increase efficiencies to meet increasing production rate demands and the Committee recognizes the Department's success in partnering with industry to solve its most challenging problems, including the development and deployment of artificial intelligence and machine learning. Within available funds, the Committee recommends not less than $5,000,000 to apply the Office of Science's leadership computing facility expertise in machine learning to increase efficiencies in large-scale, high-rate aerostructures manufacturing.

Within available funds, the Committee recommends not less than $10,000,000 to support research, development, and demonstration projects to advance the development and commercialization of direct air capture technologies that capture carbon dioxide from dilute sources, such as the atmosphere, on a significant scale. The program is directed to collaborate with the Office of Science and the Office of Fossil Energy to develop a coordinated program, as recommended by the National Academies, that supports research, development, and demonstration projects to advance the development and commercialization of direct air capture technologies on a significant scale.

The Committee recognizes the important role large-area additive manufacturing can play in helping to advance the deployment of building, transportation, and clean energy technologies. The Committee directs the Department to further foster the partnership between the national laboratories, universities, and industry to use bio-based thermoplastics composites, such as micro- and nanocellulosic materials, and large-area 3–D printing to overcome challenges to the cost and deployment of building, transportation, and energy technologies.

In addition, the Committee recommends $20,000,000 to continue for the development of additive manufacturing involving nanocellulosic feedstock materials made from forest products to overcome challenges to the cost and deployment of building, transportation, and energy technologies, and encourages the Department to leverage expertise and capabilities for large-scale additive manufacturing through partnerships between universities and the Manufacturing Demonstration Facility Technology Catalyst Initiative.

The Committee recommends $25,000,000 for the fourth year of research and development efforts to lower the cost and energy intensity of technologies to provide clean, safe water through the Energy-Water Desalination Hub.

The Committee recommends $28,000,000 to support the two Clean Energy Manufacturing Institutes [CEMIs], including $14,000,000 for the Reducing Embodied-energy and Decreasing Emissions [REMADE] Institute and $14,000,000 for the Cybersecurity Institute for Energy Efficient Manufacturing. The Committee is concerned with the apparent lack of coordination by the Department of Energy with the Department of Defense in de-

veloping the Cybersecurity Institute, thereby drastically increasing the risks of both duplication and critical gaps in government efforts to help secure the nation's manufacturing base. Therefore, the Committee directs the Department to brief the Committees on Appropriations of both Houses of Congress prior to award the Institute cooperative agreement on specific interfaces with Department of Defense efforts and how the two agencies will coordinate their efforts.

The Committee recommends $25,000,000 to continue the Critical Materials Hub. The Committee supports funding necessary to improve and increase activities at all levels of the critical materials supply chain, including technologies for mining and metallurgy.

The Committee recognizes that Lithium ion (Li-ion) extraction from unconventional sources such as domestic geothermal brine, seawater deposits, and mine tailings has the potential to create significant value as an economic and energy security opportunity for the nation, but that major barriers to economically viable recovery exist, including the development, piloting, and verification of scalable processes. Within available funds, the Committee recommends $5,000,000 for a Lithium Research Center to address fundamental science questions, quantify controlling processes, and inform the design of scalable extraction approaches.

Aluminum can recycling is the major financial driver for the economic viability of Municipal Recycling Facilities [MRFs], which collect and recycle a significant proportion of our county's waste. However, less than fifty percent of cans are collected and recycled. If more aluminum cans are collected for recycling, MRFs and other recyclers would be financially stronger, and the country would achieve greater energy and environmental benefits. The Committee directs the Department to conduct a study on the benefits of higher aluminum can recycling rates and the financial health of MRFs. The study shall consider ways to deploy new technologies, educate consumers and demonstrate whether increasing collection and recycling might offset the costs of recycling other materials. The Department shall provide this study to the Committees on Appropriations of both Houses of Congress not later than 180 days after the enactment of this act.

Within available funds, the Committee recommends $10,000,000 for district heating, within which the Department shall make grants to support demonstration projects that deploy community district heating projects in association with a renewably-fueled municipal generating station.

The Committee recommends $45,000,000 for the Industrial Technical Assistance program. Within this amount, the Committee recommends $12,000,000 to provide ongoing support for the Combined Heat and Power [CHP] Technical Assistance Partnerships [TAPs] and related CHP Technical Partnership activities at the Department, including $5,000,000 for the TAPs and $7,000,000 for related CHP activities. The Committee also encourages the Department to prioritize research, development, and demonstration of district energy systems, and work to accelerate greater deployment of district energy systems in communities, campuses, industries, and cities nationwide by supporting adaptive regional and local technology, and market opportunities.

Within available funds for Industrial Technical Assistance, the Committee recommends $10,000,000 to develop and implement a voluntary technical assistance initiative to assist energy-intensive manufacturing facilities in the U.S. to achieve energy savings and reduce costs. The Department is directed to prioritize assistance to manufacturing facilities that use the most primary energy on an annual basis and to ensure a diversity of facilities by geographic region. Outreach to manufacturing facilities should also involve collaboration with relevant trade associations and labor unions and with the National Institute of Standards and Technology Manufacturing Extension Partnership Program.

The Committee encourages the Department to continue its efforts of extending the Industrial Assessment Centers to underserved areas and furthering the geographic reach of the program to regions that are less likely to be adequately serviced because of their distance from the current Centers. Therefore, the Committee recommends up to $15,000,000 for up to 32 Industrial Assessment Centers. The Committee recognizes the great potential for energy savings in municipal, industrial, and agricultural wastewater treatment systems and within funds recommended for the Industrial Assessment Centers, the Committee recommends $3,000,000 for wastewater treatment technical assistance.

The Committee notes that industrial drying processes consume approximately 10 percent of the process energy used in the manufacturing sector. The recommendation includes funding for a competitive solicitation for university/industry-led teams to improve the efficiency of industrial drying processes.

The Committee recognizes the importance of smart manufacturing technologies, which can enhance energy savings and improve the global competitiveness of American manufacturers. The Committee notes that it is still awaiting the national smart manufacturing plan directed in Senate Report 115–258 accompanying Senate bill 2975 and urges the Department to expeditiously complete the plan.

The Committee directs the Department to develop a series of industry-specific decarbonization roadmaps to guide research and development activities across the Department to phase out net greenhouse gas emissions by 2050, considering technologies such as energy efficiency, process electrification, and carbon capture. Each roadmap shall be developed in consultation with external stakeholders including private companies, labor organizations, and the Office of Fossil Energy to identify technical and business considerations. The Department is directed to submit these roadmaps to the Committees on Appropriations of both Houses of Congress not later than 180 days after enactment of this act.

BUILDING TECHNOLOGIES

The Committee recommends $300,000,000 for Building Technologies.

Within available funds, the Committee recommends $50,000,000 for the Commercial Building Integration program for core research and development of more cost-effective integration techniques and technologies that could help the transition toward deep retrofits. In addition, the Committee encourages the Department to increase

engagement with private sector stakeholders to develop market-transforming policies and investments in commercial building retrofits.

Within available funds, the Committee recommends $40,000,000 for the Residential Building Integration program. The Committee encourages funding to be concentrated on industry teams to facilitate research, demonstrate and test new systems, and facilitate widespread deployment and dissemination of information and best practices through direct engagement with builders, the construction trades, equipment manufacturers, smart grid technology and systems suppliers, integrators, and State and local governments. Further, the Committee includes funding to facilitate whole-house energy efficiency retrofits (including outreach, engagement and training to private sector contractors), including continuing efforts to advance smart home technology.

The Committee supports continued efforts to address property rating and valuation in commercial and residential buildings as a way to improve the transparency of energy utilization in buildings for persons and companies buying or leasing property.

The Committee recommends $155,000,000 for the Emerging Technologies subprogram. Within available funds, the Committee recommends not less than $30,000,000 for building-grid integration research and development consistent with a transactive energy system, including development of advanced transactive control methodologies, field validation and testing in existing buildings, continuation of the Building-to-Grid Integration Demonstration, and coordination with the Office of Cybersecurity, Energy Security, and Emergency Response transactive energy systems activities. Within this amount, $5,000,000 is recommended to continue promoting regional demonstrations of new, utility-led, residential Connected Communities advancing smart grid systems. Further, within available funds for Emerging Technologies, the Committee recommends not less than $18,000,000 for Heating, Ventilation, and Air Conditioning [HVAC] and Refrigeration Research and Development; $14,000,000 for Building Envelope and $5,300,000 for Building Energy Modeling. The Committee encourages the Department to include field evaluation efforts in these programs.

Within available funds for Emerging Technologies, the Committee recommends $30,000,000 for research, development, demonstration, field evaluation, and commercial application activities related to advanced solid-state lighting technology development. If the Secretary finds solid-state lighting technology eligible for the Twenty-First Century Lamp prize, specified under section 655 of the Energy Independence and Security Act of 2007, $5,000,000 shall be made available to fund the prize or additional projects for solid-state lighting research and development.

The Committee notes that both natural gas and propane play an important role in meeting the energy needs of U.S. homes and commercial buildings. In particular, the Committee is aware of research opportunities related to the use of natural gas and propane in water heating, space conditioning, furnace venting and combined heat and power systems. Therefore, the Committee recommends $10,000,000 for research and development for energy efficiency efforts related to propane and the direct use of natural gas in resi-

dential applications and light-commercial applications, including natural gas heat powered thermal heat pumps that provide space heating and/or water heating, on site combined heat and power, self-powered natural gas appliances to improve reliability and resilience, and further venting research.

Within available funds, the Committee recommends not less than $2,000,000 shall be used to support strategic deployment of advanced electric heat pump technologies, including cold-climate air and ground-source heat pumps.

Within available funds, the Committee recommends $5,000,000 for novel earlier-stage research, development, and demonstration of technologies to advance energy efficient, high-rise Cross-Laminated Timber [CLT] building systems. The Committee directs the Department to support university research, in partnership with national labs, for developing, building, and evaluating CLT wall systems for embodied energy content, operating energy efficiency, wall moisture profiles, structural connector durability, and health monitoring sensors.

The Committee recommends $55,000,000 for Equipment and Buildings Standards. The Committee recommends $7,000,000 for the Building Energy Codes Program to provide technical assistance to States and municipal governments and to organizations that develop model codes and standards to improve building resilience as well as efficiency. The Committee directs the Department to conduct research on the role of energy codes and energy efficiency strategies in enhancing resilience of infrastructure and make this information publicly available in a report within 180 days of enactment of this act. The Committee notes that the Department is missing legal deadlines for over 25 energy efficiency standards mandated by Congress. The Committee directs the Department to finalize these standards as soon as practicable, and report to the Committees on Appropriations of both Houses of Congress in no more than 30 days the status of each of these standards, and any funding or staffing barriers to finalizing these standards.

Within available funds, the Committee recommends $5,000,000 to demonstrate the use of ice storage technology to enable load-shifting to offset electrical grid capacity peaks at lower costs than electrochemical storage. A demonstration shall facilitate the adoption of at least 40 MWh of ice storage capacity, retrofit and dispersed among campus and public institutional air conditioning systems to be deployed in conjunction with the operation of the statewide energy efficiency utility. This ice storage shall be installed at public-use buildings such as State office buildings, hospitals, and schools.

The Department is directed to provide to the Committees on Appropriations of both Houses of Congress a briefing, not later than 30 days after enactment of this act, on the status of the joint stakeholder proposal for an energy efficiency standard for dedicated purpose pool pump motors. This briefing shall include a timeline for final implementation of the recommendations, as the Committee is concerned that further delay will have negative consequences for U.S. manufacturers and consumers.

FEDERAL ENERGY MANAGEMENT PROGRAM

The Committee recommends $45,000,000 for the Federal Energy Management Program.

Within available funds, $15,000,000 shall be utilized for the Assisting Federal Facilities with Energy Conservation Technologies program to address the $9–15 billion of audited and cost-effective opportunity for energy savings across the Federal Government, with preference given for projects that leverage private financing. Within 90 days of enactment of this act, the Department shall submit to the Committees on Appropriations in both Houses of Congress a report of an analysis of the private financing programs, including proposed methods [process, policy, legislative, etc.] to double the Federal expansion of these cost-savings programs.

Within available funding, $3,000,000 is recommended to establish a Performance Based Contract National Resource Collaborative. The Collaborative shall be managed by Strategic Programs but be a joint development between FEMP and the Office of Weatherization and Intergovernmental Programs. The Collaborative shall develop a structure, with process and procedure, to provide technical and financial expertise to State and local government users that will enable the expansion of performance-based contracts nationwide. The Department shall submit to the Committees on Appropriations of both Houses of Congress 180 days after enactment of this act, an analysis of the expected resources that will be necessary for ongoing support for this Collaborative and provide an expectation of the available infrastructure work that can be accomplished through performance-based contracts over a 10-year period.

The Committee directs the Department to contract with the National Academy of Sciences to conduct a review of studies and methodologies used to estimate the financial savings, energy savings, greenhouse gas reductions, and other benefits or impacts of Energy Savings Performance Contracts, and include a prospective technology assessment of likely improvements in building technologies. These contracts are widely used in government settings and are intended to provide net savings to taxpayers through reduced Federal energy expenditures. The National Academy of Sciences shall report the findings of its study and provide recommendations for improving evaluation methodologies to better reflect real-world performance of these contracts.

WEATHERIZATION AND INTERGOVERNMENTAL PROGRAM

The Committee recommends $358,500,000 for the Weatherization and Intergovernmental Program.

Within this amount, $303,500,000 is recommended for the Weatherization Assistance Program [WAP], including $300,000,000 for Weatherization Assistance Grants and $3,500,000 for Training and Technical Assistance; and $55,000,000 is recommended for State Energy Program grants.

The Committee recognizes the importance of providing Federal funds under the Weatherization and Intergovernmental Program to States and Tribes in a timely manner to avoid any undue delay of services to eligible low-income households, and to encourage local high-impact energy efficiency and renewable energy initiatives and

energy emergency preparedness. Therefore, the full amount of the funds recommended for WAP and the State Energy Program shall be obligated to States, Tribes, and other direct grantees not later than 60 days after enactment of this act.

Within available funds, the Committee recommends $1,000,000 for WAP grant recipients that have previously worked with the Department via the Weatherization Innovation Pilot Program to now implement and demonstrate programs to treat harmful substances, including vermiculite, at the State and regional level.

The Committee supports WAP's continued participation in the interagency working group on Healthy Homes and Energy with the Department of Housing and Urban Development. The Department is encouraged to further coordinate with the Office of Lead Hazard Control and Healthy Homes on energy-related housing projects. The Committee further encourages the Department to track the occurrence of window replacements, which supports the reduction of lead-based paint hazards in homes.

STRATEGIC PROGRAMS

The Committee recommends $14,000,000 for Strategic Programs.

Within available funds, $2,500,000 is recommended for the Energy Transition Initiative [ETI] to support initiatives to address high energy costs, reliability, and inadequate infrastructure challenges faced by island and remote communities. The Committee supports ETI's efforts to develop a cross-sector initiative alongside community-based organizations pursuing energy transition efforts that will address energy challenges, build capacity, accelerate the sharing of best practices and innovations between similarly-situated regions, and leverage specialized, local expertise into commercial opportunity. Further, the Committee is concerned that, despite funding for this cross-sector initiative in fiscal year 2019, the Department has not begun any new work in this important area. The Committee directs the Department to support community-based initiatives by partnering with community-based organizations, and leverage the Department's previously-developed tool, to build cost-effective, resilient energy infrastructure on island and remote communities, including in Alaska, Hawaii, New England, the Caribbean, and elsewhere.

CYBERSECURITY, ENERGY SECURITY, AND EMERGENCY RESPONSE

Appropriations, 2019	$120,000,000
Budget estimate, 2020	156,500,000
Committee recommendation	179,000,000

The Committee recommends $179,000,000 for the Office of Cybersecurity, Energy Security, and Emergency Response, an increase of $22,500,000 above the budget request. Within available funds, the Committee recommends $13,000,000 for program direction.

The Committee directs the Department, in coordination with the national laboratories, to identify and determine the quantitative values of resilience benefits that various categories of energy and security technologies provide to the electricity grid, in particular for those connected to critical infrastructure. The events and threats

assessed should include real-world historical outages, cyber incursions and physical attacks, high-potential threats, and severe weather events. Similarly, the analysis should include investments in the bulk power system, distribution systems, and interdependent critical facilities and infrastructure. The minimum technologies and methods considered include advanced grid infrastructure, baseload electric generation technologies, demand response, energy storage technologies, and distributed energy resources. When preparing this report, the Department is encouraged to consult with a broad range of organizations, including the Grid Modernization Laboratory Consortium, the Designated Electric Reliability Organization, the Federal Energy Regulatory Commission, the National Association of Regulatory Utility Commissioners, and other relevant agencies and private groups. The Department shall submit the report to the Committees on Appropriations of both Houses of Congress not later than one year after enactment of this act.

The Department shall not use any equipment, system, or service that uses telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation [or any subsidiary or affiliate of such entities] or services as a substantial or essential component of any system; or as critical technology as part of any system; or maintain a contract with an entity that uses any equipment, system, or service that uses telecommunications equipment produced by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities) or services as a substantial or essential component of any system; or as critical technology as part of any system.

CYBERSECURITY FOR ENERGY DELIVERY SYSTEMS

The Committee recommends $96,000,000 for Cybersecurity for Energy Delivery Systems.

The Committee recommends $10,000,000 for the DarkNet project to explore opportunities for getting the Nation's critical infrastructure off the Internet and shielding the Nation's electricity infrastructure from disruptive cyber penetration, including expansion of the communications network architecture and development of cutting-edge networking technologies. This effort shall be closely coordinated with the Office of Electricity.

The Committee supports extension of cyber-risk information sharing tools to close remaining vulnerabilities in the distribution and transmission system. The Committee encourages the Department to continue existing work within ongoing programs and to invest in research addressing power system vulnerabilities in supply chain and life cycle management for critical power system components and advanced adaptive defensive methods for grid control systems.

Within available funds for Cybersecurity for Energy Delivery Systems, the Committee recommends $7,000,000 for Consequence-driven Cyber-informed Engineering.

Within available funds, the Department is directed to extend funding for Department of Energy Cooperative Agreement Projects DE–OE–00000807, "Improving the Cyber and Physical Security Posture of the Electric Sector", and DE–OE–0000811, "Improving

the Cyber Resiliency and Security Posture of Public Power" at an annual rate of not less than $3,000,000 per agreement.

INFRASTRUCTURE SECURITY AND ENERGY RESTORATION

The Committee recommends $70,000,000 for Infrastructure Security and Energy Restoration.

The Committee recommends not less than $6,000,000 for the continued advancement of EAGLE–I. The Committee supports further development of energy sector situational awareness capabilities through EAGLE–I, the Federal Government's situational awareness tool for national power outages. The Committee encourages the Department to further illustrate how to benefit from increased access to more varied sources of data along with augmentation of analytics for response and recovery. The Committee expects this effort to align with the North American Energy Resilience Model [NAERM] being developed within the Office of Electricity.

The Committee recommends the Department ensure no public funds are used to support government facility construction and tool procurement for Electromagnetic Pulse [EMP] simulation, geomagnetic disturbances [GMD] simulation or emulation, and demonstration programs if nongovernment facilities are available and can be used for EMP/GMD demonstrations in the multimegawatt power range on a component and system level. Taxpayer dollars shall not be utilized to duplicate capital equipment and infrastructure capabilities that can, in a classified or unclassified manner, be contracted to universities that can provide these services and capabilities for a fraction of the cost using or enhancing existing capabilities. Additionally, such facilities and capabilities give opportunities for workforce development at the undergraduate and graduate levels with students, post-doctorates and faculty. University-based-labs are uniquely positioned to provide this platform. The Committee encourages the Department to ensure a collaborative public-private effort between national laboratories, utilities, and research universities with expertise from multiple institutions across diverse geographic locations.

The Committee recommends $30,000,000 for the Advanced Mitigation Threat initiative. The Committee encourages the Department to assess the current structure of the Advanced Mitigation Threat initiative to focus on meeting the challenges associated with the merging of operational technology and information systems. The Committee recommends greater synergies across the national laboratories to better leverage the diverse talents and capabilities. The program is encouraged to work with the Office of Electricity and determine how the real-time effort of the North American Energy Resilience Model [NAERM] can provide the real-time data feeds for the Advanced Mitigation Threat initiative. Additionally, the Committee recommends leveraging potential synergies with the Office of Electricity on Defense Critical Energy Infrastructure analyses.

ELECTRICITY DELIVERY

Appropriations, 2019	$156,000,000
Budget estimate, 2020	182,500,000
Committee recommendation	221,000,000

The Committee recommends $221,000,000 for the Office of Electricity Delivery, an increase of $38,500,000 above the budget request. Within available funds, the Committee recommends $19,600,000 for program direction.

Early-Stage Research, Electricity Sector.—The Committee rejects the budget's sole focus on early-stage research. Most utilities have limited research and development budgets, primarily due to regulatory constraints designed to keep electricity costs low for consumers. Additionally, utilities are unlikely to implement new concepts because most utilities would need to use their own systems for testing and evaluation, which could impact consumers. State public utility commissions also have limited budgets that do not support research and development. States rely heavily on the Department's technical assistance on assessments of data and tools to help them evaluate grid modernization alternatives. The Department plays a vital role, not only in early-stage research, but also in deployment, field testing, and evaluation in order to ensure an ability to develop concepts and transfer them to industry partners. The Department shall ensure adequate resources are provided to the national laboratories to perform work not only in early-stage research but also mid- to late-stage research and development efforts.

TRANSMISSION RELIABILITY AND RESILIENCE

The Committee recommends $80,400,000 for Transmission Reliability.

The Committee recommends $10,000,000 for the Grid Research Integration and Demonstration Center to advance technologies in support of modernizing the electric delivery system and understanding the Nation's electricity infrastructure using real-time data.

The Committee supports continued investment in advanced grid modeling algorithms and tool development to ensure resilient grid controls and protection systems that meet the challenges of the emerging smart grid.

Within 180 days of enactment of this act, the Department is directed to provide a report to the Committees on Appropriations of both Houses of Congress outlining the barriers and opportunities for technologies that provide increased, more efficient, and/or more effective delivery over the existing transmission network. The report shall also examine the reliability, resilience, and economic benefits of technologies such as power flow control, topology optimization, and Dynamic Line Ratings.

RESILIENT DISTRIBUTION SYSTEMS

The Committee recommends $48,000,000 for Resilient Distribution Systems.

The Committee recommends $20,000,000 for the COMMANDER [Coordinated Management of Microgrids and Networked Distributed Energy Resources] National Test Bed Laboratory to establish a data link for a back-up operations center that can benefit utility companies across the country and support the North American Energy Resilience Model [NAERM].

The Committee directs the Department to focus on identifying and addressing technical and regulatory barriers impeding grid integration of distributed energy systems to reduce energy costs and improve the resiliency and reliability of the electric grid.

The Committee supports advanced control concepts and open test beds for new distribution control tools for enhanced distribution system resilience.

ENERGY STORAGE

The Committee recommends $51,000,000 for Energy Storage.

Within available funds, the Committee continues to support development of an operational energy storage test facility capable of performance-driven data in a utility environment.

Within available funds, the Committee recommends not less than $5,000,000 for the grid storage launch pad aimed at accelerating materials development, testing, and independent evaluation of battery materials and battery systems for grid applications. The Committee supports the Department's proposed Advanced Energy Storage Initiative and urges continued coordination between the program, the Office of Science, the Office of Energy Efficiency and Renewable Energy, and other Department offices to achieve commercially viable grid-scale storage with the most efficient use of taxpayer dollars.

The Committee encourages the Department to further the development and demonstration of non-battery advanced storage components, including compressed air energy storage development and demonstration to enable efficiency improvements for utility-scale, bulk energy storage solutions.

To further advance the development and demonstration of grid-scale battery energy storage projects with the funds provided, the Committee directs the Department to provide $10,000,000 for battery storage projects that meet the following criteria: are located in areas where grid capacity constraints result in curtailment of existing renewable wind energy generation; improve grid resilience for a public utility that is regularly affected by weather-related natural disasters; and provide rate reduction and renewable energy benefits to businesses, farms, and residents in an economically-stressed rural area.

The Committee encourages the Department to support State energy offices and universities with energy storage planning and deployment, and to participate in industry-led safety codes and standards development. The Committee also supports funding for development of analytical methods for including energy storage in electric system planning, as well as for development of software tools to better value energy storage technologies.

The Committee is supportive of research for novel materials and system components to resolve key cost and performance challenges for electrochemical energy storage systems based on earth abundant advanced chemistries. In addition, the Committee supports continued materials research that will improve the understanding and predictability of energy storage systems and components, as well as enable safer and more reliable materials and systems to be developed.

The Committee encourages the Department to allocate resources to provide training and technical assistance to firefighters and code inspectors on battery storage, such as through scenario-based in-person or online training.

TRANSFORMER RESILIENCE AND ADVANCED COMPONENTS

The Committee recommends $15,000,000 for Transformer Resilience and Advanced Components.

Within available funds, the Committee directs the Department to continue to support research and development for advanced components and grid materials for low-cost, power flow control devices, including both solid-state and hybrid concepts that use power electronics to control electromagnetic devices and enable improved controllability, flexibility, and resiliency.

NUCLEAR ENERGY

Appropriations, 2019	$1,326,090,000
Budget estimate, 2020	824,000,000
Committee recommendation	1,517,808,000

The Committee recommends $1,517,808,000 for Nuclear Energy, an increase of $693,808,000 above the budget request. The Committee's recommendation prioritizes funding for programs, projects and activities that will ensure a strong future for nuclear power in the United States.

Nuclear Energy provides nearly one-fifth of our Nation's electricity, and nearly 60 percent of our carbon free electricity. While there is no practical way to combat greenhouse gas emissions without nuclear power as part of the solution, the nuclear industry continues to struggle. Reactor plants continue to close early, and new construction is almost nonexistent, primarily due to cost. Revitalization of our nuclear industry through technological advancement would have many benefits. First, it would enable replacement of aging nuclear plants in the United States with safe, affordable advanced reactors. For that to be possible, urgent action is required since a large portion of the current nuclear fleet reaches retirement over the next 15 years.

