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HOUSE OF REPRESENTATIVES
REPORT
115–697

ENERGY AND WATER DEVELOPMENT APPROPRIATIONS BILL, 2019

MAY 21, 2018.—Committed to the Committee of the Whole House on the State of the Union and ordered to be printed

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

R E P O R T

together with

MINORITY VIEWS

[To accompany H.R. 5895]

The Committee on Appropriations submits the following report in explanation of the accompanying bill making appropriations for energy and water development for the fiscal year ending September 30, 2019, and for other purposes.

INDEX TO BILL AND REPORT

SUMMARY OF ESTIMATES AND RECOMMENDATIONS

The Committee has considered budget estimates, which are contained in the Budget of the United States Government, Fiscal Year 2019. The following table summarizes appropriations for fiscal year 2018, the budget estimates, and amounts recommended in the bill for fiscal year 2019.

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR 2018
AND BUDGET REQUESTS AND AMOUNTS RECOMMENDED IN THE BILL FOR 2019
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Title I, Department of Defense - Civil	6,827,000	4,784,583	7,278,000	+451,000	+2,493,417
Title II, Department of the Interior	1,480,000	1,057,008	1,555,000	+75,000	+497,992
Title III, Department of Energy	34,520,049	30,146,071	35,494,251	+974,202	+5,348,180
Title IV, Independent Agencies	391,455	352,778	423,757	+32,302	+70,979
Subtotal	43,218,504	36,340,440	44,751,008	+1,532,504	+8,410,568
Scorekeeping adjustments	-18,504	185,992	-51,008	-32,504	-237,000
Grand total for the bill	43,200,000	36,526,432	44,700,000	+1,500,000	+8,173,568

INTRODUCTION

The Energy and Water Development Appropriations bill for fiscal year 2019 totals $44,700,000,000, $1,500,000,000 above the amount appropriated in fiscal year 2018 and $8,173,568,000 above the budget request. Total defense funding is $22,300,000,000, $500,000,000 above the amount appropriated in fiscal year 2018 and $408,100,000 above the budget request. Total non-defense funding is $22,400,000,000, $1,000,000,000 above the amount appropriated in fiscal year 2018 and $7,765,468,000 above the budget request.

Title I of the bill provides $7,278,000,000 for the Civil Works programs of the U.S. Army Corps of Engineers, $451,000,000 above fiscal year 2018 and $2,493,417,000 above the budget request. Total funding for activities eligible for reimbursement from the Harbor Maintenance Trust Fund is estimated at $1,600,000,000, which is an increase of $200,000,000 above fiscal year 2018 and $635,000,000 above the budget request. The bill makes use of all estimated annual revenues from the Inland Waterways Trust Fund.

Title II provides $1,555,000,000 for the Department of the Interior and the Bureau of Reclamation, $75,000,000 above fiscal year 2018 and $497,992,000 above the budget request. The Committee recommends $1,540,000,000 for the Bureau of Reclamation, $70,500,000 above fiscal year 2018 and $492,975,000 above the budget request. The Committee recommends $15,000,000 for the Central Utah Project, $4,500,000 above fiscal year 2018 and $7,017,000 above the budget request.

Title III provides $35,494,251,000 for the Department of Energy, $974,202,000 above fiscal year 2018 and $5,348,180,000 above the budget request. Funding for the National Nuclear Security Administration (NNSA), which includes nuclear weapons activities, defense nuclear nonproliferation, naval reactors, and federal salaries and expenses, is $15,313,147,000, $644,195,000 above fiscal year 2018 and $222,097,000 above the budget request.

Funding for energy programs within the Department of Energy, which includes basic science research and the applied energy programs, is $13,421,584,000, $503,535,000 above fiscal year 2018 and $4,909,080,000 above the budget request.

Environmental management activities—non-defense environmental cleanup, uranium enrichment decontamination and decommissioning, and defense environmental cleanup—are funded at $6,869,220,000, $257,228,000 below fiscal year 2018 and $267,854,000 above the budget request.

The net amount appropriated for the Power Marketing Administrations is provided at the requested levels.

Title IV provides $423,757,000 for several Independent Agencies, $32,302,000 above fiscal year 2018 and $70,979,000 above the budget request. Net funding for the Nuclear Regulatory Commission is $191,664,000, $60,059,000 above fiscal year 2018 and $36,379,000 above the budget request.

OVERVIEW OF THE RECOMMENDATION

The Committee recommendation prioritizes the most critical inherently federal responsibilities of this bill: the national defense,

the maintenance of our nation's waterways, and ensuring the resilience and security of our electricity infrastructure. Strong support is included for basic science programs, which provide the foundation for the new energy technologies that are vital to maintaining our global competitiveness and ensuring our country's long-term prosperity, but that are often too high-risk to receive the attention of the private sector. The recommendation provides targeted resources for applied energy research and development activities to improve and extend the performance of existing energy sources and accelerate the adoption of new technologies. The recommendation also recognizes the importance of the federal government's responsibility to dispose of nuclear waste and clean up the legacy of five decades of nuclear weapons production and government-sponsored nuclear energy research.

NATIONAL DEFENSE PROGRAMS

As in previous years, the Committee considers the national defense programs run by the National Nuclear Security Administration (NNSA) to be the Department of Energy's top priority. The recommendation strongly supports the Department's proposals to modernize the nuclear weapons stockpile, increase investment in the NNSA's infrastructure, prevent the proliferation of nuclear materials, and provide for the needs of the naval nuclear propulsion program.

INVESTMENTS IN INFRASTRUCTURE

The water resource infrastructure funded by the recommendation is a critical component of ensuring a robust national economy and of supporting American competitiveness in international markets. The Corps is responsible for keeping our federal waterways open for business. The Corps also has been instrumental in reducing the risk of flooding for public safety, businesses, and much of this country's food-producing lands. The Bureau of Reclamation supplies reliable water to approximately ten percent of the country's population and to much of its fertile agricultural lands. Both agencies make significant contributions to national electricity production through hydropower facilities.

The U.S. marine transportation industry supports $2,000,000,000,000 in commerce and creates employment for more than 13 million people. As the agency responsible for our nation's federal waterways, the Corps maintains 1,067 harbors and 25,000 miles of commercial channels serving 40 states. The maintenance of these commercial waterways is directly tied to the ability of this country to ship its manufactured and bulk products, as well as to compete with the ports of neighboring countries for the business of ships arriving from around the world. As a primary supporter of America's waterway infrastructure, the Corps is ensuring that the nation has the tools to maintain a competitive edge in the global market. This recommendation makes key changes to the budget request to ensure that the Corps has the resources to continue to support America's shipping infrastructure.

The flood protection infrastructure that the Corps builds or maintains reduces the risk of flooding to people, businesses, and other public infrastructure investments. In fact, the average an-

nual damages prevented by Corps projects over fiscal years 2007–2016 was $67,600,000,000. Between 1928 and 2016, each inflation-adjusted dollar invested in these projects prevented $8.91 in damages. The properties and investments protected by the Corps infrastructure would often be flooded without that infrastructure, destroying homes, businesses, and many valuable acres of cropland.

The Bureau of Reclamation's water infrastructure is a critical component of the agricultural productivity of this country. These facilities deliver water to one of every five western farmers resulting in approximately 10 million acres of irrigated land that produces 60 percent of the nation's vegetables and 25 percent of its fruits and nuts. Additionally, these facilities deliver water to more than 31 million people for municipal, rural, and industrial uses. Without these dams and water supply facilities, American agricultural producers in the West would not be able to access reliable, safe water for their families and their businesses and many municipal and industrial users would face critical water shortages.

The Corps and Reclamation are the nation's largest and second largest producers of hydropower, respectively. Combined these federal hydropower facilities generate approximately 115 billion kilowatt-hours annually. Gross revenues from the sale of this power reach nearly $6,000,000,000 annually.

NATIONAL ENERGY POLICY

The Department of Energy and its National Laboratory system have helped to lay the foundation for the technological advances driving the energy market today. Production breakthroughs for every energy generation source can trace their origins back to research and development supported by the Department. As the energy market continues to change, the Department's support for research and development in all energy sources remains critical.

The Committee provides funding in support of an "all of the above" energy strategy designed to take advantage and utilize all sources of American-made energy. Funding for fossil and nuclear sources, which provide 83 percent of all electricity generated in the nation, is targeted to ensure the safe and efficient use of the nation's critical base load energy generation sources. Funding for renewable energy sources, which provide 17 percent of the nation's electricity, supports continued investments in research and development to advance technological innovations. This strategy provides the correct balance to enable full use of our nation's abundant fossil resources while laying the foundation for developing future energy sources.

The success of these innovations depends on a reliable and resilient electric grid infrastructure. The nation's electric grid was built to handle a different energy reality than the one we face today. Weather events, cyberattacks, and an increasing diversity of energy sources must be addressed to guarantee the continued operation of the electric grid. The Committee provides strong support to ensure the nation's electric grid remains secure.

The Committee continues its long-standing support for the investment of taxpayer funds across the spectrum of all energy technologies. A national energy policy can only be successful if it maintains stability while planning for long-term strategic goals of energy security, independence, and prosperity for the nation. The

Committee makes strategic choices, recommending a balanced approach to advancing research and development in all energy technologies and supporting a robust electric grid.

CONGRESSIONAL DIRECTION

Program, Project, or Activity.—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 Act, 2019 and the Committee report accompanying this Act.

Performance Measures.—The Committee directs each of the agencies funded by this Act to comply with title 31 of the United States Code, including the development of their organizational priority goals and outcomes such as performance outcome measures, output measures, efficiency measures, and customer service measures.