Second, a revitalized nuclear industry would give U.S. Industry the opportunity to compete as the global demand for nuclear power grows. The World Nuclear Association estimates there are nearly 30 countries planning or starting nuclear programs. International support of new reactor programs is dominated by China and Russia, while the U.S. presence is limited. Nuclear projects, such as building a nuclear power plant in a foreign country, will result in long-term relationships between governments that span several decades and have tremendous influence across the spectrum of geopolitical issues.

Finally, the United States has always been the international leader for nuclear safety and nonproliferation. To continue to lead, we must have a role in the international growth in nuclear power. We need to participate in a meaningful way. Absent that, we cannot expect the high standards of safety and nonproliferation will be maintained outside of the United States.

The Department of Energy can and should play a more active role in supporting the revitalization of the U.S. nuclear industrial base. Without a clear vision and broad commitment across government and industry, nuclear power in this country will become nonexistent. The Committee recommends a realignment of funding across the Office of Nuclear Energy to focus on needed research, development and demonstration that supports the current nuclear fleet and enables a future for nuclear power.

INTEGRATED UNIVERSITY PROGRAM

The Committee recommends $5,000,000 for the Integrated University Program.

The Committee notes the administration repeatedly attempts to defund this program, despite continued success in developing highly qualified nuclear specialists to meet national needs. In addition to the Integrated University Program, the Committee recommends up to 10 percent from each funding account within the Office of Nuclear Energy to be applied to the Nuclear Energy University Program [NEUP], except Program Direction, Construction, and Safeguards and Security. For each control point, funds applied to the NEUP can only be used for university work applicable to that control point.

The Committee is also concerned that the Department has been inconsistent in its administration of the NEUP, taxed research programs to fund the NEUP, and then used the funds for other purposes. The Committee directs the Department to provide quarterly briefs to the Committees on Appropriations of both Houses of Congress on the status of the NEUP, the allocation of funds from each control point, and the university work being funded within each control point.

SUPERCRITICAL TRANSFORMATIONAL ELECTRIC POWER

The Committee recommends $5,000,000 for Supercritical Transformational Electric Power Research and Development.

The Committee supports the collaborative efforts between the national laboratories and industry partners to develop test capabilities and validate grid-compatible supercritical carbon dioxide Brayton cycle systems by April 2020.

NUCLEAR ENERGY ENABLING TECHNOLOGY

The Committee recommends $110,000,000 for Nuclear Energy Enabling Technology.

Joint Modeling and Simulation Program.—The Committee agrees with the Department's assessment that the Energy Innovation Hub for Modeling and Simulation and the Nuclear Energy Advanced Modeling and Simulation Program have successfully developed tools that will be crucial to ongoing work supporting the current nuclear fleet, advanced reactors, and fuel cycle work. The Committee supports consolidation of all modeling and simulation within the Office of Nuclear Energy, and directs the Department to manage these two programs as single integrated program. The Committee recommends $40,000,000 for the Joint Modeling and Simulation Program to maintain the current codes and tools. Use

and application of the codes and tools should be funded by the end user, not by the Joint Modeling and Simulation Program.

Nuclear Science User Facilities.—The Committee recommends $40,000,000 for Nuclear Science User Facilities [NSUF], including not less than $3,000,000 to update the Nuclear Fuels and Materials Library and not more than $1,000,000 for the National Reactor Innovation Center [NRIC]. The Department is directed to brief the Committees on Appropriations of both Houses of Congress within 30 days of enactment of this act on the roles and responsibilities of the NRIC.

FUEL CYCLE RESEARCH, DEVELOPMENT, AND DEMONSTRATION

The Committee recommends $315,000,000 for Fuel Cycle Research, Development, and Demonstration.

The Committee is concerned that the Department lacks a comprehensive strategy for managing its work on fuel cycle research. Accordingly, new control points within Fuel Cycle Research, Development and Demonstration have been created to help prioritize work in this area.

Mining and Conversion.—The Committee recommends $10,000,000 and a new control point for Mining and Conversion. The Department is directed to contract with a federally-funded Research and Development Center [FFRDC] or other independent organization to work with industry to identify key challenges in reconstituting mining and conversion capabilities in the United States. The FFRDC or independent organization shall provide a report of their findings and recommendations directly to the Committees on Appropriations of both Houses of Congress within 180 days of enactment of this act.

Enrichment and Shipping.—The Committee recommends $50,000,000 and a new control point for Enrichment and Shipping. Within this amount, $40,000,000 is for the Civil Nuclear Enrichment Program. Both advanced reactors and accident tolerant fuels will rely on the availability of High Assay Low Enriched Uranium [HALEU]. The Committee is concerned that the Department lacks an overall strategy for HALEU, lacks a plan for shipping HALEU, and does not have reasonable estimate of the quantity or timing of HALEU required. The Department is directed to establish a team of experts across the national laboratories and industry to evaluate the anticipated demand for HALEU and the timing, and evaluate the options for meeting that demand. A report of the team's findings and recommendations shall be provided directly to the Committees on Appropriations of both Houses of Congress within 180 days of enactment of this act. In addition, the Department is directed to contract with a company experienced in shipping nuclear materials to identify key challenges in shipping HALEU. The company shall provide a report of their findings and recommendations directly to the Committees on Appropriations of both Houses of Congress within 180 days of enactment of this act.

In addition, the Secretary of Energy is directed to submit a report that describes a payment-for-milestones approach to uranium enrichment capability development, similar to how NASA partnered with private companies in its Commercial Orbital Transportation System [COTS] program, to the Committees on Appro-

priations of both Houses of Congress within 180 days of enactment of this act. In particular, the Secretary should identify any statutory, regulatory, and DOE policy/procedural restrictions that would prevent or inhibit DOE from implementing public-private partnerships for uranium enrichment modeled after the NASA COTS experience.

Material Recovery and Waste Form Development.—The Committee recommends $10,000,000 for Recovery to continue work on the ZIRCEX process to recover Highly Enriched Uranium from used naval fuel or unirradiated research reactor fuel. The Department is directed to follow DOE Order 413 for this project and to submit a Project Data Sheet for this project with the fiscal year 2021 budget request.

Advanced Fuels.—The Committee recommends $30,000,000 for continued development of Tristructural Isotropic [TRISO] fuel and $115,000,000 for development of nuclear fuels with enhanced accident-tolerant characteristics to significantly mitigate the potential consequences of a nuclear accident. Within the amounts for accident-tolerant fuels development, not less than $55,600,000 is recommended to continue the participation of three industry-led teams in Phase 2B of the cost-shared research and development program; not less than $25,000,000 is recommended to support accident-tolerant fuels development at the national laboratories and other facilities, including the Advanced Test Reactor and Transient Reactor Test Facility; and not less than $20,000,000 is recommended for testing, code development, and licensing of higher-enriched and higher burnup fuels. Further, not less than $10,000,000 is recommended specifically for development of silica-carbide ceramic fuels for light water reactors. The Committee continues to place a high priority on this program and urges the Secretary to maintain focus and priority on achieving results in these efforts.

Laboratory Support.—The Committee recommends $50,000,000 and a new control point for Laboratory Support, including $20,000,000 to support advanced reactor fuel development and qualification. Within these amounts, $5,000,000 is recommended for use of innovative process control capabilities to support closed nuclear fuel cycles for advanced reactors. This funding line also includes all work previously funded in Systems Analysis and Integration and Materials, Protection, Accountancy and Controls for Transmutation.

Used Nuclear Fuel Disposition.—The Committee continues to strongly support the recommendations of the Blue Ribbon Commission on America's Nuclear Future and believes that near-term action is needed to address the accumulating inventory of spent nuclear fuel. The Committee recommends $22,500,000 for Integrated Waste Management System activities, the same as fiscal year 2019. Funding is recommended to implement plans to consolidate spent nuclear fuel from around the United States to one or more private or government interim central storage facilities. Priority shall be given to accepting spent nuclear fuel from shutdown reactors, and to accelerating the development of a transportation capability to move spent fuel from its current storage locations. Within funds recommended, the Committee recommends up to $10,000,000 for the Secretary, within existing authorities, to contract for the man-

agement of spent nuclear fuel to which the Secretary holds the title or has a contract to accept title, which includes contracting with a private company for consolidated interim storage of spent nuclear fuel.

The Committee does not adopt the budget proposal to eliminate research and development activities for Used Nuclear Fuel previously funded in this account. The Committee recommends $27,500,000 to continue research and development activities on behavior of spent fuel in long-term storage, under transportation conditions, and in various geologic media, which will continue to be important to developing a solution to the waste problem. Priority shall be placed on the ongoing study of the performance of high-burnup fuel in dry storage and on the potential for direct disposal of existing spent fuel dry storage canister technologies.

The Committee directs the Secretary to report to the Committees on Appropriations of both Houses of Congress, not later than 90 days after the date of enactment of this act, on innovative options for disposition of high level waste and spent nuclear fuel management. Priority should be given to technological options which are cost-effective, able to be implemented in the short-term, and consider siting stakeholder engagement. Within available funds, the Committee encourages the use of research and development funding for innovative technological options.

In addition, the Committee directs the Secretary to contract with the National Academy of Sciences [NAS] within 60 days after enactment of this act to conduct a comprehensive, independent study on the waste aspects of advanced reactors. The National Academy of Sciences shall convene a committee of experts with expertise in advanced nuclear reactors, nuclear waste disposal, reprocessing, economics, and other areas of expertise that the National Academy of Sciences considers essential for completion of the study. Also, the NAS committee's consensus study report shall provide findings and recommendations that may consider policy options as long as those do not involve non-technical value judgements. The study's assessment shall include typical volumes and characteristics of waste streams from various proposed advanced nuclear reactor technologies, including radioisotopes of concern, radioactivity level, and thermal load. Advanced reactor technologies shall include the designs under consideration by the Generation IV International Forum and by the Department of Energy. The study shall also address unique disposal and/or storage requirements for these wastes and shall address the impact of possible reprocessing of spent nuclear fuel on waste generation. In addition, the study shall examine the economics of the possible waste disposal systems that could be required for the advanced reactors. The study shall be submitted to the Committees on Appropriations of both the Senate and House no later than 20 months after enactment of this act.

The Committee also directs the Secretary of Energy to provide a report to the Committees on Appropriations of both Houses of Congress within 180 days of enactment of this Act on new electromagnetic technologies for the neutralization of radioactive wastes, including an evaluation of the scientific basis for the technology, potential effects on U.S. nuclear waste and storage, potential bene-

fits to the nuclear power industry, and any implications for nuclear security.

REACTOR CONCEPTS RESEARCH, DEVELOPMENT, AND DEMONSTRATION

The Committee recommends $249,000,000 for Reactor Concepts Research, Development, and Demonstration.

Advanced Small Modular Reactor.—The Committee recommends $100,000,000 for ongoing work to develop and deploy an advanced Small Modular Reactor [SMR]. No funding is recommended for this project within any other control point and no funding is recommended for JUMP, consistent with the budget request.

Versatile Advanced Test Reactor.—The Committee supports the Department's effort to design, build, and operate a fast test reactor, but is concerned about the cost, schedule, and prioritization of this project. For example, the Department has not explained how it intends to fund either the construction or the operations of the reactor, and it will take more than 40 years to fund the design and construction at the funding level requested in the budget. Also, the Department has not explained why it prioritizes this project above delivering an advanced small modular reactor or demonstrating an advanced reactor. Absent new small modular reactors or advanced reactors that can be built and operated safely and affordably, there will be no nuclear power in the United States in the future. If that happens, we will not need a new test reactor. The Committee recommends $40,000,000 for the Versatile Advanced Test Reactor [VATR] to continue work on the Analysis of Alternatives, but no work should be done that does not directly support CD–1. The Committee encourages the Department to explore options for international and private sector cooperation, partnership, and cost sharing that might make the Versatile Fast Reactor economically feasible.

Advanced Reactor Concepts.—The Committee recommends $22,000,000 for continuation of the Advanced Reactor Concepts Industry awards.

Transformational Challenge Reactor.—The Committee rejects the Department's proposed budget realignment and funds the Transformational Challenge Reactor within Reactor Concepts Research, Development and Demonstration. The Committee recommends $30,000,000 for the Transformational Challenge Reactor.

Light Water Reactor Sustainability.—The Committee recommends $47,000,000 for Light Water Reactor Sustainability. The most cost-effective way for the United States to maintain low-cost, carbon-free electricity is to safely extend the lives of our Nation's existing nuclear reactors from 60 to 80 years. Therefore, the Committee recommends additional funding above the budget request for this activity as a priority. The Committee directs the Secretary to use funding in this activity to continue research and development work on the technical basis for subsequent license renewal. The Secretary shall focus funding in this program on materials aging and degradation, advanced instrumentation and control technologies, and component aging modeling and simulation. The Secretary shall also coordinate with industry to determine other areas of high-priority research and development in this area.

ADVANCED REACTOR DEMONSTRATION PROGRAM

The Committee recommends $300,000,000 for the Advanced Reactor Demonstration Program to demonstrate multiple advanced reactor designs.

The primary goal of this new program is to focus government and industry resources on actual construction of real demonstration reactors that are safe and affordable (to build and operate) in the near and mid-term. This program is not intended to stop any ongoing research activities funded under other programs, especially since it will require some time to start the program and select the reactor designs that will be demonstrated. Therefore, the ongoing work in the Advanced SMR program and the work in advanced reactors, including micro reactors and the previously-awarded industry awards in the Advanced Reactor Concepts program should continue without interruption at the recommended funding levels. The Committee recommends five new control points in the Advanced Reactors Demonstration Program.

Advanced Reactor Demonstrations.—The Secretary is directed to request proposals from industry to build two demonstration advanced reactors. The Committee recommends $200,000,000 for the first year of the two demonstrations, and each demonstration project shall be 50/50 percent cost-shared between the Department and the industry teams. For purposes of this program, an advanced reactor can be any fission reactor with significant improvements compared to the current generation of operational reactors and a demonstration can be an advanced reactor operated as part of the power generation facilities of an electric utility system or in any other manner for the purpose of demonstrating the suitability for commercial application of the advanced nuclear reactor.

The Secretary is directed to convene an evaluation board to review the Industry proposals and recommend the best proposals to the Secretary based on the following criteria: (1) technical feasibility that the demonstration can be completed in five to seven years; (2) likelihood that the design can be licensed for safe operations by the NRC; (3) affordability of the design for full scale construction and cost of electricity generation; (4) and the ability of the Industry team to provide their portion of the cost share. The board must provide the Secretary with a recommendation of which two industry proposals best meet these criteria. The Secretary is directed to contract with the recommended industry teams unless the Secretary certifies that such a selection is not in the national interest.

The Secretary is directed to ensure the evaluation board has the following members, in addition to any members the Secretary selects: (1) a representative from an electric utility that operates a nuclear power plant; (2) a representative from an entity that uses high-temperature process heat for manufacturing or industrial processing; (3) experts from industry with experience in design, manufacturing, and operation of nuclear reactors; (4) a representative from the finance industry with background in the nuclear field.

Risk Reduction for Future Demonstration.—The Committee recommends $50,000,000 for Risk Reduction for Future Recommendations. The Secretary is directed to select two to five industry teams

that were not selected as one of the two Advanced Reactor Demonstration, and enter into a cost share agreements to address technical risks in each proposal's reactor design. The cost share for this work shall be 80 percent Government and 20 percent Industry.

Regulatory Development.—The Committee recommends $40,000,000 for Regulatory Development, for the national laboratories to work with the Nuclear Regulatory Commission to identify and resolve technical challenges with licensing advanced reactors.

Advanced Reactors Safeguards.—The Committee recommends $10,000,000 for Advanced Reactors Safeguards to evaluate nonproliferation safeguards issues that are unique to advanced reactors.

NUCLEAR ENERGY INFRASTRUCTURE

ORNL NUCLEAR FACILITIES OPERATIONS AND MAINTENANCE

The Committee recommends $28,000,000 for Oak Ridge National Laboratory [ORNL] Nuclear Facilities Operations and Maintenance for continued safe operations and maintenance of ORNL hot cells. The Department is directed to fund Research Reactor Infrastructure as part of the NEUP using Nuclear Energy Infrastructure funds.

INL RESEARCH REACTOR OPERATIONS AND MAINTENANCE

The Committee recommends $131,000,000 for Idaho National Laboratory [INL] Research Reactor Operations and Maintenance. This control point provides funding for the safe operation of the Advanced Test Reactor [ATR], a vital asset that provides research capability across the Department. The Committee is concerned that the Department has not evaluated the long-term costs of operating all of its nuclear infrastructure, including the ATR. This is especially important in light of the Department's plan to build and operate the VATR while the ATR is still operational. The cost to operate the ATR continues to grow.

The Department is directed to contract with an FFRDC to evaluate current and projected costs to adequately maintain and operate the Advanced Reactor over its projected timeline. The FFRDC shall provide a report of their findings and recommendations directly to the Committees on Appropriations of both Houses of Congress within 180 days of enactment of this act.

INL NON-REACTOR NUCLEAR RESEARCH FACILITY OPERATIONS AND MAINTENANCE

The Committee recommends $128,000,000 for INL Non-Reactor Nuclear Research Facility Operations and Maintenance. The Committee supports continued investment in the infrastructure at INL, but also recognizes that several one-time items were previously funded and the work is now complete, including hot cell window and manipulator replacements, HVAC upgrades and roof replacements at the Materials and Fuels Complex.

CONSTRUCTION

The Committee recommends $6,000,000 for the Sample Prep Lab, $758,000 above the amount requested in the budget request

needed to fully fund construction work in fiscal year 2020. The Committee also recommends $5,000,000 for the Advanced Nuclear Materials Laboratory to begin the design once CD–0 is approved.

FOSSIL ENERGY RESEARCH AND DEVELOPMENT

Appropriations, 2019	$740,000,000
Budget estimate, 2020	562,000,000
Committee recommendation	800,000,000

The Committee recommends $800,000,000 for Fossil Energy Research and Development, an increase of $238,000,000 above the budget request. Within available funds, the Committee recommends $64,000,000 for program direction, and does not support the proposal to move Fossil Energy resources to International Affairs.

Research and Development.—The Committee rejects the approach to only provide funds for early-stage research. Such restrictions would cripple innovation and development, and would reduce the number of energy technologies adopted in the marketplace.

The Committee reiterates the importance of adequate Federal support to promote design-related work and testing for a commercial scale, post-combustion carbon dioxide capture project on an existing coal-fueled generating unit as well as research, development and deployment of breakthrough technologies.

The Committee encourages the Department to prioritize research on carbon dioxide utilization technologies, direct air capture technologies, and industrial source capture. The Committee further encourages the Office of Fossil Energy to collaborate with the Office of Energy Efficiency and Renewable Energy through the Bioenergy Technologies and Advanced Manufacturing Offices, the private sector, and academia to support projects that utilize carbon dioxide in the production of algae and other potentially marketable products.

National Energy Technology Laboratory [NETL].—No funds may be used to plan, develop, implement, or pursue the consolidation or closure of any NETL sites.

National Carbon Capture Center.—The Committee recommends funding for the National Carbon Capture Center consistent with the cooperative agreement and fiscal year 2019. The Committee continues to encourage the Department to establish university partnerships to support ongoing fossil energy programs, to promote broader research into carbon capture storage [CCS] technologies, and to expand its technology transfer efforts. The Department has previously funded several university-based CCS projects and is encouraged to build on an established research base to support ongoing research and to address the wider implementation of CCS technologies.

Fossil Energy Advisory Committees.—The Department is directed to exercise its existing authority to formally solicit input and feedback on program direction, research priorities, and other matters through the establishment of relevant advisory committees. Though utilized in the past, these advisory bodies have been curtailed recently without formal explanation by the Department. Federal advisory committees are an important tool Congress has provided the Department and are intended to serve as a mechanism that supports the proper investment of taxpayer funds in advancing critical

research and technology areas. Within 90 days of the enactment of this act, the Department is directed to brief the Committees on Appropriations of both Houses of Congress on the status of fossil energy Federal advisory committees. For those whose charter has expired or have not met within the last fiscal year, the Department shall put forward a plan that outlines steps to re-engage and solicit input from relevant communities through the Federal advisory committee mechanism. This update and any accompanying efforts shall align with the major fossil energy research programs, and include membership representatives of the research community, industry, and other interested stakeholders.

COAL CARBON CAPTURE STORAGE AND POWER SYSTEMS

The Committee recommends $517,300,000 for Coal Carbon Capture Storage and Power Systems.

The Committee further recommends that the Department continue to use programmatic funds from the Department of Energy Office of Fossil Energy Research and Development accounts for Carbon Capture and Carbon Storage to support the Accelerating CCS Technologies Grant initiative, and that the Department take steps to identify new opportunities for increased collaboration with international research partners.

The Department is directed to use funds from Coal Carbon Capture Storage and Power Systems for research and development that utilizes either coal or natural gas based generation of electricity.

The Committee supports the Department's existing cooperative agreements to develop cost sharing partnerships to conduct basic, fundamental, and applied research that assist industry in developing, deploying, and commercializing efficient, low-carbon, nonpolluting energy technologies that could compete effectively in meeting requirements for clean fuels, chemical feedstocks, electricity, and water resources.

The Committee supports funding for activities that promote the reuse of captured carbon dioxide from coal, natural gas, industrial facilities, and other sources for the production of fuels and other valuable products. The Committee further encourages the Department to establish and pursue a comprehensive carbon sequestration and utilization effort to combine research and development capacity and expertise to solve the carbon sequestration and utilization challenge within ten-years, with the goals of improving the economics associated with domestic energy production, achieving optionality in carbon management, and further reducing carbon dioxide emissions. Within 180 days of enactment of this act, the Department is directed to provide to the Committees on Appropriations of both Houses of Congress a briefing on recommendations for program structures that could best support and maximize the impact of expanded research, development, and demonstration efforts in three areas—decarbonization of the industrial sector, direct air capture, and carbon use.

Carbon Capture.—Achieving low-cost carbon capture technology is important to facilitating economic environmental mitigation solutions for the power and industrial sectors while opening up a broader carbon utilization economy. The Committee encourages the Department to focus its carbon capture research, development and

deployment efforts on improving the efficiency and decreasing the costs of carbon capture technologies, demonstrating carbon capture technologies for private sector-driven adoption at fossil energy power systems and industrial sources, and to identify how these technologies can be integrated within business models and operations. This includes small- and large-scale pilot testing of technologies moving through the program pipeline on both coal and natural gas applications, as well as on industrial sources. Within the funds dedicated to Carbon Capture, not less than $7,000,000 is for carbon capture research for natural gas power systems. The Committee acknowledges the economic and environmental benefits that could be produced by expanding the scope of carbon capture and carbon utilization research to a wider range of sources. Given the potential economic and environmental benefits, the Department is encouraged to expand activities to increase the capture of carbon dioxide from a diverse range of sources, and its subsequent use, reuse, and storage. Within available funds, the Committee recommends up to $4,000,000 for research and optimization of carbon capture technologies for use at industrial facilities, which may include developments in process equipment and chemistry, capture of process emissions, and systems integration.

The Committee recommends $20,000,000 for technology research and development on direct air carbon capture and removal. The program is directed to coordinate with the Office of Science and the Office of Energy Efficiency and Renewable Energy to develop a coordinated program, as recommended by the National Academies, that supports research, development, and demonstration projects to advance the development and commercialization of direct air capture technologies on a significant scale.

Carbon Storage.—Within available funds for Carbon Storage, the Committee recommends not less than $15,000,000 for Carbon Use and Reuse to continue research and development activities to support valuable and innovative uses for carbon. The Committee believes the potential for carbon dioxide utilization technologies to become economically viable has improved in recent years, and these technologies should continue to receive attention from the Office of Fossil Energy.

Within Carbon Storage, the Committee recommends $55,000,000 for Storage Infrastructure. The Committee recognizes the successful work of the Regional Carbon Sequestration Partnerships [RCSPs] and the important role they play in supporting the research and development of carbon utilization and storage. The Committee supports the focus on infrastructure development strategies through continued efforts to develop regionally relevant business models for implementation, expand regional geological characterization to reduce technical uncertainties, collect and analyze data, and facilitate and inform regional monitoring permitting and policy challenges. The Committee directs the Department to expand the work of the RCSPs selected under fiscal year 2019 appropriation into multi-year, public-private programs to further accelerate the commercial deployment of viable capture, storage, and utilization technologies. The Committee recommends not less than $20,000,000 for the RCSP program be added to the awards from fiscal year 2019 and focus on infrastructure development for carbon

storage and transportation systems to catalyze commercial activities in carbon storage and utilization from a variety of carbon sources. The Committee believes regional initiative support is needed to evaluate and qualify sub-regions for large-scale storage. Further, the Committee recommends not less than $30,000,000 to continue the four-phase CarbonSAFE initiative and directs the Department to solicit and select projects to support site characterization, permitting, and construction of the regional storage complexes. The Committee notes the absence of a storage infrastructure roadmap as requested in the fiscal year 2019 appropriations bill. Within 120 days of enactment of this act, the Department is directed to provide to the Committees on Appropriations of both Houses of Congress, a Storage Infrastructure Roadmap through 2025. The Department is directed to work on this Roadmap in consultation with the selected RCSPs to help identify the knowledge gaps and technology and policy developments that are needed to close those gaps.

Advanced Energy Systems.—The Committee recommends up to $30,000,000 for the solid oxide fuel cell [SOFC] program. In August, 2019, the Department submitted a congressionally requested report on the status of the SOFC program. According to this report, since its inception in 1995, the SOFC program has spent $750,000,000 culminating in two 200-plus kWe SOFC systems. One of these is still in testing and the other company has departed the U.S. market. The report notes that four other major corporations have left the fuel cell program. The Department is encouraged to work with industry in developing a rational approach to advancing SOFC research and development.

The Committee encourages the Department to promote and assist in the research and development of new, higher efficiency gas turbines used in power generation systems to allow the United States to upgrade and increase the reliability and resiliency of the Nation's electrical grid system, to better compete against the threat of foreign competitors who are being subsidized by their governments, while reducing the cost of electricity and significantly lowering emissions. This includes awarding grants and funding contract proposals from industry, small businesses, universities and other appropriate parties. Further, the Committee supports optimal funding for the Advanced Turbine program, which supports the development of advanced, high-temperature materials including ceramic matrix composites.

The Committee supports coal and coal biomass to both liquids and solids activities and encourages the Department to focus on research and development to improve cost and efficiency of coal-to-fuels technology implementation and polygeneration.

The Committee recommends $20,000,000 for Advanced Coal Processing to support early-stage research and development to enable the conversion of coal pitch and coal to carbon fiber and other value-added products for alternative advanced uses of coal. The Committee recommends not less than $10,000,000 for utilizing coal as precursor for high-value added products at the Carbon Fiber Technology Facility.

Crosscutting Research.—The Committee supports Advanced Ultra Supercritical Materials research and development to identify, test,

qualify, and develop a domestic supply chain capable of producing components from high temperature steam materials. Further, within available funds, the Committee recommends $1,500,000 to accelerate development and deployment of wireless sensor systems for coal-fired power generation in order to improve generating efficiency, reduce emissions, and lower maintenance costs.

STEP.—Within available funds, the recommendation provides not more than $9,800,000, consistent with the original scope of work, to complete the necessary design and construction of the 10–MW pilot and conduct the necessary testing for the facility. The recommendation provides additional funding to be awarded for research and development activities.

National Energy Technology Laboratory [NETL] Coal Research and Development.—Within available funds, the Committee recommends not less than $25,000,000 for the Department to continue its external agency activities to develop and test advanced separation technologies and accelerate the advancement of commercially viable technologies for the recovery of rare earth elements and minerals from U.S. coal and coal byproduct sources. The Committee expects research to support pilot-scale and experimental activities for near-term applications.

NATURAL GAS TECHNOLOGIES

The Committee recommends $55,000,000 for Natural Gas Technologies.

The Department is encouraged to issue a report, in consultation with the Department of Defense and the Department of Treasury, on the identification of potential benefits of a storage and distribution hub of ethane and other natural gas liquids to national security, including the identification of potential risks to national and economic security of significant foreign ownership and control of United States domestic petrochemical resources; and an examination of, with respect to the proposed hub, the following: (1) types of additional infrastructure needed to fully optimize the potential national security benefits; (2) whether geopolitical diversity in areas to which the ethane and other natural gas liquids will be exported from the proposed hub would undermine or bolster national security; (3) the necessity of export limits to ensure the potential national security benefits; and (4) the potential benefits, with respect to significant weather impacts compared to other regions, of locating the proposed hub in the Marcellus, Utica, and Rogersville shale plays.

The Committee understands the benefits that natural gas demand response could bring to the grid, including reducing energy costs and emissions. The Committee encourages the program and the Office of Electricity provide up to $10,000,000 for natural gas demand response pilot programs that would be developed by gas utilities, State public utility commissions, and local distribution companies. The Committee further encourages these offices to prioritize funding of pilots that have the potential to advance real-time deployment and testing of new technologies that could be used to monitor the effectiveness of natural gas demand response.

Methane Hydrate Activities.—The Committee recommends $25,000,000 for methane hydrates. The Committee notes that the

budget request includes no money for actual research into the methods for producing methane hydrates. The Committee encourages the Department to perform a long-term methane hydrate production test in the Arctic, as proposed in the Methane Hydrate Advisory Committee's earlier recommendations (May 21, 2014) to the Department. Further, the Committee supports field investigations in the Gulf of Mexico to confirm the nature, regional context, and hydrocarbon system behavior of gas hydrate deposits and recommends $5,000,000 for these activities.

Environmentally Prudent Development.—The Committee recommends $12,000,000 for the Environmentally Prudent Development subprogram, including not less than $5,200,000 to continue the Risk Based Data Management System [RBDMS]. The Committee supports continued funding of RBDMS and in particular, its functions under FracFocus. The Committee believes FracFocus should maintain its autonomy and not be incorporated into any Federal agency.

Emissions Mitigation from Midstream Infrastructure.—The Committee recommends $12,000,000 for the Emissions Mitigation from Midstream Infrastructure subprogram. The Committee recommends funds to support natural gas infrastructure research, including advanced materials and novel sensor technologies. The Department is directed to incorporate this research into its ongoing work in this field, so that it shall complement the Emissions Mitigation from Midstream Infrastructure subprogram.

Nearly 30 percent of the total methane emissions from production through to distribution occurs during the gathering, processing, and transmission of natural gas. Up to 70 percent of these emissions related to compressor packing, seals, and equipment operations could be captured and recovered through re-compression and downstream introduction of the gas back into the delivery system. Therefore, the Committee encourages the Department to provide funding for research and development of energy efficient technologies to mitigate emissions through capture and re-compression downstream into the natural gas infrastructure.

The Committee encourages coordination with industry and U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration on methane leak detection technology development. The Committee remains supportive of investment in smart pipeline sensors and controls, internal pipeline inspection and repair, and composite and advanced material science technologies. The Committee encourages the Department to consider expanded use of gas pressure monitoring, both real time and hourly, in distribution systems to improve system integrity and safety. Further deployments of methane detection sensors closer to the consumer would add to overall safety.

The Committee believes that the development, production, and transportation of natural gas should be done safely, without contamination, and in a way that reduces fugitive methane emissions. These practices are essential for mitigating environmental harms from shale gas development and reducing water contamination. Additionally, reduction of methane emissions has health co-benefits and preserves a valuable and finite resource. The Committee sup-

ports developing advanced pipeline inspection technologies to aid in cleaner and safer oil and gas development.

Emissions Quantification from Natural Gas Infrastructure.—The Committee recommends $6,000,000 for the Emissions Quantification from Natural Gas Infrastructure research subprogram.

UNCONVENTIONAL FOSSIL ENERGY TECHNOLOGIES

The Committee recommends $46,000,000 for Unconventional Fossil Energy Technologies. The Committee notes the importance of providing research support that will assure sustainable, reliable, affordable, and environmentally sound supplies of domestic unconventional fossil energy resources.

Within available funds, the Committee recommends $20,000,000 for research that develops improved enhanced recovery technologies. These technologies are essential to maximizing the value of shale oil, low permeability reservoirs, residual oil zone reservoirs, fractured reservoirs, and conventional oil reservoirs, and should advance technologies related to wellbore integrity, artificial lift, well production operations, and applicability with data analytics. In continuing with prior direction, the Department shall ensure these funds are awarded to universities and not-for-profit research organizations. Additionally, the Committee recognizes the need to increase investments that foster the sustainability of the petroleum engineering workforce. Within 180 days after the enactment of this act, the Department shall provide a report to the Committees on Appropriations of both houses of Congress that outlines the Department's efforts to maintain a stable petroleum engineering workforce and knowledge base, as well as future activities the Department can undertake to strengthen it.

The Department is encouraged to explore research and development for safe drilling and completion technologies that use no fresh water and can be deployed in horizontal wells.

The Committee recommends not less than $19,000,000 for the Unconventional Field Test Sites.

The Committee recommends not less than $4,000,000 for further research on multipronged approaches for characterizing the constituents of and managing the cleaning of water produced during the extraction of oil and natural gas, of which not less $2,000,000 is recommended to partner with research universities engaged in the study of characterizing, cleaning, treating, and managing produced water and who are willing to engage though public private partnerships with the energy industry to develop and assess commercially viable technology to achieve the same. The Committee encourages the Department to work with the energy producing industry to identify and develop commercial-scale technologies that can characterize, clean and effectively treat produced water to have beneficial reuse.

NATIONAL ENERGY TECHNOLOGY LABORATORY [NETL]

The Committee recommends $52,000,000 for NETL Research and Operations and $65,000,000 for NETL Infrastructure.

NETL Infrastructure.—The Committee recommends $7,000,000 for the continued update and refresh, as well as operation and maintenance, of Joule through the first year of the second three-

year lease. Additional funds recommended include $5,000,000 for the design and construction of a sensitive compartmented information facility, $12,000,000 for the Computational Science and Engineering Center, and additional funds for addressing deferred maintenance. The Department is further directed to prioritize funds to provide site-wide upgrades for safety and avoid an increase in deferred maintenance.

NAVAL PETROLEUM AND OIL SHALE RESERVES

Appropriations, 2019	$10,000,000
Budget estimate, 2020	14,000,000
Committee recommendation	14,000,000

The Committee recommends $14,000,000 for Naval Petroleum and Oil Shale Reserves, the same as the budget request.

STRATEGIC PETROLEUM RESERVE

Appropriations, 2019	$235,000,000
Budget estimate, 2020	174,000,000
Committee recommendation	174,000,000

The Committee recommends $174,000,000 for the Strategic Petroleum Reserve, the same as the budget request.

SPR PETROLEUM ACCOUNT

Appropriations, 2019	$10,000,000
Budget estimate, 2020	−69,000,000
Committee recommendation	10,000,000

The Committee recommends $10,000,000 for the SPR Petroleum Account, an increase of $79,000,000 above the budget request.

NORTHEAST HOME HEATING OIL RESERVE

Appropriations, 2019	$10,000,000
Budget estimate, 2020	−90,000,000
Committee recommendation	10,000,000

The Committee recommends $10,000,000 for the Northeast Home Heating Oil Reserve, an increase of $100,000,000 above the budget request.

ENERGY INFORMATION ADMINISTRATION

Appropriations, 2019	$125,000,000
Budget estimate, 2020	118,000,000
Committee recommendation	132,000,000

The Committee recommends $132,000,000 for the Energy Information Administration, an increase of $14,000,000 above the budget request.

The Committee recognizes the importance of building energy information and the opportunity for better data collection presented by new technologies. The Department is encouraged to upgrade the Commercial Buildings Energy Consumption Surveys to a real-time data collection system with rapid reporting of results, without compromising statistical validity or data security.

NON-DEFENSE ENVIRONMENTAL CLEANUP

Appropriations, 2019	$310,000,000
Budget estimate, 2020	247,480,000
Committee recommendation	318,000,000

The Committee recommends $318,000,000 for Non-Defense Environmental Cleanup, an increase of $70,520,000 above the budget request. Within available funds, $200,000 is made available for community assistance.

Small Sites.—The Committee recommends $127,000,000 for Small Sites. Within the available funds, the Committee recommends $31,000,000 to continue work at Lawrence Berkeley National Laboratory, $18,200,000 for ETEC, $45,000,000 for MOAB, $10,000,000 for excess Office of Science facilities, and $10,000,000 to continue work required pursuant to the agreement reached in 2012 between the Department, the Advisory Council on Historic Preservation, and State and local governments to complete the demolition of K–25 in exchange for preserving the historic contributions made by the K–25 site to the Manhattan Project.

URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING FUND

Appropriations, 2019	$841,129,000
Budget estimate, 2020	715,112,000
Committee recommendation	906,695,000

The Committee recommends $906,695,000 for Uranium Enrichment Decontamination and Decommissioning [UED&D] activities, an increase of $191,583,000 above the budget request.

The Committee recommendation includes $195,693,000 for East Tennessee Technology Park to continue cleanup and demolition of all remaining facilities including the K–1200 complex and the K-1600 complex, and to conduct remedial actions, and site closure activities. The Committee also recommends $240,000,000 for Paducah, and $418,295,000 for Portsmouth. Additional funding of $60,000,000 above the budget request is recommended for the Portsmouth Site, and the Department shall not barter, transfer, or sell uranium during fiscal year 2020 to generate additional funding for Portsmouth cleanup that is in excess of the amount of funding recommended.

SCIENCE

Appropriations, 2019	$6,585,000,000
Budget estimate, 2020	5,545,972,000
Committee recommendation	7,215,000,000

The Committee recommends $7,215,000,000 for Science, an increase of $1,669,028,000 above the budget request. The recommendation includes $188,000,000 for program direction.

Distinguished Scientist Program.—The Committee recommends $4,000,000 to support the Department's Distinguished Scientist Program, as authorized in section 5011 of Public Law 110–69 to promote scientific and academic excellence through collaborations between institutions of higher education and national laboratories to be funded from across all Office of Science programs.

Quantum Information Science.—The Committee supports the Office of Science's coordinated and focused research program in quantum information science to support the Department's science, energy, and national security missions, as authorized in sections 401 and 402 of Public Law 115–368, the National Quantum Initiative. This industry of the future promises to yield revolutionary new approaches to computing, sensing, communication, data security, and metrology, as well as our understanding of the universe, and accordingly the Committee recommends $195,000,000 across the Office of Science programs to advance early-stage fundamental research in this field of science, including $120,000,000 for activities authorized in section 401 and $75,000,000 for the establishment of up to five National Quantum Information Science Research Centers authorized in section 402. To the greatest extent practical, this effort shall be undertaken in coordination with the National Science Foundation and the National Institute of Standards and Technology.

Artificial Intelligence and Machine Learning.—The Committee recommends $71,000,000 for Artificial Intelligence and Machine Learning across the following Office of Science Programs: Advanced Scientific Computing Research, Basic Energy Sciences, Biological and Environmental Research, Fusion Energy Sciences, and High Energy Physics. As the stewards of the leadership computing facilities, the Committee expects Advanced Scientific Computing Research to take a lead role in the Department's artificial intelligence and machine learning activities.

ADVANCED SCIENTIFIC COMPUTING RESEARCH

The Committee recommends $1,029,000,000 for Advanced Scientific Computing Research.

The Committee recommends $188,735,000 for the Exascale Computing Project. In addition, the Committee recommends $235,000,000 for the Oak Ridge Leadership Computing Facility, $165,000,000 for the Argonne Leadership Computing Facility, $115,000,000 for the National Energy Research Scientific Computing Center, and $90,000,000 for ESnet. The Committee recommends $42,000,000 for Research and Evaluation Prototypes, including $12,000,000 for the Computational Sciences Graduate Fellowship.

Maintaining international leadership in high performance computing requires a long term and sustained commitment to basic research in computing and computational sciences, including applied math, software development, networking science, and computing competency among scientific fields. The Committee is concerned that the Department is falling behind in its research capabilities and capacity, threatening continued U.S. leadership, and therefore provides no less than $160,000,000 for research.

The Committee appreciates the Department's focus on the development of foundational Artificial Intelligence and Machine Learning capabilities, and the Committee directs the Office of Science to apply those capabilities to the Office of Science's mission with a focus on accelerating scientific discovery in its Scientific User Facilities and large experiments.

BASIC ENERGY SCIENCES

The Committee recommends $2,325,000,000 for Basic Energy Sciences [BES].

The Committee recommends up to $130,000,000 for the Energy Frontier Research Centers to continue multi-disciplinary, fundamental research needed to address scientific grand challenges. The Committee continues to support the EPSCoR program and its goals of broadening participation in sustainable and competitive basic energy research in eligible jurisdictions. The Committee recommends $25,000,000 for EPSCoR and directs the Department to resume annual or at minimum, continue biennial implementation grant solicitations. Further, the Committee recommends $20,000,000 for direct air capture research. The Office of Science is directed to coordinate with the Office of Fossil Energy and the Office of Energy Efficiency and Renewable Energy to develop a coordinated program, as recommended by the National Academies, that supports research, development, and demonstration projects to advance the development and commercialization of direct air capture technologies on a significant scale.

The Committee recommends not less than $550,000,000 to provide for optimal operations at the five BES light sources and to adequately invest in the recapitalization of key instruments and critical infrastructure improvements, as well as staff and other resources necessary to deliver critical scientific capabilities to users. The Committee recommends $323,500,000 for high-flux neutron source operations which will allow for both Spallation Neutron Source [SNS] and High Flux Isotope Reactor [HFIR] to proceed with the most critical deferred repairs, replace outdated instruments, and make essential machine improvements. Within this amount, $18,500,000 is recommended for the DISCOVER Beamline at SNS. The Committee recommends not less than $140,000,000 to fully fund optimal operations at the five BES Nanoscale Science Research Centers and to adequately invest in the recapitalization of key instruments and infrastructure, and in staff and other resources necessary to deliver critical scientific capabilities to users.

The Committee recommends $24,088,000 for the Batteries and Energy Storage Hub, the Joint Center for Energy Storage Research [JCESR]. The Committee supports the continued research and development for JCESR, to ensure the outcome of basic research leads to practical solutions that are competitive in the marketplace. The Committee recommends $20,000,000 for the Fuels from Sunlight Hub.

The Committee encourages the Department to continue funding to support research and development needs of graduate and postgraduate science programs at Historically Black Colleges and Universities.

The Committee recommends $26,000,000 for exascale systems.

Within the amounts recommended for Construction, the Committee recommends $65,000,000 for the Proton Power Upgrade project at the Spallation Neutron Source, $40,000,000 for the Second Target Station, $82,000,000 for the Advanced Light Source Upgrade, $180,000,000 for the Advanced Photon Source Upgrade, and

$55,000,000 for the Linac Coherent Light Source Facility II–High Energy [LCLS–II–HE] .

Not less than $23,000,000 is recommended for Other Project Costs, of which $4,000,000 is for the High Energy Upgrade at LCLS–II; $17,000,000 is for the Second Target Station; and $2,000,000 is for the Advanced Light Source Upgrade. Further, not less than $10,500,000 is recommended for major items of equipment [MIE], including up to $5,500,000 for the National Synchrotron Light Source–II [NSLS–II] Experimental Tools-II MIE. Despite the NSLS–II becoming operational in 2014, the Department has constructed only half of the 60 beamlines that the NSLS–II can accommodate. The Department is encouraged to continue to support the construction of additional beamlines in future budget requests so the nation's scientists can more fully leverage the investment that has been made in the NSLS–II while it is the most powerful X-Ray light source in the Nation.

BIOLOGICAL AND ENVIRONMENTAL RESEARCH

The Committee recommends $770,000,000 for Biological and Environmental Research. The Department is directed to give priority to optimizing the operation of Biological and Environmental Research User Facilities.

The Committee directs the Department to enhance investments in machine learning to advance the use of diverse and increasingly autonomous datasets to understand environmental and climate dynamics; rapidly incorporate datasets into predictive watershed, ecosystem and climate models; and project the onset of and track extreme events, such as atmospheric rivers and hurricanes.

The Committee recommends not less than $100,000,000 for the four Bioenergy Research Centers. The Committee directs the Department to maintain Genomic Science as a top priority and recommends $100,000,000 for Foundational Genomics Research. Further, the Committee recommends $55,000,000 for Biomolecular Characterization and Imaging Science, including $20,000,000 to advance the study of complex biological systems and synthetic biology using neutrons. Within available funds, the Department is directed to provide $15,000,000 to develop a multi-scale-genes to ecosystem-approach that supports a predictive understanding of complex systems important to bioenergy and biosecurity. The Committee recommends $80,000,000 for the Joint Genome Institute, an essential component for genomic research. The Committee supports the Department's establishment of a national microbiome database collaborative and provides $10,000,000 for the continuation of this effort.

Within available funding for Earth and Environmental Systems Sciences, the Committee recommends not less than $45,000,000 for Terrestrial Ecosystem Science, of which not less than $10,000,000 is for Next Generation Ecosystem Experiments Arctic; $8,300,000 is for the SPRUCE field site; $5,000,000 is to initiate planning and pilot studies for new Terrestrial Ecosystem Science manipulation experiments; $7,000,000 for Next Generation Ecosystem Experiments Tropics; $6,800,000 for Watershed Function SFA; and $5,100,000 for AmeriFLUX Long-Term Earth System Observations. Within available funding for Earth and Environmental Systems

Sciences, the Committee recommends not less than $25,000,000 for Subsurface Biogeochemical Research, including not less than $3,500,000 to support ongoing research and discovery related to mercury biogeochemical transformations in the environment.

The Committee recommends not less than $97,000,000 for Earth and Environmental Systems Modeling and directs the Department to expend appropriated funds for earth system modeling, and regional and global model analysis. The Committee further directs the Department to make land-energy interactions, land biogeochemistry, uncertainty quantification, and model evaluation (e.g., International Land Model Benchmarking) a priority within the regional and global modeling activities, and continue to support performance optimization of coupled systems for execution on high performance and exascale systems. The Committee recommends $15,000,000 to support the exascale computing initiative.

The Committee supports the Department's efforts to advance understanding of coastal ecosystems, as initiated with the terrestrial-aquatic interfaces pilot in fiscal year 2019, and provides $20,000,000 to build upon the current modeling-focused effort and to develop observational assets and associated research to study the nation's major land-water interfaces, including the Great Lakes, by leveraging national laboratories' assets as well as local infrastructure and expertise at universities and other research institutions.

The Committee encourages the Department to increase its funding for academia to perform independent evaluations of climate models using existing data sets and peer-reviewed publications of climate-scale processes to determine various models' ability to reproduce the actual climate.

The Committee continues to support the Department's funding for colleges and universities to examine and evaluate earth system models and validate their ability to reproduce earth systems. The Committee is aware of limitations in the ability to understand and predict earth systems behavior posed by uncertainties in interactions between clouds, aerosols, and climate, an area of research highlighted as a priority by the National Climate Assessment with implications for weather prediction, infrastructure planning, and national security. Reducing uncertainty in understanding cloud aerosol effects requires investment in new techniques such as controlled experiments along with observational studies, modeling and computing. The Committee recommends $15,000,000 for cloud-aerosol research, technology innovation and computing.

FUSION ENERGY SCIENCES

The Committee recommends $570,000,000 for Fusion Energy Sciences.

U.S. Contribution to the International Thermonuclear Experimental Reactor [ITER] Project.—The Committee recommends $180,000,000 for the domestic, in-kind contributions and related support activities of the ITER project.

The Department is encouraged to support optimal facility operations levels for DIII–D. The Committee recommends $30,000,000 for the Material Plasma Exposure eXperiment. The Committee supports the Matter in Extreme Conditions Petawatt Upgrade project

and recommends $14,400,000 in construction funding and $1,400,000 in other project costs funding. The Committee recommends $20,000,000 for LaserNetUS.

The Committee is aware of the increase in global investment in private fusion energy companies developing advanced technology approaches with a focus on commercialization. The U.S. has an opportunity to seize global leadership in this transformational energy sector and attract global industry stakeholders by building on the Department's laboratory capabilities and world class fusion science talent while partnering with these private fusion companies. The Committee supports the Department's recent creation of the Innovation Network for Fusion Energy [INFUSE] research and development program that is advancing enabling fusion energy commercialization technologies through partnerships with industry, labs and universities, and provides up to $20,000,000 over the budget request for the continuation of the INFUSE program.

In addition, the Committee directs the Department to create a Fusion Public—Private Partnership Cost Share Program that advances multiple fusion advanced reactor technologies which are ready for large-scale integrated performance demonstration. The Committee recommends up to $20,000,000 for this new program and directs the Department to commence a Funding Opportunity Announcement [FOA] this year with the intention of making awards to up to three private fusion energy companies pursuing diverse technological approaches to commercial fusion energy to support large-scale integrated performance prototype demonstrations within the next five years. The FOA should seek to attract leading private fusion energy companies to conduct these prototype demonstrations in partnership with, and at, the existing Office of Science laboratories to enhance leadership in these emerging advanced fusion technologies. The Department is directed to provide to the Committees on Appropriations of both Houses of Congress not later than 60 days after enactment of this act a briefing on this cost share program to include program objectives, eligibility requirements, as well as a funding profile for future fiscal years.

HIGH ENERGY PHYSICS

The Committee recommends $1,065,000,000 for High Energy Physics.

The Committee recommends up to $8,900,000 for the Large Synoptic Survey Telescope. The Committee recommends $175,000,000 for the Long Baseline Neutrino Facility/Deep Underground Neutrino Experiment, including $171,000,000 to continue construction and $4,000,000 for other project costs funds. The Committee recommends $65,000,000 for the Proton Improvement Plan–II accelerator upgrade. The Committee recommends $35,000,000 for the Sanford Underground Research Facility. Further, the Committee recommends not less than $100,000,000 for the HL–LHC Upgrade projects.

NUCLEAR PHYSICS

The Committee recommends $736,000,000 for Nuclear Physics.

Within available funds, the Committee recommends $45,300,000 for construction of the Facility for Rare Isotope Beams [FRIB],

$1,000,000 for the Electron Ion Collider, and $30,000,000 for the U.S. Stable Isotope Production and Research Center.

The Committee also recommends $28,500,000 for early operations at FRIB. This funding is necessary to meet the planned levels as defined by the Department of Energy-Michigan State University cooperative agreement. Within major items of equipment and other project costs, the Committee recommends $1,500,000 for the Stable Isotope Production Facility; $10,200,000 for the Gamma-Ray Energy Tracking Array; $9,520,000 for sPHENIX; $5,330,000 for MOLLER; $5,000,000 for Ton-Scale Neutrino-less Double Beta Decay; $10,000,000 for the Electron Ion Collider; and $1,000,000 for the High Rigidity Spectrometer.

The Committee further recommends optimal operations at the Relativistic Heavy Ion Collider, Continuous Electron Beam Accelerator Facility, the Argonne Tandem Linac Accelerator System, and the Brookhaven Linac Isotope Producer Facility.

WORKFORCE DEVELOPMENT FOR TEACHERS AND SCIENTISTS

The Committee recommends $25,000,000 for Workforce Development for Teachers and Scientists. Within available funds, the Committee recommends $11,750,000 for Science Undergraduate Laboratory Internships; $1,500,000 for Community College Internships; $3,500,000 for the Graduate Student Research Program; $1,700 for the Visiting Faculty Program; $1,200,000 for the Albert Einstein Distinguished Educator Fellowship; $2,900,000 for the National Science Bowl; $750,000 for Technology Development and Online Application; $600,000 for Evaluation Studies; and $600,000 for Outreach.

Further, not later than 60 days after enactment of this act, the Committee directs the Department to provide a report to the Committees on Appropriations of both Houses of Congress on how the Office of Science plans to comply with Executive Order 13853 to develop a pipeline to meet future needs in trade craft requirements and workforce development in coordination with the national laboratories.

SCIENCE LABORATORIES INFRASTRUCTURE

The Committee recommends $394,000,000 for Science Laboratories Infrastructure.