Offsetting Collections.—The Committee directs each of the agencies funded by this Act to continue to report any funds derived by the agency from non-federal sources, including user charges and fines that are authorized by law, to be retained and used by the agency or credited as an offset in annual budget submissions.

Regional Councils.—The Committee encourages all federal agencies to consider including regional councils and councils of government as eligible entities in competitions for federal funding when local governments or non-profit agencies are eligible.

Digital Accountability and Transparency Act.—The Committee supports the requirements of the Digital Accountability and Transparency Act of 2014 as identified in the budget request.

COMMITTEE OVERSIGHT INITIATIVES

The highest priority mission of any federal agency is to be an effective steward of taxpayer dollars. Any waste, fraud, or abuse of taxpayer dollars is unacceptable. The Committee uses hearings, reviews by the Government Accountability Office, the Committee on Appropriations' Surveys and Investigations staff, and its annual appropriations Act, including the accompanying report, to promote strong oversight of the agencies under its jurisdiction, with an emphasis on the U.S. Army Corps of Engineers, the Bureau of Reclamation, and the Department of Energy.

The recommendation continues the Committee's responsibility to conduct in-depth oversight into all activities funded in this bill. Each agency shall designate a specific point of contact to track each report required in the bill and ensure its timely production and delivery.

A summary of the major oversight efforts in the bill is provided below.

Agency/Account	Requirement
Energy and Water	Direction on performance measures
Army Corps of Engineers	Guidance on budget structure
Army Corps of Engineers	Guidance on apportionment
Army Corps of Engineers	Direction on Principles and Guidelines
Army Corps of Engineers	Direction on 2019 work plan submission
Army Corps of Engineers	Direction on new starts
Army Corps of Engineers	Direction on work related to Asian Carp
Army Corps of Engineers/Investigations	Guidance on specific studies
Army Corps of Engineers/Investigations	Guidance on allocating additional funding

Agency/Account	Requirement
Army Corps of Engineers/Construction	Guidance on allocating additional funding
Army Corps of Engineers/Construction	Direction on management of the Continuing Authorities Program
Army Corps of Engineers/Construction	Direction on funding of pilot projects
Army Corps of Engineers/Mississippi River and Tributaries.	Guidance on allocating additional funding
Army Corps of Engineers/Operation and Maintenance.	Guidance on specific projects
Army Corps of Engineers/Operation and Maintenance.	Guidance on allocating additional funding
Army Corps of Engineers/Operation and Maintenance.	Direction on levee safety initiatives
Army Corps of Engineers/Operation and Maintenance.	Briefing on certain nonoperational locks
Army Corps of Engineers/FUSRAP	Guidance on investigation and study at former Sylvania site
Army Corps of Engineers/Expenses	Direction on alternative financing
Army Corps of Engineers/General Provisions	Reprogramming requirements
Army Corps of Engineers/General Provisions	Restriction on use of continuing contracts
Army Corps of Engineers/General Provisions	Restriction on requiring permits for the discharge of dredged or fill material for certain agricultural activities
Army Corps of Engineers/General Provisions	Direction on a rule regarding federal jurisdiction under the Clean Water Act
Army Corps of Engineers/General Provisions	Restriction on funding for a new hopper dredge
Bureau of Reclamation	Direction on reconsultation activities under the Endangered Species Act
Bureau of Reclamation/Water and Related Resources.	Guidance on allocating additional funding
Bureau of Reclamation/General Provisions	Reprogramming requirements
Department of Energy	Guidance on research and development policy
Department of Energy	Guidance on Electricity Delivery and Energy Reliability reorganization
Department of Energy	Direction on Working Capital Fund
Department of Energy	Report on alleviation of poverty
Department of Energy	Direction on workplace diversity
Department of Energy	Direction on Public Access Plan
Department of Energy	GAO investigation of improper payment reporting
Department of Energy	Plan for GAO High Risk List removal
Department of Energy	Direction on commonly recycled paper
Department of Energy	Direction on educational activities
Department of Energy	Report on General Plant Projects
Department of Energy	Direction on budget requests for General Plant Projects
Department of Energy	Direction on reprogrammings and transfers
Department of Energy/Energy Efficiency	Direction on a zero emissions energy credit report
Department of Energy/Energy Efficiency	Guidance on Energy Star
Department of Energy/Energy Efficiency	Report on hyperloop transportation systems
Department of Energy/Energy Efficiency	Direction on the distribution of Weatherization Assistance Program funds
Department of Energy/Electricity Delivery	Report on battery technologies
Department of Energy/Electricity Delivery	Guidance on the Grid Modernization Laboratory Consortium
Department of Energy/Electricity Delivery	Report on transmission congestion management
Department of Energy/Nuclear	Report on technology use in nuclear waste remediation
Department of Energy/Fossil	Direction on coal research and development
Department of Energy/Fossil	Direction on NETL sites
Department of Energy/Fossil	Report on the Solid Oxide Fuel Cell Program
Department of Energy/Fossil	Direction on crude oil by rail
Department of Energy/UED&D	Prohibition on uranium bartering for cleanup
Department of Energy/Science	Report on SBIR and STTR grants
Department of Energy/Science	Report on exascale deployment plan
Department of Energy/Nuclear Waste Disposal	Direction on Yucca Mountain licensing process
Department of Energy/ARPA-E	Direction on disbursement of funds
Department of Energy/Departmental Administration.	Direction on scructure of future budget requests
Department of Energy/Departmental Administration.	Study on available resources
Department of Energy/Departmental Administration.	Direction on radium contamination
NNSA	Prohibition on Institutional Plant Projects
NNSA	Report on certain personnel costs
NNSA/Weapons	Guidance on budget requests for new nuclear weapons
NNSA/Weapons	Report on plutonium infrastructure
NNSA/Weapons	Report on low-yield warhead
NNSA/Weapons	Report on comparative warhead program costs

Agency/Account	Requirement
NNSA/Weapons	Direction on MIE project reporting
NNSA/Weapons	Direction on full cost recovery for ICF
NNSA/Weapons	Direction on budgeting for high performance computing
NNSA/Weapons	Direction on incremental facility operating costs
NNSA/Weapons	Plan to expedite Mobile Guard Transporter
NNSA/Nonproliferation	Direction on new nonproliferation projects in Russia
NNSA/Nonproliferation	Direction on nonproliferation R&D budget structure
NNSA/Nonproliferation	Prohibition on funding for ATR and HFIR conversion
NNSA/Federal Salaries	Direction on personnel and potential consolidation
Department of Energy/Defense Cleanup	Requirement for construction project data sheet submission
Department of Energy/Defense Cleanup	Report on tank waste demonstration project
Department of Energy/Defense Cleanup	Direction on nuclear quality assurance programs
Department of Energy/Defense Cleanup	Direction on resuming construction project activities
Department of Energy/Defense Cleanup	Direction on Waste Treatment Plant budget structure
Department of Energy/Defense Cleanup	Guidance on cost sharing arrangements at Savannah River
Department of Energy/Defense Cleanup	Reporting on security system upgrade project details
Department of Energy/Other Defense Activities	Direction on nuclear facilities seismic research activities
Department of Energy/Power Marketing Administrations.	Guidance on organizational reporting
Department of Energy/Federal Energy Regulatory Commission.	Report on electric transmission system resiliency
Department of Energy/General Provisions	Reprogramming requirements
Department of Energy/General Provisions	Requirement for oversight of high hazard nuclear facilities construction
Department of Energy/General Provisions	Prohibition on funds without independent cost estimates
Department of Energy/General Provisions	Restriction of certain activities in the Russian Federation
Department of Energy/General Provisions	Guidance on Strategic Petroleum Reserve activities
Department of Energy/General Provisions	Prohibition on use of MOX funds and notification requirements
Department of Energy/General Provisions	Requirements for releases from Strategic Petroleum Reserve
Department of Energy/General Provisions	Report on spent nuclear fuel
Nuclear Regulatory Commission	Guidance on reporting of salaries and expenses
Nuclear Regulatory Commission	Guidance on regulatory framework
Nuclear Regulatory Commission	Report on accident tolerant fuel
Nuclear Regulatory Commission	Report on transition to digital systems
Nuclear Regulatory Commission	Direction on rulemaking process and activities
Nuclear Regulatory Commission	Report on licensing goals and right-sizing commitments
Independent Agencies/General Provisions	Requirement for NRC to comply with Congressional requests
Independent Agencies/General Provisions	Reprogramming requirements for the NRC
General Provisions	Prohibition on funds to influence congressional action
General Provisions	Consolidation of transfer authorities
General Provisions	Prohibition of funds in contravention of Executive Order 12898
General Provisions	Prohibition of funds for computer networks that don't block pornography
General Provisions	Prohibition of funds to further implement EO 13547
General Provisions	Prohibition of funds related to operation of certain hydroelectric dams
General Provisions	Prohibition of funds to remove or close federally owned or operated dams
General Provisions	Prohibition of funds to close Yucca Mountain application

TITLE I—CORPS OF ENGINEERS—CIVIL

DEPARTMENT OF THE ARMY

CORPS OF ENGINEERS—CIVIL

INTRODUCTION

The Energy and Water Development Appropriations Act funds the Civil Works missions of the Army Corps of Engineers (Corps). This program is responsible for activities in support of coastal and inland navigation, flood and coastal storm damage reduction, environmental protection and restoration, hydropower, recreation, water supply, and disaster preparedness and response. The Corps also performs regulatory oversight of navigable waters. Approximately 22,000 civilians and almost 300 military personnel located in eight Division offices and 38 District offices work to carry out the Civil Works program.