Within these funds, the Committee recommends $26,000,000 for nuclear operations at Oak Ridge National Laboratory. In future budget requests, the Committee directs the Office of Science to work with the Office of Nuclear Energy to demonstrate a commitment to operations and maintenance of nuclear facilities at Oak Ridge National Laboratory that support multiple critical missions.

ADVANCED RESEARCH PROJECTS AGENCY–ENERGY

Appropriations, 2019	$366,000,000
Budget estimate, 2020	−287,000,000
Committee recommendation	428,000,000

The Committee recommends $428,000,000 for the Advanced Research Projects Agency-Energy [ARPA–E], an increase of

$715,000,000 above the budget request. Within available funds, the Committee recommends $35,000,000 for program direction.

The Committee continues to definitively reject the short-sighted proposal to terminate ARPA–E, and instead increases investment in this transformational program and directs the Department to continue to spend funds provided on research and development and program direction. The Department shall not use any appropriated funds to plan, develop, implement, or pursue the termination of ARPA–E. Further, the Department is directed to disburse funds appropriated for ARPA–E on eligible projects within a reasonable time period, consistent with past practices.

INNOVATIVE TECHNOLOGY LOAN GUARANTEE PROGRAM

ADMINISTRATIVE EXPENSES

GROSS APPROPRIATION

Appropriations, 2019	$33,000,000
Budget estimate, 2020	−381,569,000
Committee recommendation	32,000,000

OFFSETTING COLLECTIONS

Appropriations, 2019	−$15,000,000
Budget estimate, 2020	−3,000,000
Committee recommendation	−3,000,000

NET APPROPRIATION

Appropriations, 2019	$18,000,000
Budget estimate, 2020	−384,659,000
Committee recommendation	29,000,000

The Committee recommends $32,000,000 in funding for the Loan Guarantee Program, an increase of $413,659,000 above the budget request. This funding is offset by $3,000,000 in collections from loan guarantee applicants, for a net appropriation of $29,000,000. An additional $15,000,000 is credited to the bill as an adjustment from negative subsidies associated with this program. No funds recommended under this heading may be used to plan, develop, implement or pursue the elimination of the Title XVII Innovative Technologies Loan Program.

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING LOAN PROGRAM

Appropriations, 2019	$5,000,000
Budget estimate, 2020	
Committee recommendation	5,000,000

The Committee recommends $5,000,000 for the Advanced Technology Vehicles Manufacturing Loan Program, an increase of $5,000,000 above the budget request.

TRIBAL ENERGY LOAN GUARANTEE PROGRAM

Appropriations, 2019	$1,000,000
Budget estimate, 2020	−8,500,000
Committee recommendation	2,000,000

The Committee recommends $2,000,000 for the Tribal Energy Loan Guarantee Program, an increase of $10,500,000 above the budget request.

OFFICE OF INDIAN ENERGY POLICY AND PROGRAMS

Appropriations, 2019	$18,000,000
Budget estimate, 2020	8,000,000
Committee recommendation	25,000,000

The Committee recommends $25,000,000 for the Office of Indian Energy Policy and Programs, and directs the Office of Indian Energy to examine opportunities to partner with local and regional organizations to help with the execution of technical assistance provided to American Indian Tribes and Alaska Native villages.

In Alaska, wherever possible, State entities shall be prioritized for technical assistance partnerships over national or other organizations that do not have comparable local experience, relationships and knowledge. Further, the Committee directs the Office of Indian Energy to design funding opportunity announcements that do not exclude Tribes based on land ownership structures.

DEPARTMENTAL ADMINISTRATION

(GROSS)

Appropriations, 2019	$261,524,000
Budget estimate, 2020	210,923,000
Committee recommendation	249,378,000

(MISCELLANEOUS REVENUES)

Appropriations, 2019	$96,000,000
Budget estimate, 2020	93,378,000
Committee recommendation	93,378,000

NET APPROPRIATION

Appropriations, 2019	$165,524,000
Budget estimate, 2020	117,545,000
Committee recommendation	156,000,000

The Committee recommends $249,378,000 in funding for Departmental Administration. This funding is offset by $93,378,000 in revenue for a net appropriation of $156,000,000.

The Committee continues to use a reduced number of control points in this account to provide flexibility to the Department in its management and funding of its support functions. The Department is directed to continue to submit its budget request for this account in its current structure. The Other Departmental Administration activity includes Technology Transition Management, Chief Human Capital Officer, Chief Information Officer, Office of Small and Disadvantaged Business Utilization, General Counsel, Energy Policy and Systems Analysis, Technology Transitions, Public Affairs, Economic Impact and Diversity, and Office of Energy Jobs Development. Within the amounts provided, the Committee recommends $24,316,000 for the Office of Human Capital and $33,075,000 for the Office of General Counsel.

Partnership with Israel.—Within International Affairs, the Committee recommends $2,000,000 for the Israel Binational Industrial Research and Development [BIRD] Foundation and $4,000,000 to continue the U.S Israel Center of Excellence in Energy Engineering and Water Technology as authorized by the United States-Israel Strategic Partnership Act. This joint research and development center between the U.S. and Israel shall focus on collaborative research initiatives among universities, research institutions, and industry partners that could include hydrocarbon extraction and processing, energy infrastructure and policies, process water treatment, alternative energy sources, and impacts on coastal communities. Funding provided shall be matched with Israeli government and industry funding.

Artificial Intelligence.—The Committee recommends $2,500,000 for the Artificial Intelligence Program Office to enable greater transparency, coordination, and execution of the Department's work in this critical and growing mission space.

Technology Transfer.—Within the amount recommended for Other Departmental Administration, the Committee recommends $9,080,000 for the Office of Technology Transition. In awarding funding from the Technology Commercialization Fund, the Department shall assure cost match with private partners is in accordance with cost sharing in section 988 of the Energy Policy Act of 2005 (42 U.S.C. 16352).

Small Refinery Exemption.—The Department is directed to continue to follow the direction included in the Energy and Water Development and Related Agencies Appropriations Act, 2019, under this heading.

Chief Information Officer [CIO].—The Committee recommends $145,200,000 for Department-wide information technology and cybersecurity efforts. The Committee supports the Department's efforts to modernize its internal and external digital services consistent with the requirements of the 21st Century IDEA [Public Law 115–336]. The Committee believes the 21st Century IDEA will enable the CIO to improve digital service delivery for citizens and internal workflows. Therefore, within funds provided, the Committee recommends $4,000,000 to implement the 21st Century IDEA requirements that have the most significant impact on mission enhancement and that most effectively modernize citizen-facing services; specifically, the Committee encourages the Department to modernizes and secure its forms and accelerate the use of electronic signatures to achieve cost savings and workflow efficiencies.

The Department leads the Federal Government's effort to ensure cybersecurity attacks do not have a catastrophic impact on the energy sector, as well as to ensure the cybersecurity and resilience of the Department of Energy Enterprise infrastructure. The Department's CIO and the Office of Cybersecurity, Energy Security, and Emergency Response [CESER] lead the Federal Government's effort, in concert with energy sector owners and operators, to ensure cyber and physical attacks do not have a catastrophic impact on the nation's energy sector. The Committee commends the Department for its efforts in this area and directs the Department to continue to drive the implementation of the CIO Business Operations

Support Services [CBOSS] program to maximize and fully meet the multiple mission requirements and support the Department's critical cybersecurity mission. Funding shall continue to be used to accelerate the deployment of continuous diagnostic and mitigation [CDM] and the CIO's effort to implement CDM capabilities across the entire Department, including the national laboratories. Funding resources shall continue to be prioritized to ensure that the CIO continues to work closely with the Office of Electricity and CESER to ensure coordinated protection of the Power Marketing Administrations and unified support for cybersecurity of the energy sector as well as initiatives for information technology and data center optimization, movement to the cloud and enhancing the stewardship of information technology spending including progress in implementing technology business management, incorporating new controls on information technology spend capture in financial systems in cooperation with the Office of the Chief Financial Officer, and expanding the use of category management and best in class contract vehicles.

OFFICE OF THE INSPECTOR GENERAL

Appropriations, 2019	$51,330,000
Budget estimate, 2020	54,215,000
Committee recommendation	54,215,000

The Committee recommends $54,215,000 for the Office of the Inspector General, the same as the request.

ATOMIC ENERGY DEFENSE ACTIVITIES

NATIONAL NUCLEAR SECURITY ADMINISTRATION

The Committee recommendation for the National Nuclear Security Administration [NNSA] continues funding for recapitalization of our nuclear weapons infrastructure, while modernizing and maintaining a safe, secure, and credible nuclear deterrent without the need for underground testing. This is among our most important national security priorities.

At the same time, the Committee supports continuing important efforts to secure and permanently eliminate remaining stockpiles of nuclear and radiological materials overseas and in the United States that could be used for nuclear or radiological weapons. In addition, the Committee supports Naval Reactors and the important role they play in enabling the Navy's nuclear fleet.

The NNSA is a semi-autonomous agency within the Department. The NNSA Act clearly lays out the functions of the NNSA, and gives the Administrator authority over, and responsibility for, those functions. Again this year, no funds shall be used to reorganize, reclassify, or study combining any of those functions with the Department.

A highly-skilled and diverse workforce is required to maintain and modernize the nuclear weapons stockpile and execute the global nonproliferation initiatives of the NNSA. The Committee commends the NNSA for its aggressive efforts to recruit and retain this unique workforce.

INTEGRATED UNIVERSITY PROGRAM

The Committee directs the Secretary to carry out the requirements of the Integrated University Program in support of university research and development in areas relevant to the NNSA's mission. Within available funds, the Committee recommends not less than $5,000,000 for the Integrated University Program to cultivate the next generation of leaders in nonproliferation, nuclear security, and international security. Together with funds from the Office of Nuclear Energy and the Nuclear Regulatory Commission, this program ensures highly qualified nuclear specialists will be available to meet national needs. The Committee directs the Department to request funding for this program in future budget years. Funding for this program shall not come from prior year funds.

In addition to the Integrated University Program within Defense Nuclear Nonproliferation, the NNSA manages several university-related programs, ranging from fellowships and scholarships to university research. The NNSA is directed to provide a report annually with the budget request that lists all of the university programs requested, the recommended funding level, and the value that program provides the NNSA.

PROJECT MANAGEMENT

The Committee is concerned about the NNSA's ability to properly estimate costs and timelines for large projects. The NNSA is encouraged to assess current performance on projects costing more than $750,000,000, and make appropriate project management changes. The Committee encourages the NNSA to identify problems in cost and schedule estimates early, and provide updated information to the Committees on Appropriations of both Houses of Congress in a timely manner.

WEAPONS ACTIVITIES

Appropriations, 2019	$11,100,000,000
Budget estimate, 2020	12,408,603,000
Committee recommendation	12,742,000,000

The Committee recommends $12,742,000,000 for Weapons Activities, an increase of $333,397,000 above the budget request, to ensure the safety, security, reliability, and effectiveness of the Nation's nuclear weapons stockpile without the need for nuclear testing.

DIRECTED STOCKPILE WORK

The Committee recommends $5,462,417,000 for Directed Stockpile Work.

Life Extension Programs.—The Committee recommends $2,117,359,000 for Life Extension Programs [LEPs] and Major Alterations, which fully funds all LEPs and major alterations in the budget request, consistent with the plan of record approved by the Nuclear Weapons Council. The NNSA, the Weapons Laboratories, and the Production Sites need to ensure any technical challenges or production issues, particularly in the electronic components, are discovered quickly and mitigated to minimize impacts to com-

pleting LEPs on time and on budget, and to prevent impact on other high priorities, such as modernizing aging infrastructure, and funding for critical programs in support of nonproliferation, nuclear terrorism, and naval reactors.

The Committee is concerned that a recent technical challenge demonstrates a lack of systems engineering and highlights a lack of coordination and leadership focus, which in turn jeopardizes successful program execution. The NNSA is directed to establish an investigative team that shall include members with broad experience in similar technical reviews and shall also include members outside of Defense Programs to examine the issue and make recommendations to the Administrator to: (1) improve causal analysis within the Weapons Program; (2) identify the root cause(s) of this issue; (3) ensure the extent of condition is not more widespread than currently reported; and (4) identify corrective actions to prevent re-occurence. Within 90 days of enactment of this act, the team shall complete the examination and provide a written report of its findings and recommendations to the Committees on Appropriations of both Houses of Congress.

Weapons Dismantlement and Disposition.—The Committee recommends $56,000,000 for the dismantlement of retired nuclear weapons removed from the stockpile.

Strategic Materials.—The Committee supports continued investment in strategic materials, including management of existing material stockpiles and methods to replenish the supply needed for our national security programs. As the Department progresses through the ongoing warhead life extension programs, it will require the necessary strategic materials to meet the stockpile demands. The Committee has encouraged NNSA to explore all options to ensure it can maintain a consistent supply of purified uranium metal and other strategic materials. The Committee is concerned that NNSA's current plan does not consider all options, and may not be the most efficient. NNSA is directed to complete an independent technical review of all options prior to commencing any work to convert uranium oxide to metal.

The Committee continues to support the Nuclear Weapons Council's program of record for plutonium pit production, and directs the NNSA to provide a clear breakout of costs for each work activity in future budget requests.

Domestic Uranium Enrichment.—The Committee recommends $70,000,000 for Domestic Uranium Enrichment. A new control point has been created for downblending high-enriched uranium, so no funds are recommended for downblending within this control point.

RESEARCH, DEVELOPMENT, TECHNOLOGY, AND ENGINEERING

The Committee recommends $2,442,415,000 for Research, Development, Technology, and Engineering.

Engineering.—The Committee supports investment in Surety Science in recognition of new threats and the challenges maintaining readiness on aging systems. Within the amount recommended, $5,000,000 is for next-generation technology development for warhead system certification and the protection against theft, loss and terrorism incidents.

Enhanced Capabilities for Subcritical Experiments.—The Committee recommends $125,160,000 for Enhanced Capabilities for Subcritical Experiments [ECSE], a reduction of $20,000,000 below the request. While the Committee recognizes the importance of this project, there is not a clear, consistent set of requirements or a plan to meet those requirements. Furthermore, the Committee directs NNSA to identify and execute opportunities to further the proliferation detection research and development agenda as part of the project. The Committee directs NNSA to brief the Committees on Appropriations of both Houses of Congress not later than 60 days after enactment of this Act on the ways the Weapons and Nonproliferation programs intend to collaborate in this area.

Academic Alliances and Partnerships.—The Committee recognizes the importance of the Academic Alliances and Partnerships program in supporting fundamental science and technology research at universities that support stockpile stewardship, the development of the next generation of highly-trained workforce, and the maintenance of a strong network of independent technical peers. The Committee is also aware of the expertise provided to the NNSA by academic alliances and the centers of excellence program. The Committee encourages the NNSA to fund new centers of excellence, especially in the field of materials under extreme conditions research. The Committee recommends $70,000,000. Within this amount, not less than $5,000,000 is recommended for Tribal Colleges and Universities and not less than $20,000,000 is separately recommended for the Minority Serving Institution Partnership Program. Within the Tribal Colleges and Universities program, the Committee directs NNSA to continue existing advanced manufacturing partnerships and expand the program to other institutions.

Inertial Confinement Fusion Ignition and High-Yield.—The Committee finds that the Inertial Confinement Fusion and High Yield [ICF] program continues to be a critical and essential component of nuclear stockpile certification without underground nuclear weapons testing, maintaining U.S. leadership in high energy density physics and laser technologies, and developing the next-generation workforce. Therefore, the Committee recommends $570,000,000 for the ICF program. The recommendation includes not less than $344,000,000 for the National Ignition Facility, not less than $63,100,000 for the Z Facility, not less than $6,000,000 for the NIKE Laser at the Naval Research Laboratory, and not less than $80,000,000 for the OMEGA laser facility.

The Committee encourages continued research in High Energy Density Plasmas and recognizes the partnerships between the laboratories and research universities to address the critical need for skilled graduates to replace an aging workforce at our NNSA laboratories. Within available funds, the Committee recommends up to $5,000,000 for the Joint Program in High Energy Density Laboratory Plasmas.

The Committee directs NNSA's Deputy Administrator for Defense Programs to charge the JASON Defense Advisory Panel to conduct an independent review of the Inertial Confinement Fusion program. The JASON Defense Advisory Panel should be responsible for assessing the value and effectiveness of the inertial confinement fusion program in maintaining a safe, secure, and effec-

tive nuclear stockpile and recruiting a highly skilled and talented workforce to national security missions, including a pipeline to the NNSA national laboratories, and offer recommendations on how to further strengthen the program over the next ten years. The JASON Defense Advisory Panel should also independently evaluate the technical progress of all three approaches to ignition, recommend and prioritize future research and infrastructure priorities to make further progress in achieving ignition, and assess the status of international competition and the United States' ability to avoid technological surprise. These assessments should be completed and provided to the Committees on Appropriations of both Houses of Congress by September 30, 2020, and an unclassified summary should be made available.

The Committee recognizes that a predictable and sustained flow of targets is essential to operation of NNSA's large laser facilities. A robust vendor base promotes innovation and ensures defense-in-depth. Furthermore, the national laboratories are the target fabrication centers of last resort, even while they maintain expertise to make them knowledgeable buyers. Therefore, within available funds for facility operations and other amounts, the Committee recommends not less than $30,000,000 for target research, development, and production. Further, NNSA is directed to provide a justification for all target fabrication conducted by its national laboratories.

The Committee is concerned that near peer adversaries are developing a capability to eclipse the scientific leadership of the United States with regard to pulsed power experiments and technology. The Administrator, within 45 days of enactment of this act shall submit a report to the Committees on Appropriations of both the House and the Senate, with appropriate classified annexes, describing the NNSA's plans to meet or exceed proposed near peer technological developments with regard to pulsed power facilities and technologies. The administration shall include a preliminary budget to build or modify existing facilities to address shortfalls and prevent a technological surprise.

Advanced Simulation and Computing.—The Committee recommends $839,849,000 for advanced simulation and computing. Within available funds, the Committee recommends not less than $309,303,000 for activities associated with the exascale initiative, such as advanced system architecture design contracts with vendors and advanced weapons code development to effectively use new high performance computing platforms. Within funds provided, the Committee recommends up to $48,000,000 for artificial intelligence to support NNSA work.

Advancements in artificial intelligence and machine learning have presented numerous opportunities for advancements in multiple fields. The stockpile stewardship program may benefit from the implementation of either tool and the committee supports the efforts to develop data driven tools such as artificial intelligence and machine learning to identify issues within the stockpile and to better understand how the stockpile is aging. Furthermore, the committee is cognizant of the multiple uses for AI and machine learning and support the implementation of the technologies into other NNSA supported programs, including for the development of

hypersonic technologies, space based equities, additive manufacturing, cyber protection, and basic science and engineering in support of the national security mission. Within 180 days the Administrator shall submit a plan to the Committees on Appropriations of both Houses of Congress on how the NNSA plans to utilize artificial intelligence and machine learning over the next five years throughout the NNSA complex, and the preliminary budget requirements to implement this plan. Furthermore, the Administrator shall provide an analysis of how small businesses can compete for contracts to support these efforts.

Advanced Manufacturing Development.—The Committee recommends $144,000,000 for Advanced Manufacturing Development. Within available funds, $70,000,000 is recommended for Process Technology Development, including $10,000,000 to modernize and upgrade legacy applications at weapons production facilities to improve manufacturing and safety.

INFRASTRUCTURE AND OPERATIONS

The Committee recommends $3,319,444,000 for Infrastructure and Operations.

Project 06–D–141, Uranium Processing Facility, Y–12, Oak Ridge, Tennessee.—The Committee recommends $745,000,000 to continue construction activities of the five remaining subprojects of the Uranium Processing Facility, including the Main Process Building and the Salvage and Accountability Building.

The Committee supports the ongoing effort to replace existing enriched uranium capabilities currently residing in Building 9212 by 2025 for not more than $6,500,000,000 and the strategy of breaking the project into more manageable subprojects. This practice is specifically permitted by DOE Order 413.3B, and is a practical approach for any project of this magnitude.

Maintenance and Repair of Facilities.—Within the amounts provided, the Committee recommends not less than $60,000,000 for infrastructure at the Nevada National Security Site.

Construction of Non-Nuclear Facilities.—The Committee is concerned that NNSA is not adequately tailoring its requirements to small, non-nuclear facilities, such as parking lots, fire stations, office buildings, and emergency control centers. As a result, these facilities are taking longer and costing more, to build.

DEFENSE NUCLEAR SECURITY

The Committee recommends $800,000,000 for Defense Nuclear Security.

Project 17–D–710, West End Protected Area Reduction, Y–12.—The Committee recommends $35,000,000 to complete the West End Protected Area Reduction. The Committee notes that the budget request states that contract acquisition will begin in fiscal year 2020, and encourages NNSA to complete CD–2 and proceed to construction without delay.

DEFENSE NUCLEAR NONPROLIFERATION

Appropriations, 2019	$1,930,000,000
Budget estimate, 2020	1,993,302,000
Committee recommendation	2,085,000,000

The Committee recommends $2,085,000,000 for Defense Nuclear Nonproliferation, an increase of $91,698,000 above the budget request.

Defense Nuclear Nonproliferation provides a vitally important component of our national security, preventing nuclear materials and weapons from falling into the wrong hands, including non-weapons nations, terrorist organizations, and other non-state entities. This mission is challenged by an increasingly dangerous world with emerging and evolving threats, in addition to the proliferation of technologies that simplify production, manufacturing, and design of nuclear materials and weapons. The Committee recognizes the importance of bilateral and multilateral agreements and organizations in detecting, intercepting, and deterring nuclear and radiological threats. The Committee urges the full use of these partnerships to further strengthen U.S. and global security.

Domestic Radiological Security.—The Committee recommends $137,433,000 for Domestic Radiological Security, including not less than $35,000,000 for the Cesium Irradiator Replacement Program. Within this amount $10,000,000 is to address recovery and decontamination efforts associated the container breach and release of material in Seattle, Washington, on May 2, 2019, and up to $18,000,000 to partner with interested State or local governments to improve capabilities to train first-responders, and other experts in nuclear operations, safeguards, cyber, and emergency operations.

The Committee is aware of issues related to non-radioisotopic alternative technologies to those that use Category 1 and 2 radioactive material, including the technology readiness of alternatives for medical and industrial applications, and the Federal Government's role in promoting alternative technologies. Therefore, the Committee directs the Comptroller General to examine the following questions: (1) What high-risk radioactive isotopes used for medical and industrial applications have potential non-radioisotopic alternatives and what is known about the readiness of the alternative technology? (2) What barriers exist to greater use of non-radioisotopic alternatives and what can be done to reduce or eliminate these barriers? For example, to what extent do private companies bear the cost of disposing of radioactive material, and how do these costs affect adoption of non-radioisotopic alternative technologies? (3) What is the current status of Federal activities relating to alternative non-radioisotopic technologies, including NNSA's program for replacing radioactive materials, NRC's potential role in the adoption of alternative technologies, and the status of other agencies efforts implementing recommendations from the Interagency Working Group on Alternatives to High-Activity Radioactive Sources? This report should be submitted to the Committees on Appropriations of both Houses of Congress not later than two years after the enactment of this act.

Materials Management and Minimization.—The Committee recommends $10,000,000 for Laboratory and Partnership Support to facilitate interactions between the national laboratories, production facilities and private companies seeking to produce Molybdenum-99 without the use of high-enriched uranium.

The Committee recognizes that in order to meet the nonproliferation goals set forth in AMIPA, it is necessary that the domestic pri-

vate sector has delivered to market a rate of production that has displaced imported Molybdenum–99 and eliminated domestic shortages as defined by the Department of Energy's Cooperative Agreement grant program. Further, the Committee encourages the Department of Energy to budget future Cooperative Agreement grant dollars to recipients capable of meeting this goal by the end of Fiscal Year 2022.

Defense Nuclear Nonproliferation Research and Development.—The Committee recommends $524,749,000 for Defense Nuclear Nonproliferation Research and Development. The Committee supports a robust research and development capability to support nonproliferation initiatives. Within available funds for Proliferation Detection, the Committee encourages collaboration on the Enhanced Capabilities for Subcritical Experiments project to deploy capabilities that yield additional insights in this area.

Proliferation of illicit nuclear materials and weapons continues to be a high-consequence threat, and our ability to detect the production and movement of these materials is vitally important. Research and development in this area is especially important. The Committee recommends not less than $22,500,000 for the Nonproliferation Stewardship Program and supports the strategic review for how the program can address gaps in the proliferation detection architecture, as well as testbed development in 2020. The Committee recommendation supports continued research and development of novel enrichment technologies to support nonproliferation goals, and recommends $7,500,000 for this purpose. The Committee also supports exploration and development of material disposal technologies, and recommends up to $10,000,000 for this purpose.

Low Enriched Uranium for Naval Applications.—Within available funds for Defense Nuclear Nonproliferation Research and Development, the Committee recommends $15,000,000 for Advanced Low Enriched Uranium Fuel Research and Development for the national laboratories to develop low-enriched fuels that could replace highly enriched uranium for naval applications. Consistent with section 7319 of title 10, United States Code, this funding is recommended within the Defense Nuclear Nonproliferation account. This work shall be managed within Defense Nuclear Nonproliferation.

Nuclear Counterterrorism and Incident Response.—Within 30 days after enactment of this Act, NNSA shall brief the Committees on Appropriations of both Houses of Congress on the current status, cost, scope, and schedule of the Capability Forward Initiative.

NAVAL REACTORS

Appropriations, 2019	$1,788,618,000
Budget estimate, 2020	1,648,396,000
Committee recommendation	1,648,396,000

The Committee recommends $1,648,396,000 for Naval Reactors, the same as the budget request. The Committee's recommendation fully funds important national priorities, including the *Columbia*-class replacement submarine design and the prototype refueling. Naval Reactors currently relies on high-enriched uranium from weapons that have been removed from the stockpile to fuel the

Navy's aircraft carriers and submarines. The Committee encourages Naval Reactors to continue working with the NNSA to ensure there is a long-term plan that meets the Navy's needs for high-enriched uranium.