GENERAL PROVISIONS—DEPARTMENT OF THE INTERIOR

The bill continues a provision regarding the circumstances in which the Bureau of Reclamation may reprogram funds.

The bill continues a provision regarding the San Luis Unit and Kesterson Reservoir in California.

The bill makes permanent a provision regarding aquifer recharge.

The bill continues a provision regarding a feasibility study.

The bill includes a provision regarding the San Joaquin River Restoration program.

The bill continues a provision regarding instream flows.

The bill includes a provision regarding pumped storage hydropower development.

TITLE III—DEPARTMENT OF ENERGY

INTRODUCTION

Funds recommended in Title III provide for all Department of Energy (DOE) programs, including Energy Efficiency and Renewable Energy; Cybersecurity, Energy Security, and Emergency Response; Electricity Delivery; Nuclear Energy; Fossil Energy Research and Development; Naval Petroleum and Oil Shale Reserves; the Strategic Petroleum Reserve; SPR Petroleum Account; the Northeast Home Heating Oil Reserve; the Energy Information Administration; Non-Defense Environmental Cleanup; the Uranium Enrichment Decontamination and Decommissioning Fund; Science; Nuclear Waste Disposal; Advanced Research Projects Agency—-Energy; Innovative Technology Loan Guarantee Program; Advanced Technology Vehicle Manufacturing Loans Program; Tribal Energy Loan Guarantee Program; Departmental Administration; Office of the Inspector General; the National Nuclear Security Administration (Weapons Activities, Defense Nuclear Nonproliferation, Naval Reactors, and Federal Salaries and Expenses); Defense Environmental Cleanup; Other Defense Activities; Defense Nuclear Waste Disposal; the Power Marketing Administrations; and the Federal Energy Regulatory Commission.

COMMITTEE RECOMMENDATION

The Department of Energy has requested a total budget of $30,146,071,000 in fiscal year 2019 to fund programs in its four primary mission areas: science, energy, environment, and national security. The Department of Energy budget request is $4,373,978,000 below the fiscal year 2018 enacted level.

Research and Development Policy.—The President's budget request proposes to refocus the Department on an early-stage research and development mission. Early-stage research and development has an appropriate place in a balanced research portfolio. However, the Committee believes that a focus on only early-stage activities will forego the nation's scientific capabilities in medium- and later-stage research and development and may not fully realize the technological advancements possible under the Department's applied energy activities. The Committee provides funding to support a more comprehensive approach that includes medium and later-stage research, development, deployment, and demonstration

activities. The Department is expected to follow this comprehensive approach and expend funding in an expeditious manner, to include the issuance of funding opportunity announcements and awards of funds.

Electricity Delivery and Energy Reliability.—The Committee notes that the budget request proposed to split the Electricity Delivery and Energy Reliability program into two new accounts: "Cybersecurity, Energy Security, and Emergency Response" and "Electricity Delivery". The Committee accepts this new account structure. The "Cybersecurity, Energy Security, and Emergency Response" account includes the subprograms "Cybersecurity for Energy Delivery Systems" and "Infrastructure Security and Energy Restoration". The "Electricity Delivery" account contains all other subprograms that were previously funded as part of the Electricity Delivery and Energy Reliability program. In addition, each account contains separate Program Direction funding.

CONGRESSIONAL DIRECTION

Article I, section 9 of the United States Constitution states, "No money shall be drawn from the Treasury but in consequence of Appropriations made by law."

The Committee continues the Department's reprogramming authority in statute to ensure that the Department carries out its programs consistent with congressional direction. This reprogramming authority is established at the program, project, or activity level, whichever is the most specific level of budget items identified in this Act and the Committee report accompanying the Act. The Committee also prohibits new starts through the use of reprogramming and includes other direction to improve public oversight of the Department's actions. In addition, the recommendation continues a general provision specifying which transfer authorities may be used for accounts funded by this Act. The Committee recommendation includes a general provision that specifies the amount of funding that may be transferred from the Department's accounts to the DOE working capital fund in aggregate, consistent with the authorities provided by section 653 of the Department of Energy Organization Act (42 U.S.C. 7263).

FINANCIAL REPORTING AND MANAGEMENT

The Department still is not in compliance with its statutory requirement to submit to Congress, at the time that the President's budget request is submitted, a future-years energy program that covers the fiscal year of the budget submission and the four succeeding years, as directed in the fiscal year 2012 Act. In addition, the Department has an outstanding requirement to submit a plan to become fully compliant with this requirement.

Working Capital Fund.—The Committee recommends $274,833,000, the same as fiscal year 2018, for transfers to the fund in fiscal year 2019, after accounting for the shift of CyberOne activities to Departmental Administration. Guidelines for the Department's working capital fund are provided in 42 U.S.C. 7263, which authorizes the use of the working capital fund for expenses necessary for the maintenance and operation of common administrative services. The use of the fund for cybersecurity is not specifically authorized and is not appropriate considering direct funding

is also requested and appropriated within funds for the Chief Information Officer within Departmental Administration. The Department shall include all funding required for CyberOne and other related cybersecurity needs in its budget request for Departmental Administration in future budget requests.

Alleviation of Poverty.—In its fiscal year 2016 report, the Committee directed the Department to provide a report detailing all domestic and international projects and programs within its jurisdiction that contribute to the alleviation of poverty. The Department is encouraged to provide this report not later than 90 days after the enactment of this Act.

Workplace Diversity.—The Committee recognizes the importance of workplace diversity in the Department of Energy's national laboratories. The Committee encourages the Department to continue to develop and broaden partnerships with minority serving institutions, including Hispanic Serving Institutions, Historically Black Colleges and Universities, Asian and Pacific Islander Serving Institutions, Predominantly Black Institutions, Tribal Colleges, and other Minority Serving Institutions. The Committee notes that the fiscal year 2017 Act directed the Department to provide a detailed plan outlining efforts to recruit and retain diverse talent from the institutions mentioned above. The Department is encouraged to provide this plan not later than 90 days after the enactment of this Act.

Public Access Plan.—The Committee appreciates the Department issuing its Public Access Plan on July 24, 2014. The Committee urges the Department to continue efforts towards full implementation of the plan and expects an update on progress be included in the fiscal year 2020 budget request.

Improper Payments.—The Committee continues to be concerned that the Department is failing in its responsibility to ensure that its maintenance and operating contracts with incurred costs valued at billions of dollars per year are being audited appropriately and in a timely manner. The Department was directed in the fiscal year 2015 Act to carry out a plan to improve its cost audit coverage, but has not reported any progress on issues identified by the DOE Inspector General (IG) associated with the Department's cost audit coverage. The DOE IG continues to track nearly a billion dollars in potentially unallowable and unresolved amounts on DOE contracts. In May 2017, the Government Accountability Office (GAO) found that DOE does not use leading practices for managing fraud risks, such as data analytics, that can help agencies detect fraudulent spending or other improper payments. The GAO made six recommendations that remain open. Nevertheless, the Department claims that it had an industry leading low improper payment rate of 0.07% for fiscal year 2015, far below the government-wide improper payment rate of 4.8%. In claiming this figure, the Department is clearly not accounting for payments that it has simply failed to audit and resolve. It is also not evident that the Department is capturing data on payments made to its contractors that are later determined to be an unallowable cost. The Committee directs the Comptroller General to investigate the Department's system of tracking unallowable, disputed, or improper payments and provide recommendations to improve the Department's methodology for reporting accurate, representative, and meaningful data

on improper payments. Furthermore, the Department is directed to provide to the Committees on Appropriations of both Houses of Congress not later than 90 days after the enactment of this Act a plan for removing the Department of Energy from the GAO's High Risk List for Fraud, Waste, and Abuse for its maintenance and operating contracts. This plan shall include actions to improve contract auditing and the tracking of meaningful data for fraud, waste, and abuse in its contracts.

Supporting Information.—The Committee relies 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 in order to maintain a transparent and open governing process. The Committee recognizes that some discussions internal to the executive branch are predecisional in nature and, therefore, not subject to disclosure. However, access to facts, figures, and statistics that inform these decisions are not subject to this same sensitivity and are critical to the budget process. The Administration needs to ensure timely and complete responses to these inquiries.

MANAGEMENT OF SPENT NUCLEAR FUEL AND DEFENSE WASTE

The Committee fully supports the Administration's position to move forward with Yucca Mountain. The Department, together with the Nuclear Regulatory Commission (NRC), has repeatedly confirmed over the years that Yucca Mountain is a safe and secure location to permanently store the nation's spent nuclear fuel and high-level radioactive waste. However, many more steps remain before Yucca Mountain begins to accept waste. The Department's request restarts this process and brings the Department closer to fulfilling its legal obligation to take responsibility for storing the nation's nuclear waste. The Committee appreciates the Department's focus on Yucca Mountain and provides additional funds above the budget request to accelerate progress toward meeting the Department's goals.

To restart the adjudication of the Yucca Mountain license application, the Committee provides a total of $267,700,000, an increase of $100,000,000 above the budget request. Funding for Yucca is provided in the following three accounts: $190,000,000 for Nuclear Waste Disposal, $30,000,000 for Defense Nuclear Waste Disposal, and $47,700,000 within the NRC.

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.

EDUCATIONAL ACTIVITIES

The Department is prohibited from funding fellowship and scholarship programs in fiscal year 2019 unless the programs were explicitly included in the budget justification or funded within this recommendation. Any new or ongoing programs that the Depart-

ment chooses to fund in fiscal year 2019 must be detailed in the fiscal year 2019 budget justifications.

PROJECT MANAGEMENT

The Committee notes that the Department is not meeting its statutory annual reporting requirements for its general plant projects. In addition, the Department has not been consistently reporting the details of its general plant projects across Departmental programs in its budget request. Not later than 60 days after the enactment of this Act, the Department shall provide to the Committees on Appropriations of both Houses of Congress a report on all general plant projects funded in fiscal years 2017, 2018, and 2019. The Department shall ensure that all general plant projects are clearly identified in the appropriate sections of its fiscal year 2020 budget request and that a full description with total costs is included for each project.

REPROGRAMMING AND TRANSFER GUIDELINES

The Committee requires the Department to inform the Committee promptly when a change in program execution and funding is required during the fiscal year. The Department's reprogramming requirements are detailed in statute. To assist the Department in this effort, the following guidance is provided for programs and activities.

Definition.—A reprogramming includes the reallocation of funds from one activity to another within an appropriation. The recommendation includes a general provision providing internal reprogramming authority to the Department, as long as no program, project, or activity is increased or decreased by more than $5,000,000 or 10 percent, whichever is less, compared to the levels in the table detailing the Committee's recommendations for the Department's various accounts. For construction projects, a reprogramming constitutes the reallocation of funds from one construction project to another project or a change of $2,000,000 or 10 percent, whichever is less, in the scope of an approved project.

Criteria for Reprogramming.—A reprogramming should be made only when an unforeseen situation arises, and then only if delay of the project or activity until the next fiscal year would result in a detrimental impact to an agency program or priority. A reprogramming may also be considered if the Department can show that significant cost savings can accrue by increasing funding for an activity. Mere convenience or preference should not be a factor for consideration. A reprogramming may not be employed to initiate new programs or to change program, project, or activity allocations specifically denied, limited, or increased by the Congress in the Act or report.

Reporting and Approval Procedures.—In recognition of the security missions of the Department, the legislative guidelines allow the Secretary and the Administrator of the National Nuclear Security Administration jointly to waive the reprogramming restriction by certifying to the Committees on Appropriations of both Houses of Congress that it is in the nation's security interest to do so. The Department shall not deviate from the levels for activities specified in the report that are below the level of the detail table, except through the regular notification procedures of the Committee. No

funds may be added to programs for which funding has been denied. Any reallocation of new or prior-year budget authority or prior-year de-obligations, or any request to implement a reorganization that includes moving previous appropriations between appropriations accounts must be submitted to the Committees on Appropriations of both Houses of Congress in writing and may not be implemented prior to approval by the Committees.

Transfers.—As in fiscal year 2018, funding actions into or out of accounts funded by this Act may only be made by transfer authorities provided by this or other appropriations Acts.

COMMITTEE RECOMMENDATIONS

The Committee's recommendations for Department of Energy programs in fiscal year 2019 are described in the following sections. A detailed funding table is included at the end of this title.

ENERGY PROGRAMS

ENERGY EFFICIENCY AND RENEWABLE ENERGY

Appropriation, 2018	$2,321,778,000
Budget estimate, 2019	695,610,000
Recommended, 2019	2,078,640,000
Comparison:	
Appropriation, 2018	−243,138,000
Budget estimate, 2019	+1,383,030,000

Energy Efficiency and Renewable Energy (EERE) programs include research, development, demonstration, and deployment activities advancing energy efficiency and renewable energy technologies, as well as federal energy assistance programs. The EERE program is divided into three portfolios: sustainable transportation, renewable energy, and energy efficiency. The sustainable transportation portfolio, which consists of the vehicles, bioenergy, and hydrogen and fuel cell programs, advances the development of plug-in electric and other alternative fuel vehicles, high-efficiency advanced combustion engines, and the replacement of oil with clean domestic transportation fuels. The renewable energy portfolio, which consists of the solar, wind, water, and geothermal programs, aims to develop innovative technologies to make renewable electricity generation cost competitive with traditional sources of energy. The energy efficiency portfolio, which consists of the advanced manufacturing, buildings, and federal energy assistance programs, seeks cost-effective solutions to reduce energy consumption in plants, buildings, and homes.

The Committee encourages EERE to offer technical and other programmatic assistance to the Commonwealth of Puerto Rico to support investment in innovative technologies to effectively reduce power system emissions, efficiently treat wastewater, produce biofuels, and generate power from solid waste. In addition, the Committee also encourages EERE to assist Puerto Rico in assessing the viability and implementation of a subsea electric cable interconnection and the use of micro grids in order to reduce electricity rates.

The Committee recognizes the importance of the Department's work on the Energy-Water Nexus and as part of that effort, the Committee encourages the Department to enter into an inter-

departmental agreement with the Department of Agriculture for research that explores how to integrate ongoing research projects at the various national laboratories and the Agricultural Research Service to develop effective, deployable, energy- and water-efficient food production platforms, beginning in food-insecure communities across the country. By working together, DOE and the Department of Agriculture can bring respective strengths and resources to designing the most desirable low-cost and efficient production system.

Zero Emissions Energy Credit.—The Committee notes that in the fiscal year 2018 Act the Department was directed to produce a report to evaluate the effects of a Zero Emissions Energy Credit. The Committee expects a timely delivery of the report.

Energy Star.—The Committee supports the Department's ongoing role in the Energy Star program and its current structure. In November 2017, the Environmental Protection Agency (EPA) requested feedback from Energy Star program stakeholders about how to improve the program by developing updated standard operating procedures (SOPs). The Department is directed to support the EPA's efforts to reexamine Energy Star guidelines and SOPs to ensure transparency, predictability, and consistency for all stakeholders.

SUSTAINABLE TRANSPORTATION

The Vehicle, Bioenergy, and Hydrogen and Fuel Cell Technologies programs fund activities that can reduce American exposure to future high oil prices. Research into cutting-edge technologies that will increase the fuel economy of gasoline and diesel fuel vehicles—the vast majority of today's fleet will allow Americans to spend less on fuel while traveling the same distance. Research into next-generation automotive and fuel cell technologies that power vehicles with domestic energy sources such as natural gas, electricity, biofuels, and hydrogen can likewise dramatically lower the impact of future high gas prices on Americans.

Vehicle Technologies.—Within available funds, the recommendation includes $130,000,000 for Batteries and Electric Drive Technology, of which $7,000,000 is to enable extreme fast charging and advanced battery analytics; $25,000,000 for Energy Efficient Mobility Systems; $25,000,000 for Materials Technology; $2,500,000 for Advanced Vehicle Competitions; and $20,000,000 to continue the SuperTruck II program to further improve the efficiency of heavy-duty class 8 long- and regional-haul vehicles. 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.

The Committee directs the Department to continue to support the Clean Cities program, including providing competitive grants to support alternative fuel, infrastructure, and vehicle deployment activities. Within available funds, the recommendation provides $34,000,000 for Deployment through the Clean Cities Program. When issuing competitive grants in support of these activities, the Department is encouraged to focus on awards that range from $500,000 to $1,000,000 each and include at least one Clean Cities coalition partner. The Committee encourages the Department to ensure balance in the award of funds to achieve varied aims in fos-

tering broader adoption of clean vehicles and installation of supporting infrastructure.

Within available funds, the recommendation includes up to $15,000,000 for medium- and heavy-duty on-road natural gas engine research and development, including energy efficiency improvements, emission after-treatment technologies, fuel system enhancements, and new engine development. The recommendation also includes, within available funds, up to $10,000,000 to continue to support improving the energy efficiency of commercial off-road vehicles, including fluid power systems.

The Committee is aware of the efforts to develop hyperloop transportation systems around the country, which have the potential to increase the energy efficiency of our nation's transportation system. The Committee directs the Department to provide to the Committees on Appropriations of both Houses of Congress not later than 180 days after the enactment of this Act a report that models the demands on the electric grid and the overall energy consumption of the transportation sector of varying levels of network penetration of an interconnected hyperloop system. The report should include information about how these systems could be integrated into the electric grid and identify any technological constraints of the grid that must be addressed to allow the broad adoption of hyperloop technologies.

Bioenergy Technologies.—Within available funds, $27,000,000 is for feedstock supply and logistics, of which $14,000,000 is for the national lab consortium and $5,000,000 is for upgrades at the Biomass Feedstock National User Facility to extend its capabilities and maximize benefits. The recommendation provides $32,000,000 for algal biofuels, of which $2,000,000 is for further research and development activities to support carbon capture from the atmosphere (ambient air) using algae-to-energy technologies.

Within available funds for Conversion Technologies, the recommendation provides $20,000,000 to continue the Agile Biology Foundry and $5,000,000 to improve the efficiency of community and smaller digesters that accept both farm and food wastes.

The Committee is appreciative ofμresearch the Bioenergy Technologies Office has supported regarding wet and gaseous waste streams in waste-to-energy projects. The Committee is interested in understanding how further research and development activities can support baseload power generation using municipal solid waste-to-energy technologies. The Department is reminded that the fiscal year 2018 Act required, not later than 180 days after the enactment of that Act, a report on research and development activities that can improve the economic viability of municipal solid waste-to-energy facilities.

Hydrogen and Fuel Cell Technologies.—Within available funds, $2,000,000 is for the EERE share of the integrated hybrid energy systems work with the Office of Nuclear Energy and $7,000,000 is to enable integrated energy systems using high and low temperature electrolyzers with the intent of advancing the H2@Scale concept.