Naval Reactors has an exceptional program for self-assessment and causal analysis. The Committee directs Naval Reactors to assist the Weapons Program to evaluate a recent technical problem to determine the root causes and to identify corrective actions.

COLUMBIA-CLASS REACTOR SYSTEMS DEVELOPMENT

The Committee recommends $75,500,000 for *Columbia*-Class Reactor Systems Development. *Columbia*-class submarines are vital to maintain our survivable deterrent. The Committee remains concerned about on-time delivery of the first *Columbia*-Class submarine, in part because Naval Reactors claims to have the same amount of schedule margin despite multiple challenges in the propulsion plant. The Committee directs Naval Reactors to provide quarterly updates to the Committees on Appropriations for both Houses of Congress on the progress of the propulsion plant.

NAVAL REACTORS DEVELOPMENT

The Committee recommends $516,205,000 for Naval Reactors Development. Within the available funds, the Committee recommends $85,480,000 for the Advanced Test Reactor. The Committee directs Naval Reactors to provide a report on its projected test needs in the Advanced Test Reactor for the next 15 years to the Committees on Appropriations of both Houses of Congress within 90 days after enactment of this act.

S8G PROTOTYPE REFUELING

The Committee recommends $170,000,000 for S8G Prototype Refueling, an increase of $15,000,000 above the budget request. The Committee recognizes the importance of on-time completion of the prototype refueling, and places higher priority on this project than research and development for future reactor designs.

CONSTRUCTION

The Committee recommends $282,600,000 for Construction. Within available funds, the Committee recommends $238,000,000 for the Spent Fuel Handling Facility in Idaho.

FEDERAL SALARIES AND EXPENSES

Appropriations, 2019	$410,000,000
Budget estimate, 2020	434,699,000
Committee recommendation	434,699,000

The Committee recommends $434,699,000 for Federal Salaries and Expenses, the same as the budget request. The Committee recognizes the importance of recruiting and retaining the highly-skilled personnel needed to meet NNSA's important mission. Chronic underfunding in this account has led to understaffing across multiple areas, even as overall NNSA workload has increased. In order to remedy the situation, NNSA needs to hire an adequate number of personnel with the right skills mix. The Com-

mittee directs NNSA to brief the Committees on Appropriations of both Houses of Congress quarterly on the status of hiring and retention, how it is utilizing its special hiring authority, and actions it is taking to streamline hiring of Federal employees.

DEFENSE ENVIRONMENTAL CLEANUP

Appropriations, 2019	$6,024,000,000
Budget estimate, 2020	5,506,501,000
Committee recommendation	6,226,000,000

The Committee recommendation for Defense Environmental Cleanup is $6,226,000,000, an increase of $719,499,000 above the budget request. Within available funds, the Department is directed to fund the hazardous waste worker training program at $10,000,000.

Future Budget Requests.—The Committee directs the Department to include out-year funding projections in the annual budget request for Environmental Management, and an estimate of the total cost and time to complete each site.

Richland.—As a signatory to the Tri-Party Agreement, the Department of Energy is required to meet specific compliance milestones toward the cleanup of the Hanford site. Among other things, the Department committed to provide the funding necessary to enable full compliance with its cleanup milestones. Unfortunately, if the Department's fiscal year 2020 budget request were enacted, future fiscal year Tri-Party Agreement milestones could be at risk, threatening high-risk cleanup projects near the City of Richland, Washington and the economically and environmentally important Columbia River. The Committee recognizes that significant progress has been made at the Hanford Site. However, because the Department's budget request could slow or halt critical cleanup work and threaten the Department's compliance with its legal obligations under the Tri-Party Agreement, the Committee recommends $900,223,000 for Richland Operations. Additional funding is provided for cleanup of the 300–296 waste site under the 324 Building, risk reduction activities associated with legacy waste sites, site-wide infrastructure, and community and regulatory support. Within available funds for Central Plateau Remediation, the Committee redirects $11,800,000 in prior year funds from the Containerized Sludge Removal (Project 15–D-401) to replace and upgrade power supply infrastructure in support of direct feed low-activity waste operations.

Within available funds, the Department recommends not less than $8,5000,000 for the Hazardous Materials Management and Emergency Response facilities. Further, within available funds, the Department is directed to carry out maintenance and public safety efforts at the Manhattan Project National Historical Park, including the B Reactor, including facility improvements needed to expand public access and interpretive programs. Within available funds the Department is directed to support the Hanford Workforce Engagement Center to provide education and advocacy to current and former Hanford employees on all available Federal and State compensation programs. None of the Richland Operations funds shall be used to directly carry out waste removal or treatment activities within the Office of River Protection's tank farms.

NNSA Sites.—The Committee directs the Department to provide a plan for decommissioning the full suite of excess facilities at Lawrence Livermore National Laboratory over the next ten years. The plan will identify specific facilities; key interfaces with the NNSA including timing of facility cleanout and transfer; and baseline cost, scope, and schedule by year for each facility. The Department shall submit the plan to the Committees on Appropriations of both Houses of Congress not later than 180 days after enactment of this act.

Oak Ridge Reservation.—The Committee recommends $450,000,000 for the Oak Ridge Reservation.

The Committee is disappointed in the lack of progress in issuing the Record of Decision for the new landfill, and recommends no funding to continue the preliminary design until agreement is reached on the Record of Decision. Further, the Department is directed to perform an evaluation of the cost of onsite disposal compared to offsite disposal, including the economic impact to the local community, and brief the Committees on Appropriations of both Houses of Congress within 90 days after enactment of this act.

The Committee recommends $2,700,000 for Community and Regulatory Support, but none of these funds shall be applied to the Federal Facilities Agreement grant.

Additional funds above the budget request are recommended to address the growing backlog of deferred maintenance associated with Environmental Management owned facilities. The Department should also focus on the cleanup of excess contaminated facilities, many of which are on the Department's list of high-risk facilities, to reduce threats to worker safety and health and to provide for future use.

U–233 Disposition Program.—The Committee recommends $55,000,000 for the disposition of material in Building 3019. Removal of legacy material from this building, an aging facility in the heart of the Oak Ridge National Laboratory central campus, must remain a high priority for the Department. Removal of the Uranium-233 will enable the overall security posture at the laboratory to be relaxed, which will reduce costs, eliminate nuclear safety issues, and make the campus more conducive to collaborative science. The Committee supports the Department's current approach to expedite the disposition of material in Building 3019, using a public-private partnership that will reduce the overall cost of cleanup.

Mercury Treatment Facility.—The Committee recommends $70,000,000 to complete construction of the Outfall 200 Mercury Treatment Facility. Remediation of mercury contamination at the Oak Ridge Reservation is an important precursor to full site remediation. Reducing the mercury being released into the East Fork of Poplar Creek continues to be among the highest priorities for the Environmental Management program.

Office of River Protection.—The Committee recommends $1,616,000,000 for the Office of River Protection. Funds above the budget request are provided to continue tank waste retrievals and design and construct facilities necessary to meet near-term waste treatment goals. Funds are also provided to resume full engineering, procurement, and construction work on the High-Level Waste

Treatment Facility; to continue design and engineering on the Pre-Treatment Facility; and to ensure compliance with the 2016 Consent Decree and Tri-Party Agreement milestones. Funds that support the Waste Treatment Plant project are provided separately for: (1) Low-Activity Waste Treatment Facility, Analytical Laboratory, and Balance of Facilities; (2) High-Level Waste Treatment Facility; (3) Pre-Treatment Facility; and (4) Low Activity Waste Pretreatment System.

The Committee recognizes the Department of Energy's efforts to improve working conditions in the tank farms and to address chemical vapor exposures by implementing recommendations from the 2014 Hanford Tank Vapor Assessment Report. The Committee is aware of three subsequent reviews conducted by the Department's Office of the Inspector General and Office of Enterprise Assessments, and the National Institute for Occupational Safety and Health. Within available funds in the Tank Farms Activities control point, the Department is directed to continue ongoing work to address chemical vapor exposures, implement recommendations from the three additional reviews, and maintain a safe work environment for Hanford employees.

The Committee notes the budget request included a specific line item for the test bed initiative, also called the low-level waste offsite disposal, following direction provided in the fiscal year 2019 Energy and Water Development Appropriations Act. The recommendation provides not more than $10,000,000 for this effort.

Savannah River Site.—The Committee recommends $1,469,632,000 for the Savannah River site. Within available funds, $3,000,000 is for disposition of spent fuel from the High Flux Isotope Reactor, $11,249,000 is for Community and Regulatory Support, and $50,000,000 is for the Advanced Manufacturing Collaborative.

Waste Isolation Pilot Plant.—Funds above the budget request are provided to purchase electric-powered mining equipment to improve mine air quality and maximize the capacity of ventilation infrastructure.

Technology Development and Demonstration.—The Committee recommends $25,000,000 for Technology Development and Demonstration. The Committee supports the Department's efforts to expand technology development and demonstration to address its long-term and technically complex cleanup challenges. Within the amount recommended, not less than $5,000,000 is recommended for work on qualification, testing and research to advance the state-of-the-art on containment ventilation systems. Further, the Department is directed to take the necessary steps to implement and competitively award a cooperative university affiliated research center for that purpose.

Within the amount recommended, not less than $5,000,000 is recommended to fund the existing cooperative agreement with the Consortium for Risk Evaluation with Stakeholder Participation [CRESP] and not less than $5,000,000 is recommended for research and development of robotics to enhance worker safety.

OTHER DEFENSE ACTIVITIES

Appropriations, 2019	$860,292,000
Budget estimate, 2020	1,035,339,000
Committee recommendation	895,097,000

The Committee recommends $895,097,000 for Other Defense Activities, a decrease of $140,242,000 below the budget request. Within available funds, the Committee recommends $271,000,000 for Specialized Security Activities. The Committee does not support the administration's request to move funding for formerly Utilized Sites Remedial Action Program [FUSRAP] to the Office of Legacy Management, so there is no funding for that purpose included within Other Defense Activities. Within the available funds for Environment, Health and Safety, the Committee recommends not less than $1,000,000 for the Epidemiologic Study of One Million U.S. Radiation Workers and Veterans, which was originally approved by the Office of Science in 2012.

The Committee remains concerned with the implementation of Order 140.1, Interface with the Defense Nuclear Facilities Safety Board [DNFSB], and the potential impacts on the ability of the DNFSB to carry out its Congressionally-mandated responsibilities. To ensure DNFSB can continue to meet its statuary oversight responsibilities as well as help restore credibility with the local communities, the Secretary is directed to collaborate with the DNFSB to address the board's specific concerns with Order 140.1, and to demonstrate again a shared focus on adequate protection of public health and safety.

POWER MARKETING ADMINISTRATIONS

No funds are recommended to divest transmission assets of the Power Marketing Administrations [PMA]. The Committee reminds the Department of the prohibition on studying transfer of PMA assets in Public Law 99–349.

CBO has continued to raise questions about the current receipt authority provided in this and prior year appropriations acts to create carryover of unobligated balances for purchase power and wheeling expenditures [PPW]. Since the scoring for PPW receipts has historically equaled expenses as a result of a 2001 scoring agreement, the Committee continues to be unable to recommend the full budget request for PPW expenses for the Southeastern Power Administration, Southwestern Power Administration, or Western Area Power Administration due to CBO scoring. The Committee recommends the full amount for PPW expenses that CBO has estimated will be spent for those purposes in fiscal year 2020, which is approximately $200,000,000 lower (in the aggregate) than the budget request. The Committee will continue to work to resolve the differences in the CBO and administration estimates for PPW expenses.

OPERATIONS AND MAINTENANCE, SOUTHWESTERN POWER ADMINISTRATION

Appropriations, 2019	$10,400,000
Budget estimate, 2020	10,400,000
Committee recommendation	10,400,000

The Committee recommends a net appropriation of $10,400,000 for the Southwestern Power Administration.

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

Appropriations, 2019	$89,372,000
Budget estimate, 2020	89,196,000
Committee recommendation	89,372,000

The Committee recommends a net appropriation of $89,372,000 for the Western Area Power Administration.

FALCON AND AMISTAD OPERATING AND MAINTENANCE FUND

Appropriations, 2019	$228,000
Budget estimate, 2020	228,000
Committee recommendation	228,000

The Committee recommends a net appropriation of $228,000 for the Falcon and Amistad Operating and Maintenance Fund.

FEDERAL ENERGY REGULATORY COMMISSION

SALARIES AND EXPENSES

Appropriations, 2019	$369,900,000
Budget estimate, 2020	382,000,000
Committee recommendation	382,000,000

REVENUES APPLIED

Appropriations, 2019	$ −369,900,000
Budget estimate, 2020	−382,000,000
Committee recommendation	−382,000,000

The Committee recommends a net appropriation of $0 for the Federal Energy Regulatory Commission [FERC].

The Committee encourages FERC to prioritize meaningful opportunities for public engagement and coordination with State and local governments in the Federal permitting and review processes of energy infrastructure proposals. Specifically, review processes should remain transparent and consistent, and ensure the health, safety, and security of the environment and each affected community.

The Committee directs FERC, within 90 days of enactment of this act, to provide a study and report to the Committees on Appropriations of both Houses of Congress outlining the barriers and opportunities for high voltage transmission delivery, including over the Nation's transportation corridors. The report shall examine the reliability and resilience benefits, permitting barriers, and any barriers in State or Federal policy or markets.

DEPARTMENT OF ENERGY

[In thousands of dollars]

	2019 Appropriations	Budget estimate	Committee recommendation	Committee recommendation compared to—	
				2019 Appropriations	Budget estimate
ENERGY PROGRAMS					
ENERGY EFFICIENCY AND RENEWABLE ENERGY					
Sustainable Transportation:					
Vehicle technologies	344,000	73,400	410,000	+66,000	+336,600
Bioenergy technologies	226,000	40,000	245,000	+19,000	+205,000
Hydrogen and fuel cell technologies	120,000	44,000	160,000	+40,000	+116,000
Subtotal, Sustainable Transportation	690,000	157,400	815,000	+125,000	+657,600
Renewable Energy:					
Solar energy technologies	246,500	67,000	260,000	+13,500	+193,000
Wind energy technologies	92,000	23,700	100,000	+8,000	+76,300
Water power technologies	105,000	45,000	160,000	+55,000	+115,000
Geothermal technologies	84,000	28,000	115,000	+31,000	+87,000
Subtotal, Renewable Energy	527,500	163,700	635,000	+107,500	+471,300
Energy Efficiency:					
Advanced manufacturing	320,000	80,500	380,000	+60,000	+299,500
Building technologies	226,000	57,000	300,000	+74,000	+243,000
Federal energy management program	30,000	8,400	45,000	+15,000	+36,600
Weatherization and Intergovernmental Programs:					
Weatherization:					
Weatherization assistance program	254,000	.....	300,000	+46,000	+300,000
Training and technical assistance	3,000	.....	3,500	+500	+3,500
Subtotal, Weatherization	257,000	.....	303,500	+46,500	+303,500
State Energy Program Grants	55,000	.....	55,000	.....	+55,000
Subtotal, Weatherization and Intergovernmental Program	312,000	.....	358,500	+46,500	+358,500

DEPARTMENT OF ENERGY—Continued

[In thousands of dollars]

	2019 Appropriations	Budget estimate	Committee recommendation	Committee recommendation compared to—	
				2019 Appropriations	Budget estimate
Subtotal, Energy Efficiency	888,000	145,900	1,083,500	+195,500	+937,600
Corporate Support:					
Facilities and infrastructure:					
National Renewable Energy Laboratory [NREL]	97,000	107,000	145,500	+48,500	+38,500
Program direction	162,500	122,000	165,000	+2,500	+43,000
Strategic programs	14,000	.....	14,000	.....	+14,000
Subtotal, Corporate Support	273,500	229,000	324,500	+51,000	+95,500
Subtotal, Energy efficiency and renewable energy	2,379,000	696,000	2,858,000	+479,000	+2,162,000
Use of prior year balances	.....	−353,000	.....	.....	+353,000
Floor Amendments	.....	.....	.....	.....	.....
Rescission	.....	.....	−58,000	−58,000	−58,000
TOTAL, ENERGY EFFICIENCY AND RENEWABLE ENERGY	2,379,000	343,000	2,800,000	+421,000	+2,457,000
CYBERSECURITY, ENERGY SECURITY, AND EMERGENCY RESPONSE					
Cybersecurity for energy delivery systems (CEDS)	89,500	75,000	96,000	+6,500	+21,000
Infrastructure security and energy restoration	19,000	70,000	70,000	+51,000	.....
Program direction	11,500	11,500	13,000	+1,500	+1,500
Floor Amendments	.....	.....	.....	.....	.....
TOTAL, CYBERSECURITY, ENERGY SECURITY, AND EMERGENCY RESPONSE	120,000	156,500	179,000	+59,000	+22,500
ELECTRICITY					
Transmission reliability	39,000	70,500	80,400	+41,400	+9,900
Resilient distribution systems	40,000	27,900	48,000	+8,000	+20,100
Energy Storage:					
Research	46,000	43,500	46,000	.....	+2,500

Construction: 20–OE–100 Grid Storage Launchpad	.....	5,000	5,000	+5,000	.....
Subtotal, Energy Storage	46,000	48,500	51,000	+5,000	+2,500
Transformer resilience and advanced components	7,000	9,000	15,000	+8,000	+6,000
Transmission permitting and technical assistance	7,000	7,000	7,000	.....	.....
Program direction	17,000	19,600	19,600	+2,600	.....
TOTAL, ELECTRICITY	156,000	182,500	221,000	+65,000	+38,500
NUCLEAR ENERGY					
Research and development:					
Integrated university program	5,000	.....	5,000	.....	+5,000
STEP R&D	5,000	.....	5,000	.....	+5,000
Nuclear energy enabling technologies:					
Crosscutting Technology Development	50,000	17,400	30,000	−20,000	+12,600
Nuclear Energy Advanced Modeling and Simulation	31,000	30,000	.....	−31,000	−30,000
Energy Innovation Hub for Modeling and Simulation	27,585	.....	.....	−27,585	.....
Joint Modeling and Simulation program	.....	.....	40,000	+40,000	+40,000
Nuclear Science User Facilities	44,000	27,600	40,000	−4,000	+12,400
Transformational Challenge Reactor	.....	23,450	.....	.....	−23,450
Subtotal, Nuclear energy enabling technologies	152,585	98,450	110,000	−42,585	+11,550
Fuel Cycle research and development Mining and Conversion	.....	.....	10,000	+10,000	+10,000
Enrichment and shipping	.....	.....	50,000	+50,000	+50,000
Material Recovery and Waste Form Development	38,000	6,000	10,000	−28,000	+4,000
Advanced Fuels Advanced Fuels	125,000	36,000	.....	−125,000	−36,000
Accident Tolerant Fuels	.....	.....	115,000	+115,000	+115,000
Triso	.....	.....	30,000	+30,000	+30,000
Subtotal, Advanced Fuels	125,000	36,000	145,000	+20,000	+109,000
Laboratory support	.....	.....	50,000	+50,000	+50,000
Used Nuclear Fuel Disposition	.....	.....	.....	.....	.....
Used Nuclear Fuel Disposition R&D	63,915	5,000	27,500	−36,415	+22,500
Integrated Waste Management System	22,500	.....	22,500	.....	+22,500
Civil Nuclear Enrichment	.....	40,000	.....	.....	−40,000
System Analysis and Integration	8,500	.....	.....	−8,500	.....
Materials Protection, Accounting and Control Technology	6,000	3,000	.....	−6,000	−3,000

DEPARTMENT OF ENERGY—Continued

[In thousands of dollars]

	2019 Appropriations	Budget estimate	Committee recommendation	Committee recommendation compared to—	
				2019 Appropriations	Budget estimate
Subtotal, Fuel Cycle research and development	263,915	90,000	315,000	+51,085	+225,000
Reactor concepts RD&D:					
Advanced Small Modular Reactor R&D	100,000	10,000	100,000	.....	+90,000
Light Water Reactor Sustainability	47,000	30,150	47,000	.....	+16,850
Advanced Reactor Technologies Advanced Reactor Technologies	111,500	75,000	.....	−111,500	−75,000
Fuel and Graphite Fuel Qualification program	.....	.....	.....	.....	.....
MW Scale Rx study	.....	.....	10,000	+10,000	+10,000
Transformational Challenge Reactor	.....	.....	30,000	+30,000	+30,000
Advanced Reactor Concepts Industry Awards	.....	.....	22,000	+22,000	+22,000
Versatile Advanced Test Reactor R&D	65,000	100,000	40,000	−25,000	−60,000
Subtotal, Reactor concepts RD&D	323,500	215,150	249,000	−74,500	+33,850
Advanced Reactors Demonstration Program Demonstration 1	.....	.....	100,000	+100,000	+100,000
Demonstration 2	.....	.....	100,000	+100,000	+100,000
Risk Reduction for Future Demonstrations	.....	.....	50,000	+50,000	+50,000
Regulatory Development	.....	.....	40,000	+40,000	+40,000
Advanced Reactors Safeguards	.....	.....	10,000	+10,000	+10,000
Subtotal, Advanced Reactors Demonstration Program	.....	.....	300,000	+300,000	+300,000
International nuclear energy cooperation	3,000	.....	.....	−3,000	.....
Subtotal, Research and development	753,000	403,600	984,000	+231,000	+580,400
Infrastructure:					
ORNL Nuclear Facilities Operations and Maintenance	.....	.....	28,000	+28,000	+28,000
INL Nuclear Research Reactor Operations and Maintenance	.....	.....	131,000	+131,000	+131,000
INL Non–Reactor Nuclear Research Facility Operations and Maintenance	.....	.....	128,000	+128,000	+128,000
INL Engineering and Support Facility Operations and Maintenance	.....	.....	8,000	+8,000	+8,000
INL Regulatory Compliance	.....	.....	10,000	+10,000	+10,000

Radiological facilities management:					
Space and defense infrastructure	20,000	.....	.....	−20,000	.....
Research reactor infrastructure	9,000	9,000	.....	−9,000	−9,000
Subtotal, Radiological facilities management	29,000	9,000	.....	−29,000	−9,000
Idaho operations and infrastructure	288,000	204,000	.....	−288,000	−204,000
Construction:					
Sample Prep Lab, INL	30,000	5,242	6,000	−24,000	+758
Advanced Nuclear Materials Laboratory, ORNL	.....	.....	5,000	+5,000	+5,000
Subtotal, Construction	30,000	5,242	11,000	−19,000	+5,758
Subtotal, Idaho facilities management	318,000	209,242	283,000	−35,000	+73,758
Subtotal, Infrastructure	347,000	218,242	316,000	−31,000	+97,758
Idaho sitewide safeguards and security	146,090	137,808	137,808	−8,282	.....
Program direction	80,000	64,350	80,000	.....	+15,650
Floor Amendments	.....	.....	.....	.....	.....
TOTAL, NUCLEAR ENERGY	1,326,090	824,000	1,517,808	+191,718	+693,808
FOSSIL ENERGY RESEARCH AND DEVELOPMENT					
Coal CCS and Power Systems:					
Carbon Capture	100,671	39,800	113,000	+12,329	+73,200
Carbon Storage	98,096	29,000	103,000	+4,904	+74,000
Advanced Energy Systems	129,683	185,300	139,000	+9,317	−46,300
Cross Cutting Research	56,350	72,825	64,300	+7,950	−8,525
NETL Coal Research and Development	54,000	60,500	67,000	+13,000	+6,500
STEP (Supercritical CO2)	22,430	.....	14,000	−8,430	+14,000
Transformational Coal Pilots	25,000	.....	17,000	−8,000	+17,000
Subtotal, Coal CCS and Power Systems	486,230	387,425	517,300	+31,070	+129,875
Natural Gas Technologies:					
Research	51,000	10,730	55,000	+4,000	+44,270
Unconventional fossil energy technologies from petroleum—oil technologies	46,000	19,000	46,000	.....	+27,000
Program direction	61,070	61,045	64,000	+2,930	+2,955
Special recruitment programs	700	700	700	.....	.....
NETL Research and Operations	50,000	40,000	52,000	+2,000	+12,000

[In thousands of dollars]

	2019 Appropriations	Budget estimate	Committee recommendation	Committee recommendation compared to—	
				2019 Appropriations	Budget estimate
NETL Infrastructure	45,000	43,100	65,000	+20,000	+21,900
Floor Amendments	.....	.....	.....	.....	.....
TOTAL, FOSSIL ENERGY RESEARCH AND DEVELOPMENT	740,000	562,000	800,000	+60,000	+238,000
NAVAL PETROLEUM AND OIL SHALE RESERVES	10,000	14,000	14,000	+4,000	.....
STRATEGIC PETROLEUM RESERVE					
STRATEGIC PETROLEUM RESERVE	235,000	174,000	174,000	−61,000	.....
Sale of crude oil	−300,000	−450,000	−450,000	−150,000	.....
Use of sale proceeds	300,000	450,000	450,000	+150,000	.....
TOTAL, STRATEGIC PETROLEUM RESERVE	235,000	174,000	174,000	−61,000	.....
SPR PETROLEUM ACCOUNT					
SPR Petroleum Account	10,000	.....	10,000	.....	+10,000
Sale of NGSR refined petroleum product	.....	−96,000	.....	.....	+96,000
Use of NGSR refined petroleum product sale proceeds	.....	27,000	.....	.....	−27,000
TOTAL, SPR PETROLEUM ACCOUNT	10,000	−69,000	10,000	.....	+79,000
NORTHEAST HOME HEATING OIL RESERVE					
NORTHEAST HOME HEATING OIL RESERVE	10,000	.....	10,000	.....	+10,000
Sale of Northeast Home Heating Oil Reserves	.....	−90,000	.....	.....	+90,000
TOTAL, NORTHEAST HOME HEATING OIL RESERVE	10,000	−90,000	10,000	.....	+100,000
ENERGY INFORMATION ADMINISTRATION	125,000	118,000	132,000	+7,000	+14,000