The Committee recognizes the progress of the program and continues support for stationary, vehicle, motive, and portable power applications of this technology. The Department is encouraged to explore technologies that advance novel onboard hydrogen tank

systems and trailer delivery systems, and that reduce the cost and improve the performance of hydrogen generation and storage systems. The Department is encouraged to work with the Department of Transportation on coordinating supporting hydrogen fueling infrastructure.

The Committee recognizes the need to support the development of alternative fueling infrastructure for U.S. consumers. Accordingly, the Department is encouraged to collaborate with the National Institute of Standards and Technology to allow accurate measurement of hydrogen at fueling stations.

RENEWABLE ENERGY

The Solar Energy, Wind Energy, Water Power, and Geothermal Technologies programs fund applied research, development, and demonstration to reduce the cost of renewable energy to economically competitive levels. Research into innovative technologies, such as photovoltaic and concentrating solar technologies, offshore wind, hydropower, and ground heat, can expand energy production from our domestic resources and reduce our dependence on foreign oil.

Solar Energy.—The Committee encourages the Department to research high efficiency thin-film photovoltaics and processes for high-speed, low-cost processing to produce stable materials on flexible substrates that can be used in residential and commercial power and be integrated into buildings, vehicles, and food production. Research programs are encouraged to include cooperation between industry and academia and to include advanced optical characterization that enables development of strong correlations between materials, cell optical properties, and the photovoltaic power performance of the working solar cells. The Committee also encourages the Department to find ways to expand access to solar energy to residences and businesses in low-income communities.

The Committee encourages the Department to prioritize research that seeks to improve photovoltaic cell technologies, overcome grid integration challenges, and reduce the costs of solar adoption.

Wind Energy.—Within available funds, the recommendation provides up to $5,000,000 for LCOE reduction, domestic manufacturing, and lowering market barriers for distributed wind systems, including small wind for rural homes and farms. The recommendation provides $1,000,000 for the Wind for Schools program.

The Committee supports wind energy research, development, and testing activities at the Department and recommends not less than $7,000,000 for these activities. The Department is encouraged to allocate this funding to perform experimental testing, including aeroacoustics, and any required equipment and instrumentation, to validate high-fidelity wind plant models, and to develop wind plant controls in support of the Department's Atmosphere to Electrons (A2e) initiative. The Department is encouraged to leverage existing partnerships and expand research collaboration with industry, national laboratories, and academia, especially in the areas of hybrid wind system control and optimization, wind turbine capability enhancement to increase grid reliability and resilience, and R&D activities, including cyber security, under the guidance of the Grid Modernization Initiative.

The Committee continues to support wind activities with large generation potential. As such, the Committee urges the Depart-

ment to prioritize offshore wind technologies that address the unique opportunities and issues across the nation's waterways, such as high winds, icing, and deep water. In addition, the Committee encourages the Department to continue its work in advancing innovative technologies for offshore wind development, including freshwater, deepwater, shallow water, and transitional depth installations.

The Committee supports the efforts by the Department to establish an offshore wind research and development consortium.

Water Power.—Within available funds, the recommendation provides $59,000,000 for marine and hydrokinetic technology research, development, and deployment activities, including research into mitigation of marine ecosystem impacts of these technologies. The Committee directs the Department to continue development of the open-water wave energy test facility with previously provided funds. The Committee directs the Department to continue competitive solicitations to increase energy capture, reliability, and survivability at lower costs for a balanced portfolio of wave and current (ocean, river, tidal) energy conversion systems and components. The Committee expects the Department to continue to support collaborations between the previously designated Marine Renewable Energy Centers and the national laboratories, including personnel exchanges, to support research, development, and deployment of marine energy components and systems. In addition, the Department is directed to 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.

The recommendation provides $26,000,000 for conventional hydropower, of which $6,600,000 is for the purposes of section 242 of the Energy Policy Act of 2005. Within available funds for hydropower, $10,000,000 is recommended for a competitive funding opportunity for industry-led research, development and deployment of cross-cutting energy converter technologies for run-of-river and tailrace applications to better utilize underdeveloped low-head and other hydropower resources.

ENERGY EFFICIENCY

The Advanced Manufacturing, Building Technologies, Federal Energy Management, and Weatherization and Intergovernmental programs advance cost-effective solutions to reduce energy consumption through increased efficiency. Research into cutting-edge technologies that enhance manufacturing processes; develop advanced materials; and reduce energy use in buildings, homes, and factories can serve the national interest by greatly reducing our energy needs, while also giving American manufacturers an advantage to compete in the global marketplace.

The Committee encourages the Department to plan a workshop to explore ways to improve the adoption rate of energy efficient technologies.

Advanced Manufacturing.—Within available funds, the recommendation provides $80,000,000 for Advanced Manufacturing Research and Development Projects; not less than $4,205,000 for improvements in the steel industry; $20,000,000 for process informed science, design, and engineering of materials and devices operating in harsh environments; $5,000,000 for research into the

materials and manufacturing process development of high-strength, light-weight nano-crystalline metal alloys; and $5,000,000 for process-informed catalyst science to direct chemical reactions in full-scale industrial manufacturing processes and to develop new industrial product applications.

The recommendation provides $56,000,000 for four Clean Energy Manufacturing Innovation (CEMI) Institutes, $25,000,000 for the Critical Materials Institute, and $20,000,000 for the Manufacturing Demonstration Facility (MDF) and the Carbon Fiber Test Facility. Within available funds for the MDF, up to $5,000,000 is for the development of additive systems and automation technologies that have the potential to deposit multiple materials allowing for hybrid material solutions. In addition, the Committee supports the Department's ongoing efforts to work on bio-based composites, bio-derived materials, and nano/microcellulose research. The Committee supports the budget request for Research and Development Consortia to conduct early-stage research and development in high priority areas and also supports early-stage research in materials, process knowledge, and applications of modeling and simulation relevant to energy in manufacturing. The recommendation provides no funding for the Energy-Water Desalination Hub.

The Committee notes that drying processes consume approximately 10 percent of the process energy used in the manufacturing sector. The recommendation provides up to $10,000,000 to support research and development efforts to improve the efficiency of drying processes.

Building Technologies.—The Committee encourages the Department to continue work on transactive controls for the integration of buildings, the grid, and renewable energy assets, including photovoltaics, and encourages the continuation of this work. Within available funds, the recommendation includes up to $25,000,000 for transactive controls research and development, of which $5,000,000 is to continue promoting regional demonstrations of new, utility-led residential connected communities for advancing smart grid systems; $28,000,000 for Commercial Buildings Integration; $23,000,000 for Residential Buildings Integration; and $25,000,000 for solid state lighting. 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 is provided in addition to funds recommended for lighting research and development.

Within the Residential Buildings Integration program, the Committee encourages the Department to support industry teams to facilitate research, demonstrate and test new systems, and facilitate widespread deployment through direct engagement with builders, the construction trades, equipment manufacturers, smart grid technology and systems suppliers, integrators, and State and local governments.

The Committee appreciates the Department's work in the area of mass composite timber technology and high performance building insulation and sensor technologies.

The Committee notes that natural gas plays an important role in meeting the energy needs of U.S. homes and commercial buildings. The Committee encourages the Department to explore research and development that can advance future natural gas systems and ap-

pliances to meet consumer demand for high efficiency and environmentally friendly products.

The Committee recommends up to $20,000,000 for research, development, and market transformation programs on energy efficiency efforts related to the direct use of natural gas in residential applications, including gas heat pump heating and water heating, on-site combined heat and power, and natural gas appliance venting.

The Committee urges the Department to examine how on-site renewable generation and energy efficiency measures can combine to meet state energy code objectives.

Weatherization and Intergovernmental Programs.—The Committee directs the Department to prioritize a timely distribution of Weatherization Assistance Program funds. The Committee recognizes that many individuals who would otherwise be eligible for the Weatherization Assistance Program have homes with structural deficiencies which preclude them from participating. The Department is directed to provide to the Committees on Appropriations of both Houses of Congress a briefing on the kinds of information that is collected from grantees and the potential for collecting additional information that discusses the kinds of structural deficiencies that make homes ineligible for the program.

CORPORATE SUPPORT

The Program Direction, Strategic Programs, and Facilities and Infrastructure budgets provide the necessary resources for program and project management across all of EERE's technology programs, for the adoption of technologies to market, and for the operation and upkeep of the National Renewable Energy Laboratory.

Strategic Programs.—The Department is encouraged to work with 2-year, public community and technical colleges on job training programs that lead to an industry-recognized credential in the energy workforce.

CYBERSECURITY, ENERGY SECURITY, AND EMERGENCY RESPONSE

Appropriation, 2018	$– – –
Budget estimate, 2019	95,800,000
Recommended, 2019	146,000,000
Comparison:	
Appropriation, 2018	+146,000,000
Budget estimate, 2019	+50,200,000

The Cybersecurity, Energy Security, and Emergency Response program leads the Department's efforts to secure the nation's energy infrastructure against all hazards, reduce the risks of and impacts from cyber events, and assist with restoration activities. A reliable and resilient power grid is critical to the nation's economic competitiveness and leadership.

After adjusting for the account structure changes proposed in the President's request, the recommendation is $49,971,000 above the fiscal year 2018 enacted level for these activities.

The Committee places a high priority on ensuring the protection of the grid against cyberattacks and extreme weather events. The Committee appreciates the Department's enhanced focus on these activities. Many different actors, governmental and private, play a role in preventing and responding to threats to the nation's energy

infrastructure. The Committee expects the Department to continue coordinating its efforts with all stakeholders to ensure the highest priority areas are being addressed effectively in its ongoing efforts to protect the grid.

Within available funds for Cybersecurity for Energy Delivery Systems, $10,000,000 is for research and development on concepts to simplify and isolate automated systems and remove vulnerabilities that could allow unauthorized access to the grid through digital software systems.

ELECTRICITY DELIVERY

Appropriation, 2018	$– – –
Budget estimate, 2019	61,309,000
Recommended, 2019	175,000,000
Comparison:	
Appropriation, 2018	+175,000,000
Budget estimate, 2019	+113,691,000

The Electricity Delivery program advances technologies and provides operational support to increase the efficiency and technological advancement of the nation's electricity delivery system. The power grid employs aging technologies at a time when power demands and the deployment of new intermittent technologies are imposing new stresses on the system. The Electricity Delivery program aims to develop a modern power grid by advancing resilient power distribution systems, intelligent and high-efficiency grid components, and energy storage systems.

After adjusting for the account structure changes proposed in the President's request, the recommendation is $22,700,000 above the fiscal year 2018 enacted level for these activities.

Within available funds for Resilient Distribution Systems, $7,000,000 is provided for university-based research and development of sensing, intelligent machines in the Internet of Things and their integration into the utility grid. The Committee supports investments to bring together the national laboratories' micro grid capabilities to provide the most advanced set of micro grid research, development, and experimentation capabilities for developing grid solutions from fundamental research to evaluation, design, and decision support.

The Committee supports energy storage projects that fully assess and demonstrate a portfolio of energy storage systems at grid relevant scales and maximize the value stream of these technologies to deliver tangible benefits across the operations, energy delivery, environmental, and financial sectors of the utility industry.

Within available funds for Energy Storage, the Department is encouraged to launch a new initiative aimed at aggressively driving down costs and improving the performance of a diverse set of grid-scale storage technologies. The program will build off the Department's prior research and development efforts in storage; include a suite of technologies capable of providing storage-like functions; and focus R&D efforts on technical, regulatory, and market issues necessary to achieve both existing grid-scale storage cost and performance targets, as well as targets for increased grid reliability, resiliency, or others as appropriate. The Electricity Delivery program is urged to coordinate its efforts with the Office of Science and EERE to ensure this new initiative best leverages the storage

work being conducted within the Basic Energy Sciences program of the Office of Science and programs within EERE where appropriate. Low cost grid-scale energy storage technologies are critical to improving grid resiliency, reliability, security, and the successful integration of a broad range of generation sources.

The Committee notes the potential benefits that high power, high capacity batteries can provide for increased energy resilience in the face of adverse events and increasing deployments of intermittent technologies. The Department is directed to provide to the Committees on Appropriations of both Houses of Congress not later than 180 days after the enactment of this Act a report on the potential use of next generation, high capacity and high power batteries in our energy system.

The Department is directed to continue the ongoing work between the national laboratories, industry, and universities to improve grid reliability and resiliency through the strategic goals of the Grid Modernization Initiative. The Committee encourages the Department to include all applied energy programs to ensure broad energy system resilience and modernization. In addition, the Committee supports the strategic goals of the Grid Modernization Laboratory Consortium and supports continued implementation of the Grid Multi-year Program Plan. The plan should include an emphasis on national grid resilience modeling and improved grid cyber resilience.

The Committee is supportive of establishing a shared platform for understanding the interconnectedness of the North American grid, but lacks details on cost estimates for these efforts. The Department is directed to provide to the Committees on Appropriations of both Houses of Congress not later than 90 days after the enactment of this Act a report describing the activities and costs necessary to achieve a North American grid model. Within available funds the Department may build upon existing tools and modeling work done at the Department to explore a shared modeling platform across the national laboratories.

The Committee supports the Department's involvement in the grid restoration effort in Puerto Rico and encourages the Department to continue to provide technical assistance as Puerto Rico works to rebuild its energy infrastructure. In addition, the Electricity Delivery program is encouraged to collaborate with EERE to offer assistance in assessing the viability and implementation of a subsea electric cable interconnection and the use of micro grids in order to reduce electricity rates.

The Department is directed to provide to the Committees on Appropriations of both Houses of Congress not later than 180 days after the enactment of this Act a report on the potential of dynamic line rating systems to address transmission congestion management and improve grid reliability and resiliency. The report should contain an analysis of the technologies needed to support dynamic line rating and any generation technologies that may benefit or be disadvantaged by implementing a dynamic line rating scheme.

NUCLEAR ENERGY

Appropriation, 2018	$1,205,056,000
Budget estimate, 2019	757,090,000
Recommended, 2019	1,346,090,000
Comparison:	
Appropriation, 2018	+141,034,000
Budget estimate, 2019	+589,000,000

Nuclear power generates approximately one-fifth of the nation's electricity and will continue to be an important base-load energy source in the future. The Department of Energy's Nuclear Energy (NE) program invests in research, development, and demonstration activities that develop the next generation of clean and safe reactors, further improve the safety of our current reactor fleet, and contribute to the nation's long-term leadership in the global nuclear power industry.

NUCLEAR ENERGY RESEARCH AND DEVELOPMENT

Nuclear Energy Enabling Technologies.—Within available funds, $50,000,000 is for Crosscutting Technology Development, of which $10,000,000 is for work on advanced sensors and instrumentation and $10,000,000 is for hybrid energy systems; $50,000,000 is for the Nuclear Science User Facilities, of which $10,000,000 is for nuclear energy computation system and support; $40,000,000 is for Nuclear Energy Advanced Modeling and Simulation, of which $6,000,000 is for MW-scale reactor modeling and simulation; and $24,300,000 is for the Energy Innovation Hub. The Department is directed to continue to treat the Energy Innovation Hub and the Nuclear Energy Advanced Modeling and Simulation programs as separate funding activities.

Integrated University Program.—The Committee recommends $5,000,000 to continue the Integrated University Program, which is critical to ensuring the nation's nuclear science and engineering workforce in future years.

Reactor Concepts Research, Development, and Demonstration.—Within available funds, $100,000,000 is for Advanced Small Modular Reactor Research and Development to support technical, first-of-its-kind engineering and design and regulatory development of next generation light water and non-light water small modular reactors, including $10,000,000 for seismic analysis; $155,000,000 is for Advanced Reactor Technologies, of which $34,000,000 is for fuel and graphite qualification, $22,000,000 is to complete the federal share of the two performance-based advanced reactor concepts, and $20,000,000 is for MW-scale reactor research and development; and $65,000,000 is for research and development to support efforts to develop a versatile fast test reactor. In support of the current fleet of reactors as they continue to ensure safe and reliable operations, the Committee includes $50,000,000 for the Light Water Reactor Sustainability program.

The Department is encouraged to build upon the success of the advanced reactor concepts program and explore ways to support research and development that would enable non-light water reactor demonstrations by the mid to late 2020s.

The Department shall continue to work with the National Aeronautics and Space Administration (NASA) to ensure an adequate

supply of plutonium-238 is available for future NASA space exploration missions.

Fuel Cycle Research and Development.—Within available funds, the recommendation provides $128,559,000 for the Advanced Fuels Program, of which not less than $55,600,000 is to continue the participation of three industry-led teams of the cost shared research and development program on Accident Tolerant Fuels; not less than $20,000,000 is to support accident tolerant fuels development at the national laboratories and other facilities, including at the Advanced Test Reactor, the Transient Reactor Test Facility, and the Halden reactor; $3,000,000 is to continue research on ceramic cladding; and $15,000,000 is for additional support of capability development of transient testing, including test design, modeling, and simulation. The Committee notes that continued operation of the Advanced Test Reactor, the Transient Reactor Test Facility, and the Halden Reactor are critical to the success of the Accident Tolerant Fuels program and should be preserved. Within available funds, the recommendation provides $50,000,000 for Material Recovery and Waste Form Development, of which $7,000,000 is for joint fuel cycle studies and up to $20,000,000 is for highly enriched uranium recovery preparation and testing to support needs for high assay low enriched uranium.

The recommendation provides $62,500,000 to continue generic Used Nuclear Fuel Disposition research and development activities. The Department is directed to provide to the Committees on Appropriations of both Houses of Congress a report on how electromagnetic technologies can be used to remediate nuclear waste. The report shall evaluate the scientific basis for these technologies, the effects on nuclear waste and storage in the United States, the benefit to the nuclear power industry, and the implications for national security. The Committee is aware of the Department's ongoing research and development efforts regarding the safe transportation of spent nuclear fuel and encourages the Department to continue this important work to ensure that this fuel can be safely moved at the earliest opportunity.

IDAHO FACILITIES MANAGEMENT

INL Operations and Infrastructure.—Within available funds, the recommendation includes $300,000,000 for INL Operations and Infrastructure to support the MFC and ATR Five-Year Plan to increase reliability and sustainability.

IDAHO SITEWIDE SAFEGUARDS AND SECURITY

Idaho Sitewide Safeguards and Security.—Within available funds, the recommendation includes $10,000,000 to construct a protective forces building at the ATR complex that will meet the needs for expanded protective force and security operations under the Department's new Design Basis Threat but that will not exceed a total project cost of $10,000,000.