NON-DEFENSE ENVIRONMENTAL CLEANUP					
Fast Flux Test Reactor Facility (WA)	2,240	2,500	2,500	+260	.....
Gaseous Diffusion Plants	101,304	103,073	113,085	+11,781	+10,012
Small sites	131,456	66,692	127,000	−4,456	+60,308
West Valley Demonstration Project	75,000	75,215	75,215	+215	.....
Community and Regulatory Support	.....	.....	200	+200	+200
TOTAL, NON–DEFENSE ENVIRONMENTAL CLEANUP	310,000	247,480	318,000	+8,000	+70,520
URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING FUND					
Oak Ridge	195,000	109,439	195,693	+693	+86,254
Nuclear facility D&D, Paducah	206,000	207,215	240,000	+34,000	+32,785
Portsmouth:					
Nuclear facility D&D, Portsmouth	366,931	304,559	367,193	+262	+62,634
Construction:					
20–U–401 On -site waste disposal facility (Cell Line 2&3)	.....	10,000	10,000	+10,000	.....
15–U–408 On–site waste disposal facility, Portsmouth	41,168	41,102	41,102	−66	.....
Subtotal, Portsmouth	408,099	355,661	418,295	+10,196	+62,634
Pension and community and regulatory support	21,030	21,762	21,762	+732	.....
Title X uranium/thorium reimbursement program	11,000	21,035	30,945	+19,945	+9,910
TOTAL, UED&D FUND	841,129	715,112	906,695	+65,566	+191,583
SCIENCE					
Advanced scientific computing research:					
Advanced scientific computing research	702,794	732,153	840,265	+137,471	+108,112
Construction:					
17–SC–20 SC Exascale Computing Project (SC–ECP)	232,706	188,735	188,735	−43,971	.....
Subtotal, Advanced scientific computing research	935,500	920,888	1,029,000	+93,500	+108,112
Basic energy sciences:					
Research	1,757,700	1,675,285	1,903,000	+145,300	+227,715
Construction:					
13–SC–10 LINAC coherent light source II (LCLS–II), SLAC	129,300	.....	.....	−129,300	.....
18–SC–10 Advanced Photon Source Upgrade (APS–U), ANL	130,000	150,000	180,000	+50,000	+30,000
18–SC–11 Spallation Neutron Source Proton Power, Upgrade (PPU), ORNL	60,000	5,000	65,000	+5,000	+60,000

[In thousands of dollars]

	2019 Appropriations	Budget estimate	Committee recommendation	Committee recommendation compared to—	
				2019 Appropriations	Budget estimate
18–SC–12 Advanced Light Source, Upgrade (ALS–U), LBNL	60,000	13,000	82,000	+22,000	+69,000
18–SC–13 LINAC coherent light source II HE (LCLS–II–HE), SLAC	28,000	14,000	55,000	+27,000	+41,000
19–SC–14 Second Spallation Neutron Source (SNS) Target Station (STS), ORNL	1,000	1,000	40,000	+39,000	+39,000
Subtotal, Construction	408,300	183,000	422,000	+13,700	+239,000
Subtotal, Basic energy sciences	2,166,000	1,858,285	2,325,000	+159,000	+466,715
Biological and environmental research	705,000	494,434	770,000	+65,000	+275,566
Fusion energy sciences:					
Research	432,000	294,750	375,600	−56,400	+80,850
Construction:					
20–SC–61, Matter in Extreme Conditions (MEC) Petawatt Upgrade, SLAC	.....	1,000	14,400	+14,400	+13,400
14–SC–60 U.S. Contributions to ITER	132,000	107,000	180,000	+48,000	+73,000
Subtotal, Construction	132,000	108,000	194,400	+62,400	+86,400
Subtotal, Fusion energy sciences	564,000	402,750	570,000	+6,000	+167,250
High energy physics:					
Research	800,000	648,038	829,000	+29,000	+180,962
Construction:					
18–SC–42 Proton Improvement Plan II (PIP–II), FNAL	20,000	20,000	65,000	+45,000	+45,000
11–SC–41 Muon to electron conversion experiment, FNAL	30,000	.....	.....	−30,000	.....
11-SC-40 Long baseline neutrino facility / deep underground neutrino experiment (LBNF/DUNE), FNAL	130,000	100,000	171,000	+41,000	+71,000
Subtotal, Construction	180,000	120,000	236,000	+56,000	+116,000
Subtotal, High energy physics	980,000	768,038	1,065,000	+85,000	+296,962

Nuclear physics:					
Operations and maintenance	615,000	579,854	659,700	+44,700	+79,846
Construction:					
20–SC–52 Electron Ion Collider (EIC)	.....	.....	1,000	+1,000	+1,000
20–SC–51, U.S. Stable Isotope Production and Research Center (U.S. SIPRC), ORNL	.....	5,000	30,000	+30,000	+25,000
14–SC–50 Facility for rare isotope beams (FRIB) Michigan State University	75,000	40,000	45,300	−29,700	+5,300
Subtotal, Nuclear physics	690,000	624,854	736,000	+46,000	+111,146
Workforce development for teachers and scientists	22,500	19,500	25,000	+2,500	+5,500
Science laboratories infrastructure:					
Infrastructure support:					
Payment in lieu of taxes	1,713	4,540	4,540	+2,827	.....
Oak Ridge landlord	6,434	5,610	5,610	−824	.....
Facilities and infrastructure	45,543	25,050	90,850	+45,307	+65,800
Oak Ridge nuclear operations	26,000	10,000	26,000	.....	+16,000
Subtotal, Infrastructure support	79,690	45,200	127,000	+47,310	+81,800
Construction:					
20–SC–77 Large Scale Collaboration Center, SLAC	.....	3,000	11,000	+11,000	+8,000
20–SC–76 Craft Resources Support Facility, ORNL	.....	20,000	20,000	+20,000	.....
20–SC–75 CEBAF Renovation and Expansion, TJNAF	.....	2,000	5,000	+5,000	+3,000
20–SC–72 Seismic Safety and Infrastructure Upgrades, LBNL	.....	5,000	15,000	+15,000	+10,000
20–SC–71 Critical Utilities Rehabilitation Project, BNL	.....	12,000	25,000	+25,000	+13,000
19–SC–71 Science User Support Center (SUSC), BNL	7,000	6,400	25,000	+18,000	+18,600
19–SC–72 Electrical Capacity and Distribution Capability, ANL	30,000	30,000	30,000	.....	.....
19–SC–73 Translational Research Capability, ORNL	25,000	15,000	40,000	+15,000	+25,000
19–SC–74 BioEPIC Building, LBNL	5,000	6,000	28,000	+23,000	+22,000
18–SC–71 Energy Sciences Capability, PNNL	24,000	9,000	26,000	+2,000	+17,000
17–SC–71 Integrated Engineering Research Center, FNAL	20,000	10,000	25,000	+5,000	+15,000
17–SC–73 Core Facility Revitalization, BNL	42,200	.....	.....	−42,200	.....
20–SC–78 Tritium System Demolition and Disposal, PPPL	.....	.....	13,000	+13,000	+13,000
20–SC–79 Argonne Utilities Upgrade, ANL	.....	.....	1,000	+1,000	+1,000
20–SC–80 Linear Assets Modernization Project, LBNL	.....	.....	1,000	+1,000	+1,000
20–SC–81 Critical Utilities Infrastructure Revitalization, SLAC	.....	.....	1,000	+1,000	+1,000
20–SC–82 Utilities Infrastructure Project, FNAL	.....	.....	1,000	+1,000	+1,000
Subtotal, Construction:	153,200	118,400	267,000	+113,800	+148,600
Subtotal, Science laboratories infrastructure	232,890	163,600	394,000	+161,110	+230,400

DEPARTMENT OF ENERGY—Continued

[In thousands of dollars]

	2019 Appropriations	Budget estimate	Committee recommendation	Committee recommendation compared to—	
				2019 Appropriations	Budget estimate
Safeguards and security	106,110	110,623	113,000	+6,890	+2,377
Science program direction	183,000	183,000	188,000	+5,000	+5,000
TOTAL, SCIENCE	6,585,000	5,545,972	7,215,000	+630,000	+1,669,028
NUCLEAR WASTE DISPOSAL		90,000			−90,000
ADVANCED RESEARCH PROJECTS AGENCY-ENERGY					
ARPA–E projects	334,750		393,000	+58,250	+393,000
Program direction	31,250		35,000	+3,750	+35,000
Rescission of prior year balances		−287,000			+287,000
Floor Amendments					
TOTAL, ARPA–E	366,000	−287,000	428,000	+62,000	+715,000
TITLE 17—INNOVATIVE TECHNOLOGY LOAN GUARANTEE PGM					
Administrative expenses	33,000	3,000	32,000	−1,000	+29,000
Offsetting collection	−15,000	−3,000	−3,000	+12,000	
Rescission		−160,659			+160,659
Cancellation of Commitment Authority		−224,000			+224,000
TOTAL, TITLE 17—INNOVATIVE TECHNOLOGY LOAN GUARANTEE PROGRAM	18,000	−384,659	29,000	+11,000	+413,659
ADVANCED TECHNOLOGY VEHICLES MANUFACTURING LOAN PGM					
Administrative expenses	5,000		5,000		+5,000
TOTAL, ADVANCED TECHNOLOGY VEHICLES MANUFACTURING LOAN PROGRAM	5,000		5,000		+5,000
TRIBAL ENERGY LOAN GUARANTEE PROGRAM					
Administrative expenses	1,000		2,000	+1,000	+2,000

Rescission	.....	−8,500	.....	.....	+8,500
TOTAL, TRIBAL ENERGY LOAN GUARANTEE PROGRAM	1,000	−8,500	2,000	+1,000	+10,500
OFFICE OF INDIAN ENERGY POLICY AND PROGRAMS					
Indian energy program	13,200	4,479	19,000	+5,800	+14,521
Program Direction	4,800	3,521	6,000	+1,200	+2,479
Floor Amendments	.....	.....	.....	.....	.....
TOTAL, OFFICE OF INDIAN ENERGY POLICY AND PROGRAMS	18,000	8,000	25,000	+7,000	+17,000
DEPARTMENTAL ADMINISTRATION					
Administrative operations:					
Salaries and expenses:					
Office of the Secretary:					
Program direction	5,395	5,119	5,119	−276	.....
Congressional and intergovernmental affairs	6,200	5,895	4,395	−1,805	−1,500
Chief Financial Officer	48,912	52,000	52,000	+3,088	.....
Economic impact and diversity	10,169	9,494	9,494	−675	.....
International Affairs	.....	.....	22,000	+22,000	+22,000
Chief Information Officer	131,624	124,554	145,200	+13,576	+20,646
Artificial Intelligence and Technology Office	.....	.....	2,500	+2,500	+2,500
Other Departmental Administration	173,247	152,953	141,762	−31,485	−11,191
Subtotal, Salaries and expenses	375,547	350,015	382,470	+6,923	+32,455
Subtotal, Administrative operations	375,547	350,015	382,470	+6,923	+32,455
Strategic partnership projects	40,000	40,000	40,000	.....	.....
Subtotal, Departmental administration	415,547	390,015	422,470	+6,923	+32,455
Use of prior–year balances	−2,000	.....	.....	+2,000	.....
Funding from other defense activities	−151,689	−179,092	−173,092	−21,403	+6,000
Floor Amendments	.....	.....	.....	.....	.....
Total, Departmental administration (gross)	261,858	210,923	249,378	−12,480	+38,455
Miscellaneous revenues	−96,000	−93,378	−93,378	+2,622	.....

DEPARTMENT OF ENERGY—Continued

[In thousands of dollars]

	2019 Appropriations	Budget estimate	Committee recommendation	Committee recommendation compared to—	
				2019 Appropriations	Budget estimate
TOTAL, DEPARTMENTAL ADMINISTRATION (net)	165,858	117,545	156,000	−9,858	+38,455
OFFICE OF THE INSPECTOR GENERAL					
Office of the inspector general	51,330	54,215	54,215	+2,885	.....
TOTAL, OFFICE OF THE INSPECTOR GENERAL	51,330	54,215	54,215	+2,885	.....
INTERNATIONAL AFFAIRS	.....	36,100	.....	.....	−36,100
TOTAL, ENERGY PROGRAMS	13,472,407	8,349,265	14,996,718	+1,524,311	+6,647,453
ATOMIC ENERGY DEFENSE ACTIVITIES					
NATIONAL NUCLEAR SECURITY ADMINISTRATION					
WEAPONS ACTIVITIES					
Directed stockpile work:					
Life Extension Programs and Major alterations B61 Life extension program	794,049	792,611	792,611	−1,438	.....
W76 Life extension program	48,888	.....	.....	−48,888	.....
W76–2 Modification program	65,000	10,000	10,000	−55,000	.....
W88 Alteration program	304,285	304,186	304,186	−99	.....
W80–4 Life extension program	654,766	898,551	898,551	+243,785	.....
IW–1	53,000	.....	.....	−53,000	.....
W87–1 Modification Program	.....	112,011	112,011	+112,011	.....
Subtotal, Life Extension Programs and Major alterations	1,919,988	2,117,359	2,117,359	+197,371	.....
Stockpile systems:					
B61 Stockpile systems	64,547	71,232	71,232	+6,685	.....
W76 Stockpile systems	84,300	89,804	89,804	+5,504	.....
W78 Stockpile systems	81,329	81,299	81,299	−30	.....
W80 Stockpile systems	80,204	85,811	85,811	+5,607	.....

B83 Stockpile systems	35,082	51,543	51,543	+16,461	.....
W87 Stockpile systems	83,107	98,262	98,262	+15,155	.....
W88 Stockpile systems	170,913	157,815	157,815	−13,098	.....
Subtotal, Stockpile systems	599,482	635,766	635,766	+36,284	.....
Weapons dismantlement and disposition	56,000	47,500	56,000	.....	+8,500
Stockpile services:					
Production support	510,000	543,964	543,964	+33,964	.....
Research and Development support	36,150	39,339	39,339	+3,189	.....
Research and Development certification and safety	201,840	236,235	236,235	+34,395	.....
Management, technology, and production	300,736	305,000	305,000	+4,264	.....
Subtotal, Stockpile services	1,048,726	1,124,538	1,124,538	+75,812	.....
Strategic materials:					
Uranium sustainment	87,182	94,146	94,146	+6,964	.....
Plutonium sustainment:					
Plutonium sustainment operations	286,282	691,284	698,844	+412,562	+7,560
Plutonium pit production project	75,000	21,156	21,156	−53,844	.....
Subtotal, Plutonium sustainment	361,282	712,440	720,000	+358,718	+7,560
Tritium sustainment	290,275	269,000	269,000	−21,275	.....
Lithium sustainment	29,135	28,800	28,800	−335	.....
Domestic uranium enrichment	50,000	140,000	70,000	+20,000	−70,000
HEU downblend	.....	.....	90,000	+90,000	+90,000
Strategic materials sustainment	216,196	256,808	256,808	+40,612	.....
Subtotal, Strategic materials	1,034,070	1,501,194	1,528,754	+494,684	+27,560
Subtotal, Directed stockpile work	4,658,266	5,426,357	5,462,417	+804,151	+36,060
Research, Development, Test and Evaluation (RDT&E):					
Science:					
Advanced certification	57,710	57,710	57,710	.....	.....
Primary assessment technologies	89,313	95,169	95,169	+5,856	.....
Dynamic materials properties	120,000	133,800	136,306	+16,306	+2,506
Advanced radiography	32,544	32,544	32,544	.....	.....
Secondary assessment technologies	77,553	77,553	77,553	.....	.....
Academic alliances and partnerships	53,364	44,625	70,000	+16,636	+25,375

DEPARTMENT OF ENERGY—Continued

[In thousands of dollars]

	2019 Appropriations	Budget estimate	Committee recommendation	Committee recommendation compared to—	
				2019 Appropriations	Budget estimate
Enhanced capabilities for subcritical experiments	50,000	145,160	125,160	+75,160	−20,000
Subtotal, Science	480,484	586,561	594,442	+113,958	+7,881
Engineering:					
Enhanced surety	39,717	46,500	46,500	+6,783	
Weapons system engineering assessment technology	23,029			−23,029	
Delivery environments (formerly Weapon systems engineering assessment technology)		35,945	35,945	+35,945	
Nuclear survivability	48,230	53,932	53,932	+5,702	
Enhanced surveillance	45,147	57,747	57,747	+12,600	
Stockpile responsiveness	34,000	39,830	100,000	+66,000	+60,170
Subtotal, Engineering	190,123	233,954	294,124	+104,001	+60,170
Inertial confinement fusion ignition and high yield:					
Ignition and other stockpile programs	101,140	55,649	110,000	+8,860	+54,351
Diagnostics, cryogenics and experimental support	77,915	66,128	78,000	+85	+11,872
Pulsed power inertial confinement fusion	6,596	8,571	9,000	+2,404	+429
Joint program in high energy density laboratory plasmas	8,492	12,000	5,000	−3,492	−7,000
Facility operations and target production	350,791	338,247	368,000	+17,209	+29,753
Subtotal, Inertial confinement fusion ignition and high yield	544,934	480,595	570,000	+25,066	+89,405
Advanced simulation and computing:					
Advanced simulation and computing	670,119	789,849	789,849	+119,730	
Construction:					
18–D–670 Exascale class computer cooling equipment, LANL	24,000			−24,000	
18–D–620 Exascale computing facility modernization project, LLNL	23,000	50,000	50,000	+27,000	
Subtotal, Construction	47,000	50,000	50,000	+3,000	
Subtotal, Advanced simulation and computing	717,119	839,849	839,849	+122,730	

Advanced manufacturing development:					
Additive manfacturing	12,000	18,500	22,000	+10,000	+3,500
Component manufacturing development	38,644	48,410	52,000	+13,356	+3,590
Process technology development	30,914	69,998	70,000	+39,086	+2
Subtotal, Advanced manufacturing development	81,558	136,908	144,000	+62,442	+7,092
Subtotal, RDT&E	2,014,218	2,277,867	2,442,415	+428,197	+164,548
Infrastructure and Operations:					
Operations of facilities	870,000	905,000	905,000	+35,000	.....
Safety and environmental operations	110,000	119,000	130,000	+20,000	+11,000
Maintenance and repair of facilities	515,000	456,000	515,000	.....	+59,000
Recapitalization:					
Infrastructure and safety	450,000	447,657	460,000	+10,000	+12,343
Capability based investments	109,057	135,341	140,000	+30,943	+4,659
Subtotal, Recapitalization	559,057	582,998	600,000	+40,943	+17,002
Subtotal, Infrastructure and Operations	2,054,057	2,062,998	2,150,000	+95,943	+87,002
Construction:					
19–D–670 138kV Power Transmission System Replacement, NNSS	.....	6,000	6,000	+6,000	.....
18–D–680 Material staging facility, PX	24,000	.....	24,000	.....	+24,000
18–D–650 Tritium production capability, SRS	.....	27,000	27,000	+27,000	.....
18–D–690 Lithium production capability, Y–12	19,000	.....	.....	−19,000	.....
18–D–690 Lithium processing facility, Y–12 (formerly Lithium production capability)	.....	32,000	32,000	+32,000	.....
17–D–640 U1a complex enhancements project, NNSA	20,000	35,000	35,000	+15,000	.....
17–D–630 Electrical distribution system, LLNL	.....	.....	.....	.....	.....
16–D–515 Albuquerque Complex project	47,953	.....	.....	−47,953	.....
15–D–612 Emergency Operations Center, LLNL	.....	5,000	5,000	+5,000	.....
15–D–611 Emergency Operations Center, SNL	.....	4,000	4,000	+4,000	.....
15–D–301 HE Science & Engineering Facility, PX	.....	123,000	123,000	+123,000	.....
06–D–141 Uranium Processing Facility, Y–12	703,000	745,000	745,000	+42,000	.....
Chemistry and metallurgy replacement (CMRR):					
04–D–125 Chemistry and metallurgy replacement project, LANL	219,842	168,444	168,444	−51,398	.....
Subtotal, CMRR	219,842	168,444	168,444	−51,398	.....
Subtotal, Construction	1,033,795	1,145,444	1,169,444	+135,649	+24,000

DEPARTMENT OF ENERGY—Continued

[In thousands of dollars]

	2019 Appropriations	Budget estimate	Committee recommendation	Committee recommendation compared to—	
				2019 Appropriations	Budget estimate
Subtotal, Infrastructure and Operations	3,087,852	3,208,442	3,319,444	+231,592	+111,002
Secure transportation asset:					
Operations and equipment	176,617	209,502	209,502	+32,885	.....
Program direction	102,022	107,660	107,660	+5,638	.....
Subtotal, Secure transportation asset	278,639	317,162	317,162	+38,523	.....
Defense nuclear security:					
Defense nuclear security	690,638	778,213	765,000	+74,362	−13,213
Construction:					
17–D–710 West end protected area reduction project, Y–12	.....	.....	35,000	+35,000	+35,000
Subtotal, Defense nuclear security	690,638	778,213	800,000	+109,362	+21,787
Information technology and cyber security	221,175	309,362	309,362	+88,187	.....
Legacy contractor pensions	162,292	91,200	91,200	−71,092	.....
Use of prior year balances	−13,080	.....	.....	+13,080	.....
Subtotal, Weapons Activities	11,100,000	12,408,603	12,742,000	+1,642,000	+333,397
TOTAL, WEAPONS ACTIVITIES	11,100,000	12,408,603	12,742,000	+1,642,000	+333,397
DEFENSE NUCLEAR NONPROLIFERATION					
Defense Nuclear Nonproliferation Programs:					
Global material security:					
International nuclear security	46,339	48,839	48,839	+2,500	.....
Domestic radiologic security	127,433	90,513	137,433	+10,000	+46,920
International radiologic security	78,907	60,827	78,907	.....	+18,080
Nuclear smuggling detection	154,429	142,171	154,429	.....	+12,258
Subtotal, Global material security	407,108	342,350	419,608	+12,500	+77,258

Material management and minimization:					
HEU Reactor Conversion	.....	114,000	99,000	+99,000	−15,000
Nuclear material removal	32,925	32,925	32,925	.....	.....
Material disposition	225,869	186,608	186,608	−39,261	.....
Laboratory and partnership support	35,000	.....	10,000	−25,000	+10,000
Subtotal, Material management and minimization	293,794	333,533	328,533	+34,739	−5,000
Nonproliferation and arms control	129,703	137,267	140,000	+10,297	+2,733
Defense nuclear nonproliferation R&D:					
Proliferation detection	281,521	304,040	291,500	+9,979	−12,540
Nuclear detonation detection	195,749	191,317	195,749	.....	+4,432
Nonproliferation fuels development	98,300	.....	15,000	−83,300	+15,000
Nonproliferation Stewardship program	.....	.....	22,500	+22,500	+22,500
Subtotal, Defense nuclear nonproliferation R&D	575,570	495,357	524,749	−50,821	+29,392
Nonproliferation construction:					
99–D–143 Mixed Oxide (MOX) Fuel Fabrication Facility, SRS	220,000	220,000	220,000	.....	.....
18–D–150 Surplus plutonium disposition project, SRS	.....	79,000	79,000	+79,000	.....
Subtotal, Nonproliferation construction	220,000	299,000	299,000	+79,000	.....
Legacy contractor pensions	28,640	13,700	13,700	−14,940	.....
Subtotal, Defense Nuclear Nonproliferation Programs	1,654,815	1,621,207	1,725,590	+70,775	+104,383
Nuclear counterterrorism and incident response program:					
Nuclear counterterrorism and incident response	319,185	.....	.....	−319,185	.....
Emergency Operations	.....	35,545	35,545	+35,545	.....
Counterterrorism and Counterproliferation	.....	336,550	323,865	+323,865	−12,685
Subtotal, Nuclear counterterrorism and incident response program	319,185	372,095	359,410	+40,225	−12,685
Use of prior–year balances	−25,000	.....	.....	+25,000	.....
Subtotal, Defense Nuclear Nonproliferation	1,949,000	1,993,302	2,085,000	+136,000	+91,698
Rescission	−19,000	.....	.....	+19,000	.....

DEPARTMENT OF ENERGY—Continued

[In thousands of dollars]

	2019 Appropriations	Budget estimate	Committee recommendation	Committee recommendation compared to—	
				2019 Appropriations	Budget estimate
TOTAL, DEFENSE NUCLEAR NONPROLIFERATION	1,930,000	1,993,302	2,085,000	+155,000	+91,698
NAVAL REACTORS					
Naval reactors development	514,951	531,205	516,205	+1,254	−15,000
Columbia–class reactor systems development	138,000	75,500	75,500	−62,500	
S8G Prototype refueling	250,000	155,000	170,000	−80,000	+15,000
Naval reactors operations and infrastructure	525,764	553,591	553,591	+27,827	
Program direction	48,709	50,500	50,500	+1,791	
Construction:					
20–D–931, KL Fuel development laboratory		23,700	23,700	+23,700	
19–D–930 KS Overhead Piping	10,994	20,900	20,900	+9,906	
17–D–911 BL Fire System Upgrade	13,200			−13,200	
14–D–901 Spent fuel handling recapitalization project, NRF	287,000	238,000	238,000	−49,000	
Subtotal, Construction	311,194	282,600	282,600	−28,594	
TOTAL, NAVAL REACTORS	1,788,618	1,648,396	1,648,396	−140,222	
FEDERAL SALARIES AND EXPENSES	410,000	434,699	434,699	+24,699	
TOTAL, NATIONAL NUCLEAR SECURITY ADMINISTRATION	15,228,618	16,485,000	16,910,095	+1,681,477	+425,095
DEFENSE ENVIRONMENTAL CLEANUP					
Closure sites administration	4,889	4,987	4,987	+98	
Richland:					
River corridor and other cleanup operations	193,692	139,750	236,102	+42,410	+96,352
Central plateau remediation	660,358	472,949	654,800	−5,558	+181,851
RL Community and regulatory support	10,121	5,121	10,121		+5,000

Construction:					
18–D–404 WESF Modifications and capsule storage	1,000	11,000	11,000	+10,000	.....
15–D–401 Containerized sludge removal	.....	.....	−11,800	−11,800	−11,800
Subtotal, Construction	1,000	11,000	−800	−1,800	−11,800
Subtotal, Richland	865,171	628,820	900,223	+35,052	+271,403
Office of River Protection:					
Waste treatment and immobilization plant commissioning	15,000	15,000	15,000	.....	.....
Rad liquid tank waste stabilization and disposition	771,947	677,460	775,000	+3,053	+97,540
Construction:					
15–D–409 Low activity waste pretreatment system	56,053	.....	.....	−56,053	.....
18–D–16 Waste treatment and immobilization plant—LBL/Direct feed LAW	655,000	640,000	776,000	+121,000	+136,000
01–D–16 D High–level waste facility	60,000	30,000	25,000	−35,000	−5,000
01–D–16 E Pretreatment facility	15,000	20,000	15,000	.....	−5,000
Subtotal, Construction	786,053	690,000	816,000	+29,947	+126,000
ORP Low–level waste offsite disposal	.....	10,000	10,000	+10,000	.....
Subtotal, Office of River Protection	1,573,000	1,392,460	1,616,000	+43,000	+223,540
Idaho National Laboratory:					
Idaho cleanup and waste disposition	420,000	331,354	380,000	−40,000	+48,646
Idaho community and regulatory support	3,200	3,500	3,500	+300	.....
ID Excess facilities D&D	10,000	.....	.....	−10,000	.....
Use of prior year balances	.....	.....	−10,000	−10,000	−10,000
Total, Idaho National Laboratory	433,200	334,854	373,500	−59,700	+38,646
NNSA sites and Nevada offsites:					
Lawrence Livermore National Laboratory	1,704	1,727	1,727	+23	.....
Separations Process Research Unit	15,000	15,300	15,300	+300	.....
Nevada	60,136	60,737	60,737	+601	.....
Sandia National Laboratory	2,600	2,652	2,652	+52	.....
Los Alamos National Laboratory	220,000	195,462	220,000	.....	+24,538
LLNL Excess facilities D&D	25,000	128,000	65,000	+40,000	−63,000
Total, NNSA sites and Nevada off–sites	324,440	403,878	365,416	+40,976	−38,462

[In thousands of dollars]

	2019 Appropriations	Budget estimate	Committee recommendation	Committee recommendation compared to—	
				2019 Appropriations	Budget estimate
Oak Ridge Reservation:					
OR Nuclear facility D&D	189,000	93,693	216,000	+27,000	+122,307
U233 disposition program	52,300	45,000	55,000	+2,700	+10,000
OR Cleanup and disposition	74,000	82,000	101,300	+27,300	+19,300
Construction:					
17–D–401 On–site waste disposal facility	10,000	15,269	.....	−10,000	−15,269
14–D–403 Outfall 200 mercury treatment facility	76,000	49,000	70,000	−6,000	+21,000
Subtotal, Construction	86,000	64,269	70,000	−16,000	+5,731
OR Community & regulatory support	5,700	4,819	2,700	−3,000	−2,119
OR Technology development and deployment	3,000	3,000	5,000	+2,000	+2,000
Total, Oak Ridge Reservation	410,000	292,781	450,000	+40,000	+157,219
Savannah River Site:					
SR Site risk management operations:					
SR Site risk management operations	489,460	490,613	490,613	+1,153	.....
Construction:					
18–D–402 Emergency Operations Center Replacement, SR	1,259	6,792	6,792	+5,533	.....
Subtotal, SR Site risk management operations	490,719	497,405	497,405	+6,686	.....
SR Community and regulatory support	11,249	4,749	11,249	.....	+6,500
SR Radioactive liquid tank waste stabilization and disposition	696,869	797,706	820,106	+123,237	+22,400
Construction:					
20–D–402 Advanced Manufacturing Collaborative Facility (AMC)	.....	50,000	50,000	+50,000	.....
20–D–401 Saltstone Disposal Unit #10, 11, 12	.....	500	500	+500	.....
19–D–701 SR Security system replacement	10,000	.....	6,279	−3,721	+6,279
18–D–402 Saltstone disposal unit #8/9	7,577	51,750	20,000	+12,423	−31,750
17–D–402 Saltstone disposal Unit #7, SRS	41,243	40,034	40,034	−1,209	.....
05–D–405 Salt waste processing facility, SRS	130,000	20,988	24,059	−105,941	+3,071

Subtotal, Construction	188,820	163,272	140,872	−47,948	−22,400
Use of prior year balances	.....	.....	.....	.....	.....
Total, Savannah River Site	1,387,657	1,463,132	1,469,632	+81,975	+6,500
Waste Isolation Pilot Plant:					
Waste Isolation Pilot Plant	311,695	299,088	304,353	−7,342	+5,265
Construction:					
15–D–411 Safety significant confinement ventilation system, WIPP	84,212	58,054	58,054	−26,158	.....
15–D–412 Exhaust shaft, WIPP	1,000	34,500	34,500	+33,500	.....
Total, Waste isolation pilot plant	396,907	391,642	396,907	.....	+5,265
Program direction	298,500	278,908	293,734	−4,766	+14,826
Program support	12,979	12,979	12,979	.....	.....
Safeguards and Security	304,434	317,622	317,622	+13,188	.....
Technology development	25,000	.....	25,000	.....	+25,000
Use of prior year balances	−7,577	.....	.....	+7,577	.....
Subtotal, Defense Environmental Cleanup	6,028,600	5,522,063	6,226,000	+197,400	+703,937
Rescission	−4,600	−15,562	.....	+4,600	+15,562
TOTAL, DEFENSE ENVIRONMENTAL CLEAN UP	6,024,000	5,506,501	6,226,000	+202,000	+719,499
OTHER DEFENSE ACTIVITIES					
Environment, health, safety and security:					
Environment, health, safety and security	133,839	139,628	136,345	+2,506	−3,283
Program direction	69,000	72,881	69,000	.....	−3,881
Subtotal, Environment, Health, safety and security	202,839	212,509	205,345	+2,506	−7,164
Enterprise assessments:					
Enterprise assessments	24,068	24,068	24,068	.....	.....
Program direction	52,702	57,211	54,711	+2,009	−2,500
Subtotal, Enterprise assessments	76,770	81,279	78,779	+2,009	−2,500
Specialized security activities	266,378	254,578	271,000	+4,622	+16,422

DEPARTMENT OF ENERGY—Continued

[In thousands of dollars]

	2019 Appropriations	Budget estimate	Committee recommendation	Committee recommendation compared to—	
				2019 Appropriations	Budget estimate
Office of Legacy Management:					
Legacy management	140,575	283,767	142,767	+2,192	−141,000
Program direction	18,302	19,262	19,262	+960	.....
Subtotal, Office of Legacy Management	158,877	303,029	162,029	+3,152	−141,000
Defense related administrative support	151,689	179,092	173,092	+21,403	−6,000
Office of hearings and appeals	5,739	4,852	4,852	−887	.....
Use of prior year balances	−2,000	.....	.....	+2,000	.....
TOTAL, OTHER DEFENSE ACTIVITIES	860,292	1,035,339	895,097	+34,805	−140,242
DEFENSE NUCLEAR WASTE DISPOSAL	.....	26,000	.....	.....	−26,000
TOTAL, ATOMIC ENERGY DEFENSE ACTIVITIES	22,112,910	23,052,840	24,031,192	+1,918,282	+978,352
POWER MARKETING ADMINISTRATIONS [1]					
SOUTHEASTERN POWER ADMINISTRATION					
Operation and maintenance:					
Purchase power and wheeling	68,824	80,419	70,704	+1,880	−9,715
Program direction	6,500	6,597	6,597	+97	.....
Subtotal, Operation and maintenance	75,324	87,016	77,301	+1,977	−9,715
Less alternative financing [PPW]	−13,824	−14,704	−14,704	−880	.....
Offsetting collections (for PPW)	−55,000	−65,715	−56,000	−1,000	+9,715
Offsetting collections (PD)	−6,500	−6,597	−6,597	−97	.....
TOTAL, SOUTHEASTERN POWER ADMINISTRATION	.....	.....	.....	.....	.....

SOUTHWESTERN POWER ADMINISTRATION					
Operation and maintenance:					
Operating expenses	17,006	13,639	13,639	−3,367	.....
Purchase power and wheeling	60,000	93,000	25,000	−35,000	−68,000
Program direction	32,995	35,157	35,157	+2,162	.....
Construction	16,875	15,067	15,067	−1,808	.....
Subtotal, Operation and maintenance	126,876	156,863	88,863	−38,013	−68,000
Less alternative financing (for O&M)	−8,894	−6,018	−6,018	+2,876	.....
Less alternative financing (for PPW)	−10,000	−10,000	−10,000	.....	.....
Less alternative financing (Const)	−12,180	−10,070	−10,070	+2,110	.....
Offsetting collections (PD)	−29,695	−31,467	−31,467	−1,772	.....
Offsetting collections (for O&M)	−5,707	−5,908	−5,908	−201	.....
Offsetting collections (for PPW)	−50,000	−83,000	−15,000	+35,000	+68,000
TOTAL, SOUTHWESTERN POWER ADMINISTRATION	10,400	10,400	10,400	.....	.....
WESTERN AREA POWER ADMINISTRATION					
Operation and maintenance:					
Construction and rehabilitation	32,632	45,887	45,887	+13,255	.....
Operation and maintenance	77,056	72,176	72,176	−4,880	.....
Purchase power and wheeling	486,396	547,650	456,769	−29,627	−90,881
Program direction	238,483	250,091	250,091	+11,608	.....
Subtotal, Operation and maintenance	834,567	915,804	824,923	−9,644	−90,881
Less alternative financing (for O&M)	−7,758	−6,600	−6,600	+1,158	.....
Less alternative financing (for Construction)	−27,077	−39,922	−39,922	−12,845	.....
Less alternative financing (for Program Dir.)	−39,136	−44,719	−44,719	−5,583	.....
Less alternative financing (for PPW)	−260,954	−288,769	−288,769	−27,815	.....
Offsetting collections (for program direction)	−150,761	−149,142	−149,142	+1,619	.....
Offsetting collections (for O&M)	−25,009	−24,445	−24,445	+564	.....
Offsetting collections (Public Law 108–477, Public Law 109–103)	−225,442	−258,881	−168,000	+57,442	+90,881
Offsetting collections (Public Law 98–381)	−9,058	−8,954	−8,954	+104	.....
Use of prior–year balances	.....	−5,000	−5,000	−5,000	.....
Rescission of prior–year balances	.....	−176	.....	.....	+176
TOTAL, WESTERN AREA POWER ADMINISTRATION	89,372	89,196	89,372	.....	+176

DEPARTMENT OF ENERGY—Continued

[In thousands of dollars]

	2019 Appropriations	Budget estimate	Committee recommendation	Committee recommendation compared to—	
				2019 Appropriations	Budget estimate
FALCON AND AMISTAD OPERATING AND MAINTENANCE FUND					
Operation and maintenance	4,440	5,647	5,647	+1,207	.....
Offsetting collections	−1,340	−2,932	−2,932	−1,592	.....
Less alternative financing	−372	−1,187	−1,187	−815	.....
Use of prior–year balances	−2,500	−1,300	−1,300	+1,200	.....
TOTAL, FALCON AND AMISTAD O&M FUND	228	228	228	.....	.....
TOTAL, POWER MARKETING ADMINISTRATIONS	100,000	99,824	100,000	.....	+176
FEDERAL ENERGY REGULATORY COMMISSION					
Federal Energy Regulatory Commission	369,900	382,000	382,000	+12,100	.....
FERC revenues	−369,900	−382,000	−382,000	−12,100	.....
Total, FEDERAL ENERGY REGULATORY COMMISSION	.....	.....	.....	.....	.....
GENERAL PROVISIONS					
Section 107 (rescission)	.....	.....	−96,000	−96,000	−96,000
GRAND TOTAL, DEPARTMENT OF ENERGY	35,685,317	31,501,929	39,031,910	+3,346,593	+7,529,981
(Total amount appropriated)	(35,708,917)	(32,197,826)	(39,185,910)	(+3,476,993)	(+6,988,084)
(Rescissions)	(−23,600)	(−695,897)	(−154,000)	(−130,400)	(+541,897)
SUMMARY OF ACCOUNTS					
Energy efficiency and renewable energy	2,379,000	343,000	2,800,000	+421,000	+2,457,000
Cybersecurity, Energy Security, and Emergency Response	120,000	156,500	179,000	+59,000	+22,500
Electricity	156,000	182,500	221,000	+65,000	+38,500
Nuclear energy	1,326,090	824,000	1,517,808	+191,718	+693,808
Fossil Energy Research and Development	740,000	562,000	800,000	+60,000	+238,000

Naval Petroleum & Oil Shale Reserves	10,000	14,000	14,000	+4,000	.....
Strategic petroleum reserve	235,000	174,000	174,000	−61,000	.....
SPR Petroleum Account	10,000	−69,000	10,000	.....	+79,000
Northeast home heating oil reserve	10,000	−90,000	10,000	.....	+100,000
Energy Information Administration	125,000	118,000	132,000	+7,000	+14,000
Non–Defense Environmental Cleanup	310,000	247,480	318,000	+8,000	+70,520
Uranium enrichment D&D fund	841,129	715,112	906,695	+65,566	+191,583
Science	6,585,000	5,545,972	7,215,000	+630,000	+1,669,028
Nuclear Waste Disposal	.....	90,000	.....	.....	−90,000
Advanced Research Projects Agency–Energy	366,000	−287,000	428,000	+62,000	+715,000
Title 17 Innovative technology loan guarantee program	18,000	−384,659	29,000	+11,000	+413,659
Advanced technology vehicles manufacturing loan pgm	5,000	.....	5,000	.....	+5,000
Tribal Energy Loan Guarantee program	1,000	−8,500	2,000	+1,000	+10,500
Office of Indian Energy Policy and Programs	18,000	8,000	25,000	+7,000	+17,000
Departmental administration	165,858	117,545	156,000	−9,858	+38,455
Office of the Inspector General	51,330	54,215	54,215	+2,885	.....
International Affairs	.....	36,100	.....	.....	−36,100
Atomic energy defense activities:					
National Nuclear Security Administration:					
Weapons activities	11,100,000	12,408,603	12,742,000	+1,642,000	+333,397
Defense nuclear nonproliferation	1,930,000	1,993,302	2,085,000	+155,000	+91,698
Naval reactors	1,788,618	1,648,396	1,648,396	−140,222	.....
Federal Salaries and Expenses	410,000	434,699	434,699	+24,699	.....
Subtotal, National Nuclear Security Admin	15,228,618	16,485,000	16,910,095	+1,681,477	+425,095
Defense environmental cleanup	6,024,000	5,506,501	6,226,000	+202,000	+719,499
Other defense activities	860,292	1,035,339	895,097	+34,805	−140,242
Defense nuclear waste disposal	.....	26,000	.....	.....	−26,000
Total, Atomic Energy Defense Activities	22,112,910	23,052,840	24,031,192	+1,918,282	+978,352
Power marketing administrations (1):					
Southeastern Power Administration	.....	.....	.....	.....	.....
Southwestern Power Administration	10,400	10,400	10,400	.....	.....
Western Area Power Administration	89,372	89,196	89,372	.....	+176
Falcon and Amistad operating and maintenance fund	228	228	228	.....	.....
Total, Power Marketing Administrations	100,000	99,824	100,000	.....	+176

DEPARTMENT OF ENERGY—Continued

[In thousands of dollars]

	2019 Appropriations	Budget estimate	Committee recommendation	Committee recommendation compared to—	
				2019 Appropriations	Budget estimate
Federal Energy Regulatory Commission:					
Salaries and expenses	369,900	382,000	382,000	+12,100	.....
Revenues	−369,900	−382,000	−382,000	−12,100	.....
General Provision:					
Section 107 (rescission)	.....	.....	−96,000	−96,000	−96,000
Total Summary of Accounts, Department of Energy	35,685,317	31,501,929	39,031,910	+3,346,593	+7,529,981

[1] Totals include alternative financing costs, reimbursable agreement funding, and power purchase and wheeling expenditures. Offsetting collection totals reflect funds collected for annual expenses, including power purchase and wheeling.

GENERAL PROVISIONS—DEPARTMENT OF ENERGY

Section 301. The bill includes a provision related to reprogramming.

Section 302. The bill includes a provision to authorize intelligence activities pending enactment of the fiscal year 2020 Intelligence Authorization Act.

Section 303. The bill includes a provision related to independent cost estimates.

Section 304. The bill includes a provision concerning a pilot program for consolidated storage of spent nuclear fuel.

Section 305. The bill includes a provision regarding the approval of critical decision-2 and critical decision-3 for certain construction projects.

Section 306. The bill includes a provision regarding environmental stewardship and endangered species recovery efforts.

Section 307. The bill includes a provision regarding a pilot program for storage of used nuclear fuel.

Section 308. The bill includes a provision regarding the Working Capital Fund.

TITLE IV

INDEPENDENT AGENCIES

The budget request again proposes to eliminate the Delta Regional Authority, Denali Commission, and Northern Border Regional Commission. The budget requests funding to conduct closeout of the agencies in fiscal year 2020. The Committee strongly opposes the termination of these agencies, and recommends funding to continue their activities. The administration shall continue all activities funded by this act, as well as follow directive language included in this report. No funds shall be used for the planning of or implementation of termination of these agencies.

APPALACHIAN REGIONAL COMMISSION

Appropriations, 2019	$165,000,000
Budget estimate, 2020	165,000,000
Committee recommendation	175,000,000

The Committee recommends $175,000,000 for the Appalachian Regional Commission [ARC], an increase of $10,000,000 above the budget request.

Further, the Committee recommends not less than $16,000,000 shall be for a program of industrial site and workforce development in Southern and South Central Appalachia, focused primarily on the automotive supplier sector and the aviation sector. Up to $13,500,000 of that amount is recommended for activities in Southern Appalachia. The funds shall be distributed to States that have distressed counties in Southern and South Central Appalachia using the ARC Area Development Formula.

Within available funding, the Committee recommends $16,000,000 for a program of basic infrastructure improvements in distressed counties in Central Appalachia. Funds shall be distributed according to ARC's distressed counties formula and shall be in addition to the regular allocation to distressed counties.

Within available funds, the Committee recommends up to $10,000,000 to implement a regionally competitive pilot initiative to address the substance abuse crisis that disproportionally affects Appalachia. Substance abuse and the opioid crisis have uniquely affected the Appalachian region, and the Commission is well placed to respond to the economic impacts of this crisis through its existing programs. However, although it has the authority to address the impacts of the crisis, it has not yet done so by changing its formulas for distress and need. The Commission currently uses an index-based classification system to compare each county in the nation with national averages on three economic indicators-three-year average unemployment rates, per capita market income, and poverty rates—and then classifies those counties within one of five economic status designations: distressed, at-risk, transitional, competi-

tive, or attainment. In determining a classification system for the basis of providing substance abuse grants, the Committee encourages the Commission to consider data from the Centers for Disease Control and other data on overdose and overdose death rates.

Within available funds, the Committee recommends $50,000,000 for the Partnerships for Opportunity and Workforce and Economic Revitalization [POWER] Initiative to support communities, primarily in Appalachia, that have been adversely impacted by the closure of coal-powered generating plants and a declining coal industry by providing resources for economic diversification, job creation, job training, and other employment services. The Committee recommends $83,000,000 for base funds. Within available funds, $10,000,000 is provided for a program of high-speed broadband deployment in economically distressed counties within the Central, North Central, and Northern Appalachian regions, in the Commission's jurisdiction, to diversify and enhance regional business development.

DEFENSE NUCLEAR FACILITIES SAFETY BOARD

SALARIES AND EXPENSES

Appropriations, 2019	$31,000,000
Budget estimate, 2020	29,450,000
Committee recommendation	31,000,000

The Committee recommends $31,000,000 for the Defense Nuclear Facilities Safety Board, an increase of $1,550,000 above the budget request. Congress permanently authorized the Inspector General for the Nuclear Regulatory Commission to serve as the Inspector General for the Defense Nuclear Facilities Safety Board. The Committee recommendation includes $1,171,000 within the Office of Inspector General of the Nuclear Regulatory Commission to perform these services.

DELTA REGIONAL AUTHORITY

Appropriations, 2019	$25,000,000
Budget estimate, 2020	2,500,000
Committee recommendation	30,000,000

The Committee recommends $30,000,000 for the Delta Regional Authority [DRA], an increase of $27,500,000 above the budget request.

Within available funds, not less than $15,000,000 is recommended for flood control, basic public infrastructure development and transportation improvements, which shall be allocated separate from the State formula funding method. The Committee does not include a statutory waiver with regard to DRA's priority of funding, and directs DRA to focus on activities relating to basic public infrastructure and transportation infrastructure before allocating funding toward other priority areas.

DENALI COMMISSION

Appropriations, 2019	$15,000,000
Budget estimate, 2020	7,300,000
Committee recommendation	15,000,000

The Committee recommends $15,000,000 for the Denali Commission, an increase of $7,700,000 above the budget request. The Denali Commission is a Federal-State partnership responsible for promoting infrastructure development, job training, and other economic support services in rural areas throughout Alaska.

NORTHERN BORDER REGIONAL COMMISSION

Appropriations, 2019	$20,000,000
Budget estimate, 2020	850,000
Committee recommendation	25,000,000

The Committee recommends $25,000,000 for the Northern Border Regional Commission, an increase of $24,150,000 above the budget request. Within available funds, not less than $4,000,000 is recommended for initiatives that seek to address the decline in forest-based economies throughout the region and $500,000 is recommended for the State Capacity Building Grant Program authorized in the 2018 Farm Bill.

NUCLEAR REGULATORY COMMISSION

SALARIES AND EXPENSES

Appropriations, 2019	$898,350,000
Budget estimate, 2020	907,765,000
Committee recommendation	841,236,000

REVENUES

Appropriations, 2019	−$770,477,000
Budget estimate, 2020	−748,669,000
Committee recommendation	−723,469,000

NET APPROPRIATION

Appropriations, 2019	$127,873,000
Budget estimate, 2020	159,096,000
Committee recommendation	117,767,000

The Committee recommends $841,236,000 for the Nuclear Regulatory Commission [Commission], a decrease of $66,529,000 from the budget request. The Committee's recommendation requires the use of $40,000,000 of unobligated balances from prior appropriations. This amount is offset by estimated revenues of $723,469,000, resulting in a net appropriation of $117,767,000. In developing this recommendation, the Committee has consulted with the Commission to ensure it maintains its gold-standard health and safety mission while reducing low-priority work.

Advanced Nuclear Reactor Regulatory Infrastructure.—The recommendation includes $15,478,000 for the development of regulatory infrastructure for advanced nuclear technologies, which is not subject to the Commission's general fee recovery collection requirements. The Committee encourages the Commission to incorporate nuclear safeguards and security requirements into its development of the advanced reactor regulatory infrastructure and to work with the Department of Energy, the International Atomic Energy Agency, and other groups in the formulation of its licensing requirements.

Budget Control Points.—The recommendation includes budget control points for fiscal year 2020 to ensure the Commission's budget execution follows congressional intent. These budget control points are included in the table following the heading of Office of Inspector General. As it did for fiscal year 2019, the Committee includes statutory language incorporating the new control points by reference into law, and notes that any breaches are subject to the reporting requirements and remedies of the Antideficiency Act contained in title 31 of the United States Code.

Budget Execution Plan.—The Commission is directed to provide the Committee with a specific budget execution plan no later than 30 days after the enactment of this act. This plan shall provide details at the product line level within each of the control points, as applicable, included in the table after the Office of Inspector General heading below.

Reprogramming Authority.—Section 402 continues reprogramming authority included in the Energy and Water Development Appropriations Act, 2019, for the Commission between the budget control points, subject to prior congressional approval, with a provision made for emergency circumstances. This reprogramming authority supersedes the Commission's existing guidance on internal reprogrammings.

Unobligated Balances from Prior Appropriations.—The Committee notes that the Commission carries unobligated balances from appropriations received prior to fiscal year 2020. The Committee's recommendation requires the use of $40,000,000 of these balances, derived from fee-based activities. Because the Commission has already collected fees corresponding to these activities in prior years, the Committee does not include these funds within the fee base calculation for determining authorized revenues, and does not provide authority to collect additional offsetting receipts for their use. The Committee notes that any remaining unobligated balances carried forward from prior years are subject to the reprogramming guidelines in section 402, and shall only be used to supplement appropriations consistent with those guidelines.

Integrated University Program.—The Committee recommends $15,000,000 for the Integrated University Program, of which not less than $5,000,000 is for grants to support research projects that do not align with programmatic missions but are critical to maintaining the discipline of nuclear science and engineering.

Reporting Requirement.—The Committee directs the Commission to continue the reporting required in the explanatory statement for the Energy and Water Development Appropriations Act, 2019, relating to progress against the Commission's licensing goals and right-sizing commitments.

Rulemaking.—The Committee directs the Commission to provide in its annual budget request and the semi-annual report to Congress on licensing and regulatory activities a list of all rulemaking activities planned, to include their priority and schedule.

Reevaluation of Medical Event Reporting.—The Committee is aware of evidence demonstrating the prevalence of extravasations in nuclear medicine procedures within and across healthcare providers. Extravasations of diagnostic radiopharmaceuticals negatively affect the sensitivity and quantification of nuclear medicine

scans. Extravasations can affect disease staging and treatment assessment, result in unnecessary invasive procedures and additional radiation exposure, and lead to higher costs for patients and payers. The Committee supports the work of the Commission and the Advisory Committee on Medical Use of Isotopes to consider new evidence in evaluating whether all radiotracer extravasations should be reportable as medical events under 10 C.F.R. Part 35. Not later than 90 days after the enactment of this Act, the Commission shall provide to the Committees on Appropriations of both Houses of Congress a report on updates to injection quality monitoring, classification, and reporting requirements regarding extravasations.

Commission Workforce.—The NRC has undergone substantial change in the past 6 years as it has reduced its budget and workforce to reflect the changing nuclear power industry. The fee-based budget has declined by 15 percent, and the agency workforce has declined by 21 percent. The demographics of the agency have shifted as a result of these changes. By the end of 2022, roughly 40 percent of the agency workforce will be eligible to retire, but at the end of fiscal year 2018, only two percent of the agency's workforce was below the age of 30. It is imperative the Commission strategically invest resources for recruiting, hiring, and training scientists and engineers to accomplish future work, advance a twenty-first century workforce, and ensure the capacity to meet its mission today and in the future. The Committee supports the Commission's efforts to ensure that it has sufficient capable staff so that there can be a future for nuclear power. The Committee encourages the Commission to identify needed staff resources in future budget requests.