FOSSIL ENERGY RESEARCH AND DEVELOPMENT

Appropriation, 2018	$726,817,000
Budget estimate, 2019	502,070,000
Recommended, 2019	785,000,000
Comparison:	
Appropriation, 2018	+58,183,000
Budget estimate, 2019	+282,930,000

Fossil energy resources, such as coal, oil, and natural gas, generate approximately 63 percent of the nation's electricity and will continue to provide for the majority of our needs for the foreseeable future. The Fossil Energy Research and Development program funds research, development, and demonstration activities to improve existing technologies and to develop next-generation systems in the full spectrum of fossil energy areas. At a time when fossil fuel power generation is expanding around the globe, the activities funded within this program advance our nation's position as a leader in fossil energy technologies and ensure that we use the full extent of our domestic resources safely and efficiently.

COAL—CCS AND POWER SYSTEMS

The Department is directed to use funds from Coal CCS and Power Systems for both coal and natural gas research and development as it determines to be merited, as long as such research does not occur at the expense of coal research and development.

The recommendation provides $25,000,000 to continue to support the solicitation for two large-scale pilots that focus on transformational coal technologies that represent a new way to convert energy to enable a step change in performance, efficiency, and the cost of electricity compared to today's technologies. Such technologies include thermodynamic improvements in energy conversion and heat transfer, such as pressurized oxygen combustion and chemical looping, and improvements in carbon capture systems technology. In making the awards for large-scale pilots, the Department should prioritize entities that have previously received funding for these technologies at the lab and bench scale.

Within available funds for Coal CCS and Power Systems, the Committee supports new solicitations for Front-End Engineering and Design studies on projects that generate emissions suitable for utilization or storage. In addition, the Committee recommends research and development, as well as pilot scale activities, that will improve the performance, reliability, and efficiency of both new and existing fossil fuel fired power plants.

Consistent with direction provided in fiscal year 2018, the Committee does not support the closure of any National Energy Technology Laboratory (NETL) site and provides no funds to plan, develop, implement, or pursue the consolidation or closure of any of the NETL sites.

The Committee supports the integrated carbon and energy management activities of NE and EERE and provides $2,000,000 for Hybrid Carbon Conversion activities within Fossil Energy.

Carbon Capture.—The Department is directed to explore carrying out a prize competition to advance the research, development, or commercialization of technologies that capture, sequester, or utilize carbon from coal. The Committee encourages the Department to focus its efforts on improving the efficiency and decreasing the

costs of carbon capture technologies, demonstrating carbon capture technologies, and identifying how these technologies can be integrated with business models and operations. This focus includes small- and large-scale pilot testing of technologies moving through the program pipeline and retrofit activities on the existing fleet.

Carbon Storage.—The Committee supports the past work of the Regional Carbon Sequestration Partnerships (RCSPs) in advancing future technologies for enhanced oil recovery, mineral resource extraction, and gaining deep subsurface knowledge through continued research. The Committee believes the Department should undertake measures to preserve, share, and advance the state of knowledge gained through these programs, which will provide the necessary information to strengthen platforms for industry adoption. Within available funds for Storage Infrastructure, the Committee provides up to $30,000,000 to support the CarbonSAFE initiative in which the RCSPs are eligible to participate. The Department is encouraged to continue activities that promote the use and reuse of captured carbon from both the power and industrial sectors. In addition, the Committee encourages the Department to support non-geologic utilization activities within the Carbon Use and Reuse program, including biological utilization by algae and other microorganisms.

Advanced Energy Systems.—Within available funds, $30,000,000 is for Solid Oxide Fuel Cells to focus on hydrogen production and storage as well as research and development to enable efficient, cost-effective electricity generation with minimal use of water and the use of abundant domestic coal and natural gas resources with near-zero atmospheric emissions of CO2 and pollutants. Moreover, central power generation applications of solid oxide fuel cells can be integrated with carbon capture and storage efforts to contribute to a secure energy future. The Department is directed to provide to the Committees on Appropriations of both Houses of Congress not later than 180 days after the enactment of this Act a report on the status of the Solid Oxide Fuel Cell Program. The report shall include a discussion of the technological achievements of the program, including lessons learned, and a discussion of the technical requirements to achieve the remaining goals of the program.

The Committee urges the Department to fund research and development activities to improve the efficiency of gas turbines used in power generation systems, working cooperatively with industry, universities, and other appropriate parties. The Committee recognizes the abundance of domestic coal and its potential to be a significant primary energy source for the production of liquid fuels. Within available funds, the Department is directed to support research and development that focuses on expanding the Department's external agency activities to develop and test advanced concept coal to liquid fuels technologies. Within available funds, $37,000,000 is for transformative power generation to improve the efficiency, reliability, and flexible operations of both new and existing plants. The Department is directed to focus on advanced coal technologies that are applicable to retrofit technologies and modular coal technologies that are capable of distributed generation, represent maximum efficiency improvements over the current average fleet, incorporate advanced emissions control systems, and are economically competitive.

Crosscutting Research.—Within available funds, the recommendation provides up to $2,500,000 to research low-temperature microwave plasma technology that converts domestic coal into high-performance carbon materials, and $20,000,000 for the Advanced Ultrasupercritical Program to fabricate, qualify, and develop domestic suppliers capable of producing components from high temperature materials.

NETL Coal Research and Development.—The recommendation includes $20,000,000 for the Department to continue its ongoing 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 application.

Supercritical Transformational Electric Power (STEP) Generation.—Within available funds, the recommendation provides $16,700,000, consistent with the original scope of work, to fully fund the Department's cost share portion to design, construct, and operate a 10-MW pilot. The recommendation provides an additional $5,730,000 for competitively-awarded research and development activities, coordinated with EERE and NE, to advance the use of supercritical power cycles.

NATURAL GAS TECHNOLOGIES

Research.—Within available funds, the recommendation provides $9,000,000 for Environmentally Prudent Development and $5,200,000 for the Risk Based Data Management System. The Department is encouraged to explore technologies that curtail methane gas emissions from flaring and venting in shale formations.

UNCONVENTIONAL FOSSIL ENERGY TECHNOLOGIES

The Committee supports the Department's continued investment into research and development on unconventional fossil energy technologies. These investments will help the United States maximize the benefits of its abundant unconventional natural gas liquids production.

The Committee recognizes the Department's ongoing efforts to support research into the exploration for and development of emerging unconventional oil and gas reservoirs. The Committee encourages continued efforts to characterize emerging unconventional reservoirs and to emphasize geographic areas where geological conditions are optimal for the generation and accumulation of economically significant amounts of oil or gas in the geological formations being studied. The Committee further encourages a focus of available resources on potential unconventional reservoirs for which there exist limited amounts of data rather than well-known existing reservoirs.

The Committee provides $15,000,000 for Unconventional Field Test Sites.

The Committee is pleased with the Department's progress to date on studying the volatility of crude oil from the Bakken Shale in North Dakota and accurately assessing and characterizing volatility before transporting. The Committee directs the Department to continue this research in partnership with the Department of

Transportation to improve the safety of crude oil transported by rail in this country.

NETL INFRASTRUCTURE

Within available funds, the recommendation provides $5,500,000 for NETL's Supercomputer, Joule.

NAVAL PETROLEUM AND OIL SHALE RESERVES

Appropriation, 2018	$4,900,000
Budget estimate, 2019	10,000,000
Recommended, 2019	10,000,000
Comparison:	
Appropriation, 2018	+5,100,000
Budget estimate, 2019	– – –

The Naval Petroleum and Oil Shale Reserves no longer serve the national defense purpose envisioned in the early 1900's, and consequently the National Defense Authorization Act for fiscal year 1996 required the sale of the Government's interest in the Naval Petroleum Reserve 1 (NPR–1). To comply with this requirement, the Elk Hills field in California was sold to Occidental Petroleum Corporation in 1998. Following the sale of Elk Hills, the transfer of the oil shale reserves, and transfer of administrative jurisdiction and environmental remediation of the Naval Petroleum Reserve 2 (NPR–2) to the Department of the Interior, the Department retained one Naval Petroleum Reserve property, the Naval Petroleum Reserve 3 (NPR–3) in Wyoming (Teapot Dome field). The Department issued a disposition plan for NPR–3 in June 2013 and began implementation of the plan in fiscal year 2014. Transfer of NPR–3 to a new owner occurred in fiscal year 2015.

STRATEGIC PETROLEUM RESERVE

Appropriation, 2018	$252,000,000
Budget estimate, 2019	175,105,000
Recommended, 2019	252,000,000
Comparison:	
Appropriation, 2018	– – –
Budget estimate, 2019	+76,895,000

The mission of the Strategic Petroleum Reserve is to store petroleum to reduce the adverse economic impact of a major petroleum supply interruption to the U.S. and to carry out obligations under the international energy program.

The recommendation includes funding to address facilities development and operations, including physical security and cavern integrity, and to maintain 1,000,000 barrels of gasoline blendstock in the Northeast Gasoline Supply Reserve. The recommendation includes legislative language to direct the Secretary to draw down and sell crude oil from the Strategic Petroleum Reserve, with proceeds to be deposited into the Energy Security and Infrastructure Modernization Fund for use in carrying out the Life Extension II project. This drawdown and use of proceeds is in accordance with section 404 of the Bipartisan Budget Act of 2015.

SPR PETROLEUM ACCOUNT

Appropriation, 2018	$8,400,000
Budget estimate, 2019	– – –
Recommended, 2019	10,000,000
Comparison:	
Appropriation, 2018	+1,600,000
Budget estimate, 2019	+10,000,000

The SPR Petroleum Account funds Strategic Petroleum Reserve acquisition, transportation, and drawdown activities. The fiscal year 2019 budget request proposes to draw down and sell one million barrels of SPR crude oil to fund the costs of drawdown operations related to statutorily-directed sales. Instead, the recommendation provides discretionary appropriations for this purpose.