Training and Experience Requirements for Radiopharmaceuticals.—The Committee supports the Commission's ongoing effort to revise its regulations for training and experience requirements for radiopharmaceuticals requiring a written directive. The Committee encourages the Commission to modernize its regulations so more medical personnel can be trained to administer lifesaving cancer drugs.

OFFICE OF INSPECTOR GENERAL

GROSS APPROPRIATION

Appropriations, 2019	$12,609,000
Budget estimate, 2020	13,314,000
Committee recommendation	13,314,000

REVENUES

Appropriations, 2019	$10,355,000
Budget estimate, 2020	10,929,000
Committee recommendation	10,929,000

NET APPROPRIATION

Appropriations, 2019	$2,254,000
Budget estimate, 2020	2,385,000
Committee recommendation	2,385,000

The Committee recommends $13,314,000 for the Office of Inspector General, the same as the budget request, which is offset by revenues estimated at $10,929,000, for a net appropriation of $2,385,000. The Office of Inspector General serves both the Nuclear Regulatory Commission and the Defense Nuclear Facilities Safety Board, and the recommendation includes $1,171,000 for that purpose, which is not available from fee revenues.

NUCLEAR REGULATORY COMMISSION

[In thousands of dollars]

Item	Budget estimate	Committee recommendation	Committee recommendation compared to budget estimate
SALARIES AND EXPENSES	907,765	.....	−907,765
NUCLEAR REACTOR SAFETY	.....	447,574	+447,574
NUCLEAR MATERIALS AND WASTE SAFETY	.....	103,191	+103,191
DECOMMISSIONING AND LOW–LEVEL WASTE	.....	22,891	+22,891
CORPORATE SUPPORT	.....	292,580	+292,580
INTEGRATED UNIVERSITY PROGRAM	.....	15,000	+15,000
SUBTOTAL	907,765	881,236	−26,529
USE OF PRIOR YEARS BALANCES	.....	−40,000	−40,000
TOTAL, SALARIES AND EXPENSES	907,765	841,236	−66,529
REVENUES	748,669	723,469	−25,200
SUBTOTAL	159,096	117,767	−41,329
OFFICE OF INSPECTOR GENERAL	13,314	13,314	.....
REVENUES	10,929	10,929	.....
SUBTOTAL	2,385	2,385	.....
TOTAL, NUCLEAR REGULATORY COMMISSION	161,481	120,152	−41,329
APPROPRIATIONS	(161,481)	(120,152)	(−41,329)

NUCLEAR WASTE TECHNICAL REVIEW BOARD

Appropriations, 2019	$3,600,000
Budget estimate, 2020	3,600,000
Committee recommendation	3,600,000

The Committee recommends $3,600,000 for the Nuclear Waste Technical Review Board to be derived from the Nuclear Waste Fund, the same as the budget request.

GENERAL PROVISIONS

Section 401. The bill includes a provision regarding Congressional requests for information.

Section 402. The bill includes a provision regarding reprogramming.

TITLE V

GENERAL PROVISIONS

The following list of general provisions is recommended by the Committee:

Section 501. The bill includes a provision regarding influencing congressional action.

Section 502. The bill includes a provision regarding transfer authority.

Section 503. The bill includes a provision regarding environmental justice.

Section 504. The bill includes a provision regarding requirements for computer networks.

PROGRAM, PROJECT, AND ACTIVITY

In fiscal year 2020, for purposes of the Balanced Budget and Emergency Deficit Control Act of 1985 (Public Law 99–177), as amended, the following information provides the definition of the term "program, project or activity" for departments and agencies under the jurisdiction of the Energy and Water Development and Related Agencies Appropriation Act. The term "program, project or activity" shall include the most specific level of budget items identified in the Energy and Water Development and Related Agencies Appropriations Bill, 2020 and the report accompanying the bill.

If a sequestration order is necessary, in implementing the Presidential order, departments and agencies shall apply any percentage reduction required for fiscal year 2020 pursuant to the provisions of Public Law 99–177 to all items specified in the report accompanying the bill by the Senate Committee on Appropriations in support of the fiscal year 2020 budget estimates as modified by congressional action.

COMPLIANCE WITH PARAGRAPH 7, RULE XVI, OF THE STANDING RULES OF THE SENATE

Paragraph 7 of rule XVI requires Committee reports on general appropriations bills to identify each Committee amendment to the House bill "which proposes an item of appropriation which is not made to carry out the provisions of an existing law, a treaty stipulation, or an act or resolution previously passed by the Senate during that session."

The Committee is filing an original bill, which is not covered under this rule, but reports this information in the spirit of full disclosure.

The Committee recommends funding for the following programs or activities which currently lack authorization for fiscal year 2020:

APPROPRIATIONS NOT AUTHORIZED BY LAW—FISCAL YEAR 2020

[Dollars in thousands]

Agency/Program	Last Year of Authorization	Authorization Level	Appropriation in Last Year of Authorization	Net Appropriation in this Bill
Corps FUSRAP	.....	.....	.....	
EERE Program Direction	2006	110,500	164,198	
EERE Weatherization Activities	2012	1,400,000	68,000	
EERE State Energy Programs	2012	125,000	50,000	
Nuclear Energy	2009	495,000	792,000	
Nuclear Energy Infrastructure and Facilities	2009	145,000	245,000	
Fossil Energy	2009	641,000	727,320	
Naval Petroleum and Oil Shale Reserves	2019	10,000	10,000	
Strategic Petroleum Reserve	2003	not specified	172,856	
Northeast Home Heating Oil Reserve	2003	not specified	6,000	
Energy Information Administration	1984	not specified	55,870	
Office of Science	2013	6,007,000	4,876,000	
Advanced Technology Vehicle Manufacturing Program	2012	not specified	6,000	
Non-Defense Environmental Cleanup:				
West Valley Demonstration	1981	5,000	5,000	
Departmental Administration	1984	246,963	185,682	
Atomic Energy Defense Activities:				
National Nuclear Security Administration:				
Weapons Activities	2019	11,192,664	11,100,000	
Defense Nuclear Nonproliferation	2019	1,847,429	1,930,000	
Naval Reactors	2019	1,788,618	1,788,618	
Federal Salaries and Expenses	2019	404,529	410,000	
Defense Environmental Cleanup	2018	5,440,106	5,988,048	
Other Defense Activities	2018	816,000	840,000	
Defense Nuclear Waste Disposal	2018	30,000	.....	
Power Marketing Administrations:				
Southwestern	1984	40,254	36,229	
Western Area	1984	259,700	194,630	
Federal Energy Regulatory Commission	1984	not specified	29,582	
Defense Nuclear Facilities Safety Board	2018	30,600	31,000	
Delta Regional Authority	2018	30,000	25,000	
Northern Border Regional Commission	2018	30,000	15,000	
Southeast Crescent Regional Commission	2018	30,000	250	
Nuclear Regulatory Commission	1985	460,000	448,200	

[1] Program was initiated in 1972 and has never received a separate authorization.

COMPLIANCE WITH PARAGRAPH 7(C), RULE XXVI, OF THE STANDING RULES OF THE SENATE

Pursuant to paragraph 7(c) of rule XXVI, on September 12, 2019, the Committee ordered favorably reported a bill (S. 2470) making appropriations for energy and water development and related agencies for the fiscal year ending September 30, 2020, and for other purposes, provided, that the bill be subject to amendment and that the bill be consistent with its budget allocation, and provided that the Chairman of the Committee or his designee be authorized to offer the substance of the original bill as a Committee amendment in the nature of a substitute to the House companion measure, by a recorded vote of 31–0, a quorum being present. The vote was as follows:

Yeas	Nays
Chairman Shelby	
Mr. McConnell	
Mr. Alexander	
Ms. Collins	
Ms. Murkowski	
Mr. Graham	
Mr. Blunt	
Mr. Moran	
Mr. Hoeven	
Mr. Boozman	
Mrs. Capito	
Mr. Kennedy	
Mrs. Hyde-Smith	
Mr. Daines	
Mr. Rubio	
Mr. Lankford	
Mr. Leahy	
Mrs. Murray	
Mrs. Feinstein	
Mr. Durbin	
Mr. Reed	
Mr. Tester	
Mr. Udall	
Mrs. Shaheen	
Mr. Merkley	
Mr. Coons	
Mr. Schatz	
Ms. Baldwin	
Mr. Murphy	
Mr. Manchin	
Mr. Van Hollen	

COMPLIANCE WITH PARAGRAPH 12, RULE XXVI, OF THE STANDING RULES OF THE SENATE

Paragraph 12 of rule XXVI requires that Committee reports on a bill or joint resolution repealing or amending any statute or part of any statute include "(a) the text of the statute or part thereof which is proposed to be repealed; and (b) a comparative print of that part of the bill or joint resolution making the amendment and of the statute or part thereof proposed to be amended, showing by stricken-through type and italics, parallel columns, or other appropriate typographical devices the omissions and insertions which would be made by the bill or joint resolution if enacted in the form recommended by the Committee."

In compliance with this rule, changes in existing law proposed to be made by the bill are shown as follows: existing law to be omitted is enclosed in black brackets; new matter is printed in italic; and existing law in which no change is proposed is shown in roman.

TITLE 42—THE PUBLIC HEALTH AND WELFARE

CHAPTER 109B—SECURE WATER

§ 10364. Water management improvement

(a) Authorization of grants and cooperative agreements

* * * * * * *

(e) Authorization of appropriations

There is authorized to be appropriated to carry out this section [$480,000,000] *$540,000,000*, to remain available until expended.

WATER SUPPLY, RELIABILITY, AND ENVIRONMENTAL IMPROVEMENT ACT, 2005, PUBLIC LAW 108–361

TITLE I—CALIFORNIA WATER SECURITY AND ENVIRONMENTAL ENHANCEMENT

SEC. 101. SHORT TITLE.

* * * * * * *

SEC. 103. BAY DELTA PROGRAM.

(a) IN GENERAL.—

* * * * * * *

(e) NEW AND EXPANDED AUTHORIZATIONS FOR FEDERAL AGENCIES.—

(1) IN GENERAL.—The heads of the Federal agencies described in this subsection are authorized to carry out the activities described in subsection (f) during each of fiscal years 2005 through [2019] *2020*, in coordination with the Governor.

* * * * * * *

(f) DESCRIPTION OF ACTIVITIES UNDER NEW AND EXPANDED AUTHORIZATIONS.—

(1) CONVEYANCE.— * * *

* * * * * * *

(3) LEVEE STABILITY.—

(A) IN GENERAL.— * * *

(B) REPORT.—Not later than 180 days after the date of enactment of this Act, the Secretary of the Army shall submit to the appropriate authorizing and appropriating committees of the Senate and the House of Representatives a report that describes the levee stability reconstruction projects and priorities that will be carried out under this title during each of fiscal years 2005 through [2019] *2020*.

* * * * * * *

SEC. 107. FEDERAL SHARE OF COSTS.

(a) IN GENERAL.—The Federal share of the cost of implementing the Calfed Bay-Delta Program for fiscal years 2005 through [2019] *2020* in the aggregate, as set forth in the Record of Decision, shall not exceed 33.3 percent.

* * * * * * *

SEC. 109. AUTHORIZATION OF APPROPRIATION.

There are authorized to be appropriated to the Secretary and the heads of the Federal agencies to pay the Federal share of the cost of carrying out the new and expanded authorities described in subsections (e) and (f) of section 103 $389,000,000 for the period of fiscal years 2005 through [2019] *2020*, to remain available until expended.

OMNIBUS PUBLIC LAND MANAGEMENT ACT OF 2009, PUBLIC LAW 111–11

TITLE IX—BUREAU OF RECLAMATION AUTHORIZATIONS

Subtitle B—Project Authorizations

SEC. 9106. RIO GRANDE PUEBLOS, NEW MEXICO.

(a) FINDINGS AND PURPOSE.—

* * * * * * *

(g) AUTHORIZATION OF APPROPRIATIONS.—

(1) STUDY.— * * *

* * * * * * *

(2) PROJECTS.—There is authorized to be appropriated to carry out subsection (d) $6,000,000 for each of fiscal years 2010 through [2019] *2020*.

BUDGETARY IMPACT OF BILL

PREPARED IN CONSULTATION WITH THE CONGRESSIONAL BUDGET OFFICE PURSUANT TO SEC. 308(A), PUBLIC LAW 93–344, AS AMENDED

[In millions of dollars]

	Budget authority		Outlays	
	Committee allocation	Amount in bill	Committee allocation	Amount in bill
Comparison of amounts in the bill with the subcommittee allocation for 2020: Subcommittee on Energy and Water Development:				
Mandatory	.....	.....	.....	.....
Discretionary	48,866	48,866	46,492	[1] 46,492
Security	24,400	24,400	NA	NA
Nonsecurity	24,466	24,466	NA	NA
Projection of outlays associated with the recommendation:				
2020	.....	.....	.....	[2] 27,232
2021	.....	.....	.....	13,830
2022	.....	.....	.....	5,589
2023	.....	.....	.....	1,283
2024 and future years	.....	.....	.....	739
Financial assistance to State and local governments for 2020	NA	203	NA	..... [2]

[1] Includes outlays from prior-year budget authority.
[2] Excludes outlays from prior-year budget authority.

NA: Not applicable.

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR FISCAL YEAR 2019 AND BUDGET ESTIMATES AND AMOUNTS RECOMMENDED IN THE BILL FOR FISCAL YEAR 2020

[In thousands of dollars]

Item	2019 appropriation	Budget estimate	Committee recommendation	Senate Committee recommendation compared with (+ or −)	
				2019 appropriation	Budget estimate
TITLE I—DEPARTMENT OF DEFENSE—CIVIL					
DEPARTMENT OF THE ARMY					
Corps of Engineers—Civil					
Investigations	125,000	77,000	154,880	+29,880	+77,880
Construction	2,183,000	1,306,945	2,795,148	+612,148	+1,488,203
Mississippi River and Tributaries	368,000	209,872	368,000	.....	+158,128
Operation and Maintenance	3,739,500	1,930,428	3,798,972	+59,472	+1,868,544
Regulatory Program	200,000	200,000	200,000	.....	.....
Formerly Utilized Sites Remedial Action Program (FUSRAP)	150,000	.....	200,000	+50,000	+200,000
Flood Control and Coastal Emergencies	35,000	27,000	35,000	.....	+8,000
Expenses	193,000	187,000	193,000	.....	+6,000
Office of Assistant Secretary of the Army (Civil Works)	5,000	5,000	5,000	.....	.....
Harbor Maintenance Trust Fund	.....	965,000	.....	.....	−965,000
Inland Waterways Trust Fund	.....	55,500	.....	.....	−55,500
Total, title I, Department of Defense—Civil	6,998,500	4,963,745	7,750,000	+751,500	+2,786,255
TITLE II—DEPARTMENT OF THE INTERIOR					
Central Utah Project					
Central Utah Project Completion Account	15,000	10,000	20,000	+5,000	+10,000
Bureau of Reclamation					
Water and Related Resources	1,391,992	962,000	1,582,151	+190,159	+620,151
Central Valley Project Restoration Fund	62,008	54,849	54,849	−7,159	.....
California Bay-Delta Restoration	35,000	33,000	33,000	−2,000	.....
Policy and Administration	61,000	60,000	60,000	−1,000	.....

Total, Bureau of Reclamation	1,550,000	1,109,849	1,730,000	+180,000	+620,151
Total, title II, Department of the Interior	1,565,000	1,119,849	1,750,000	+185,000	+630,151
TITLE III—DEPARTMENT OF ENERGY					
Energy Programs					
Energy Efficiency and Renewable Energy	2,379,000	343,000	2,858,000	+479,000	+2,515,000
Rescission	.....	.....	−58,000	−58,000	−58,000
Subtotal, Energy Efficiency and Renewable Energy	2,379,000	343,000	2,800,000	+421,000	+2,457,000
Cybersecurity, Energy Security, and Emergency Response	120,000	156,500	179,000	+59,000	+22,500
Electricity	156,000	182,500	221,000	+65,000	+38,500
Nuclear Energy	1,180,000	686,192	1,380,000	+200,000	+693,808
Defense function	146,090	137,808	137,808	−8,282	.....
Subtotal	1,326,090	824,000	1,517,808	+191,718	+693,808
Fossil Energy Research and Development	740,000	562,000	800,000	+60,000	+238,000
Naval Petroleum and Oil Shale Reserves	10,000	14,000	14,000	+4,000	.....
Strategic Petroleum Reserve	235,000	174,000	174,000	−61,000	.....
Sale of crude oil	−300,000	−450,000	−450,000	−150,000	.....
Use of sale proceeds	300,000	450,000	450,000	+150,000	.....
Subtotal	235,000	174,000	174,000	−61,000	.....
SPR Petroleum Account	10,000	27,000	10,000	.....	−17,000
Sale of Petroleum Product	.....	−96,000	.....	.....	+96,000
Subtotal	10,000	−69,000	10,000	.....	+79,000
Northeast Home Heating Oil Reserve	10,000	.....	10,000	.....	+10,000
Sale of Home Heating Oil Reserve	.....	−90,000	.....	.....	+90,000
Subtotal	10,000	−90,000	10,000	.....	+100,000
Energy Information Administration	125,000	118,000	132,000	+7,000	+14,000
Non-defense Environmental Cleanup	310,000	247,480	318,000	+8,000	+70,520
Uranium Enrichment Decontamination and Decommissioning Fund	841,129	715,112	906,695	+65,566	+191,583
Science	6,585,000	5,545,972	7,215,000	+630,000	+1,669,028
Nuclear Waste Disposal	.....	90,000	.....	.....	−90,000
Advanced Research Projects Agency–Energy	366,000	.....	428,000	+62,000	+428,000

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR FISCAL YEAR 2019 AND BUDGET ESTIMATES AND AMOUNTS RECOMMENDED IN THE BILL FOR FISCAL YEAR 2020—Continued

[In thousands of dollars]

Item	2019 appropriation	Budget estimate	Committee recommendation	Senate Committee recommendation compared with (+ or −)	
				2019 appropriation	Budget estimate
Rescission	.....	−287,000	.....	.....	+287,000
Title 17 Innovative Technology Loan Guarantee Program	33,000	3,000	32,000	−1,000	+29,000
Offsetting collection	−15,000	−3,000	−3,000	+12,000	.....
Rescission	.....	−160,659	.....	.....	+160,659
Cancellation of Commitment Authority	.....	−224,000	.....	.....	+224,000
Subtotal	18,000	−384,659	29,000	+11,000	+413,659
Advanced Technology Vehicles Manufacturing Loans program	5,000	.....	5,000	.....	+5,000
Tribal Energy Loan Guarantee Program	1,000	.....	2,000	+1,000	+2,000
Rescission	.....	−8,500	.....	.....	+8,500
Subtotal	1,000	−8,500	2,000	+1,000	+10,500
Office of Indian Energy Policy and Programs	18,000	8,000	25,000	+7,000	+17,000
Departmental Administration	261,858	210,923	249,378	−12,480	+38,455
Miscellaneous revenues	−96,000	−93,378	−93,378	+2,622	.....
Net appropriation	165,858	117,545	156,000	−9,858	+38,455
Office of the Inspector General	51,330	54,215	54,215	+2,885	.....
International Affairs	.....	36,100	.....	.....	−36,100
Total, Energy programs	13,472,407	8,349,265	14,996,718	+1,524,311	+6,647,453
Atomic Energy Defense Activities					
National Nuclear Security Administration					
Weapons Activities	11,100,000	12,408,603	12,742,000	+1,642,000	+333,397
Defense Nuclear Nonproliferation	1,949,000	1,993,302	2,085,000	+136,000	+91,698
Rescission	−19,000	.....	.....	+19,000	.....

Subtotal	1,930,000	1,993,302	2,085,000	+155,000	+91,698
Naval Reactors	1,788,618	1,648,396	1,648,396	−140,222	.....
Federal Salaries and Expenses	410,000	434,699	434,699	+24,699	.....
Total, National Nuclear Security Administration	15,228,618	16,485,000	16,910,095	+1,681,477	+425,095
Environmental and Other Defense Activities					
Defense Environmental Cleanup	6,028,600	5,522,063	6,226,000	+197,400	+703,937
Rescission	−4,600	−15,562	.....	+4,600	+15,562
Subtotal	6,024,000	5,506,501	6,226,000	+202,000	+719,499
Other Defense Activities	860,292	1,035,339	895,097	+34,805	−140,242
Defense Nuclear Waste Disposal	.....	26,000	.....	.....	−26,000
Total, Environmental and Other Defense Activities	6,884,292	6,567,840	7,121,097	+236,805	+553,257
Total, Atomic Energy Defense Activities	22,112,910	23,052,840	24,031,192	+1,918,282	+978,352
Power Marketing Administrations [1]					
Operation and maintenance, Southeastern Power Administration	6,500	6,597	6,597	+97	.....
Offsetting collections	−6,500	−6,597	−6,597	−97	.....
Subtotal	.....	.....	.....	.....	.....
Operation and maintenance, Southwestern Power Administration	45,802	47,775	47,775	+1,973	.....
Offsetting collections	−35,402	−37,375	−37,375	−1,973	.....
Subtotal	10,400	10,400	10,400	.....	.....
Construction, Rehabilitation, Operation and Maintenance, Western Area Power Administration	265,142	262,959	262,959	−2,183	.....
Offsetting collections	−175,770	−173,587	−173,587	+2,183	.....
Rescission	.....	−176	.....	.....	+176
Subtotal	89,372	89,196	89,372	.....	+176
Falcon and Amistad Operating and Maintenance Fund	1,568	3,160	3,160	+1,592	.....
Offsetting collections	−1,340	−2,932	−2,932	−1,592	.....
Subtotal	228	228	228	.....	.....

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR FISCAL YEAR 2019 AND BUDGET ESTIMATES AND AMOUNTS RECOMMENDED IN THE BILL FOR FISCAL YEAR 2020—Continued

[In thousands of dollars]

Item	2019 appropriation	Budget estimate	Committee recommendation	Senate Committee recommendation compared with (+ or −)	
				2019 appropriation	Budget estimate
Total, Power Marketing Administrations	100,000	99,824	100,000	.....	+176
Federal Energy Regulatory Commission					
Salaries and expenses	369,900	382,000	382,000	+12,100	.....
Revenues applied	−369,900	−382,000	−382,000	−12,100	.....
Total, Federal Energy Regulatory Commission	.....	.....	.....	.....	.....
General Provisions					
Section 107 (rescission)	.....	.....	−96,000	−96,000	−96,000
Total, title III, Department of Energy	35,685,317	31,501,929	39,031,910	+3,346,593	+7,529,981
Appropriations	(35,708,917)	(32,197,826)	(39,185,910)	(+3,476,993)	(+6,988,084)
Rescissions	(−23,600)	(−695,897)	(−154,000)	(−130,400)	(+541,897)
TITLE IV—INDEPENDENT AGENCIES					
Appalachian Regional Commission	165,000	165,000	175,000	+10,000	+10,000
Defense Nuclear Facilities Safety Board	31,000	29,450	31,000	.....	+1,550
Delta Regional Authority	25,000	2,500	30,000	+5,000	+27,500
Denali Commission	15,000	7,300	15,000	.....	+7,700
Northern Border Regional Commission	20,000	850	25,000	+5,000	+24,150
Southeast Crescent Regional Commission	250	.....	.....	−250	.....
Nuclear Regulatory Commission:					
Salaries and expenses	898,350	907,765	841,236	−57,114	−66,529
Revenues	−770,477	−748,669	−723,469	+47,008	+25,200
Subtotal	127,873	159,096	117,767	−10,106	−41,329
Office of Inspector General	12,609	13,314	13,314	+705	.....

Revenues	−10,355	−10,929	−10,929	−574	
Subtotal	2,254	2,385	2,385	+131	
Total, Nuclear Regulatory Commission	130,127	161,481	120,152	−9,975	−41,329
Nuclear Waste Technical Review Board	3,600	3,600	3,600		
Total, title IV, Independent agencies	389,977	370,181	399,752	+9,775	+29,571
TITLE V—GENERAL PROVISIONS					
Colorado River Basin Fund	21,400			−21,400	
Total, Title V, General Provisions	21,400			−21,400	
OTHER APPROPRIATIONS					
Corps of Engineers—Civil					
Investigations (emergency)	35,000			−35,000	
Construction (emergency)	740,000			−740,000	
Mississippi River and Tributaries (emergency)	575,000			−575,000	
Operations and maintenance (emergency)	908,000			−908,000	
Flood control and coastal emergencies (emergency)	1,000,000			−1,000,000	
Expenses (emergency)	20,000			−20,000	
Total, Corps of Engineers	3,278,000			−3,278,000	
Central Utah Project					
Central Utah Project Completion Account (emergency)	350			−350	
Bureau of Reclamation					
Water and Related Resources	15,500			−15,500	
Total, Additional Supplemental Appropriations For Disaster Relief Act, 2019	3,293,850			−3,293,850	
Grand total	47,954,044	37,955,704	48,931,662	+977,618	+10,975,958
Appropriations	(44,683,794)	(38,651,601)	(49,085,662)	(+4,401,868)	(+10,434,061)
Emergency appropriations	(3,293,850)			(−3,293,850)	

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR FISCAL YEAR 2019 AND BUDGET ESTIMATES AND AMOUNTS RECOMMENDED IN THE BILL FOR FISCAL YEAR 2020—Continued

[In thousands of dollars]

Item	2019 appropriation	Budget estimate	Committee recommendation	Senate Committee recommendation compared with (+ or −)	
				2019 appropriation	Budget estimate
Rescissions	(−23,600)	(−695,897)	(−154,000)	(−130,400)	(+541,897)

[1] Totals adjusted to net out alternative financing costs, reimbursable agreement funding, and power purchase and wheeling expenditures. Offsetting collection totals only reflect funds collected for annual expenses, excluding power purchase wheeling.

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