NORTHEAST HOME HEATING OIL RESERVE

Appropriation, 2018	$6,500,000
Budget estimate, 2019	10,000,000
Recommended, 2019	10,000,000
Comparison:	
Appropriation, 2018	+3,500,000
Budget estimate, 2019	– – –

The acquisition and storage of heating oil for the Northeast began in August 2000 when the Department of Energy, through the Strategic Petroleum Reserve account, awarded contracts for the lease of commercial storage facilities and acquisition of heating oil. The purpose of the reserve is to assure home heating oil supplies for the Northeastern States during times of very low inventories and significant threats to the immediate supply of heating oil. The Northeast Home Heating Oil Reserve was established as a separate entity from the Strategic Petroleum Reserve on March 6, 2001.

ENERGY INFORMATION ADMINISTRATION

Appropriation, 2018	$125,000,000
Budget estimate, 2019	115,035,000
Recommended, 2019	125,000,000
Comparison:	
Appropriation, 2018	– – –
Budget estimate, 2019	+9,965,000

The Energy Information Administration is a quasi-independent agency within the Department of Energy established to provide timely, objective, and accurate energy-related information to the Congress, the executive branch, state governments, industry, and the public.

The Committee encourages the Department to continue important data collection, analysis, and reporting activities on energy use and consumption, including the Commercial Buildings Energy Consumption Survey, and the Residential Buildings Energy Consumption Survey.

The Committee notes that while the Energy Information Administration website does provide information for Puerto Rico and the other territories in its State Profiles section, the information furnished for Puerto Rico is not as detailed nor as up-to-date as the information furnished for states. The Committee encourages the Energy Information Administration to work to close these remaining data gaps.

NON-DEFENSE ENVIRONMENTAL CLEANUP

Appropriation, 2018	$298,400,000
Budget estimate, 2019	218,400,000
Recommended, 2019	240,000,000
Comparison:	
Appropriation, 2018	−58,400,000
Budget estimate, 2019	+21,600,000

Non-Defense Environmental Cleanup includes funds to manage and remediate sites used for civilian, energy research, and non-defense related activities. These past activities resulted in radioactive, hazardous, and mixed waste contamination that requires remediation, stabilization, or some other action.

URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING FUND

Appropriation, 2018	$840,000,000
Budget estimate, 2019	752,749,000
Recommended, 2019	870,000,000
Comparison:	
Appropriation, 2018	+30,000,000
Budget estimate, 2019	+117,251,000

The Uranium Enrichment Decontamination and Decommissioning Fund was established by the Energy Policy Act of 1992 to fund the cleanup of gaseous diffusion plants at Portsmouth, Ohio; Paducah, Kentucky; and the East Tennessee Technology Park in Oak Ridge, Tennessee.

Portsmouth.—The recommendation includes funding above the budget request to fully offset the amount of proceeds that the Department planned to generate through bartering arrangements in order to fund additional cleanup in fiscal year 2019. After the date of enactment of this Act, the Department shall not barter, transfer, or sell uranium for the remainder of fiscal year 2019 in order to generate additional funding for Portsmouth cleanup that is in excess of the amount of funding provided in this Act.

Title X Uranium/Thorium Reimbursements.—The Committee recommends $32,959,000 to reimburse private licensees for the cost of cleaning up uranium and thorium processing sites in accordance with Title X of the Energy Policy Act of 1992. The Committee expects the Department to reimburse licensees for all previous expenses, including costs related to remediation, restoration, and oversight of these programs, and to ensure all impacted communities are made whole. Fulfilling the obligation to fully reimburse licensees is important to the health and safety of the impacted communities. The Committee expects the Department to provide sufficient resources within future budget requests to reimburse licensees for approved claim balances in a timely manner and to avoid accumulating balances and liabilities.

SCIENCE

Appropriation, 2018	$6,259,903,000
Budget estimate, 2019	5,390,972,000
Recommended, 2019	6,600,000,000
Comparison:	
Appropriation, 2018	+340,097,000
Budget estimate, 2019	+1,209,028,000

The Office of Science funds basic science research across national laboratories, universities, and other research institutions in support of American innovation and the Department's energy-focused missions. Through research in physics, biology, chemistry, and other science disciplines, these activities expand scientific understanding and secure the nation's leadership in energy innovation. The Office of Science is the nation's largest supporter of basic research in the physical sciences.

The Science program office includes Advanced Scientific Computing Research, Basic Energy Sciences, Biological and Environmental Research, Fusion Energy Sciences, High Energy Physics, Nuclear Physics, Workforce Development for Teachers and Scientists, Science Laboratories Infrastructure, Safeguards and Security, and Program Direction. The Committee has placed a high priority on funding these activities in fiscal year 2019, given the private sector is not likely to fund research whose findings either have high non-commercial value or are not likely to be commercialized in the near or medium term. This work is vital to sustaining the scientific leadership of the United States and can provide the underpinnings for valuable intellectual property in the coming decades.

The Committee encourages the Department to evaluate methods to educate new and existing minority and women-owned small businesses about SBIR and STTR grants, and directs the Department to provide to the Committees on Appropriations of both Houses of Congress not later than 180 days after the enactment of this Act a report on current and planned outreach efforts in this area.

The Committee appreciates the Department's focus on quantum information sciences and encourages the Department, in addition to activities referenced in the budget request, to explore research and development on precision sensors.

ADVANCED SCIENTIFIC COMPUTING RESEARCH

The Advanced Scientific Computing Research program develops and hosts some of the world's fastest computing and network capabilities to enable science and energy modeling, simulation, and research.

Exascale Computing Project.—The recommendation includes $225,000,000 for exascale activities.

High Performance Computing and Network Facilities.—In addition to the long-term exascale initiative, the Committee supports continued upgrade and operation of the Leadership Computing Facilities at Argonne and Oak Ridge national laboratories and of the High Performance Production Computing capabilities at Lawrence Berkeley National Laboratory. The recommendation includes $140,000,000 for the Argonne Leadership Computing Facility, $185,000,000 for the Oak Ridge Leadership Computing Facility, and $100,000,000 for the National Energy Research Scientific Computing Center at Lawrence Berkeley National Laboratory. Within available funds, the recommendation includes $10,000,000 for the Computational Science Graduate Fellowship program and $80,000,000 to support necessary infrastructure upgrades and operations for ESnet.

The Committee is concerned that the increased costs of the Exascale Computing Initiative compared to previous high performance computing (HPC) efforts are not transparently presented because the Department's budget request contains inadequate detail on the cost of its HPC procurements. In its fiscal year 2020 budget request, the Department shall submit a budget justification for Advanced Scientific Computing Research that clearly details funding amounts requested for base research and development activities, operations, and procurements for the Exascale Computing Initiative.

The Committee notes the importance of a strong research program in applied and computational mathematics to the Department's mission. The Committee encourages the Department to prioritize research in applied and computational mathematics, supercomputing, and quantum computing to ensure the U.S. remains competitive in this field.

Artificial intelligence technologies that may improve the analysis and interpretation of big data can lead to substantial improvements in the Department's ability to meet its nuclear security, energy, and science missions. The Committee provides $26,000,000 to launch an artificial intelligence and big data initiative.

BASIC ENERGY SCIENCES

The Basic Energy Sciences program funds basic research in materials science, chemistry, geoscience, and bioscience. The science breakthroughs in this program enable a broad array of innovation in energy technologies and other industries critical to American economic competitiveness.

Research.—Within available funds, the recommendation provides $24,088,000 for the Batteries and Energy Storage Innovation Hub; $15,000,000 for the Fuels from Sunlight Innovation Hub; $130,500,000 for facilities operations of the nanoscience research centers; $500,000,000 for facilities operations of the nation's light sources; $280,000,000 for facilities operations of the high flux neutron sources; $20,000,000 for the Experimental Program to Stimulate Competitive Research; $110,000,000 for the Energy Frontier Research Centers; and $10,100,000 for Other Project Costs, of which $6,100,000 is for LCLS–II, $2,000,000 is for ALS–U, and $2,000,000 is for LCLS–II HE.

The Committee supports the continued research and development for the Batteries and Energy Storage Innovation Hub to develop energy storage research prototypes to ensure the outcome of basic research leads to practical solutions that are competitive in the marketplace. The Committee encourages the Hub to focus on grid storage applications, particularly on chemistries with low cost reagents.

The Committee encourages the Department to resume annual, or biennial, Implementation Grant solicitations when making awards in support of the Experimental Program to Stimulate Competitive Research. The Department is directed to provide to the Committees on Appropriations of both Houses of Congress not later than 90 days after the enactment of this Act a report that provides a plan for these future solicitations.

The Committee encourages the Department to continue to provide support for basic research in polymers and polymer-based ma-

terials for energy applications and also encourages the Department to implement neutron research efforts for polymeric materials for the materials community. The Committee is aware of the discovery of physical phenomena in the light harvesting systems of photosynthetic organisms that has potential applications in quantum computing. The recommendation provides $10,000,000 for research of artificial light harvesting systems that promise to significantly increase computational processing power and speed.

BIOLOGICAL AND ENVIRONMENTAL RESEARCH

The Biological and Environmental Research (BER) program supports advances in energy technologies and related science through research into complex biological and environmental systems. The Committee directs the Department to give priority to optimizing the operation of BER user facilities and the programs that utilize them.

The recommendation provides $100,000,000 for the Bioenergy Research Centers and $70,000,000 for the Joint Genome Institute.

The Committee recognizes the importance of the emerging field of microbiome research and encourages the Department to explore establishing a national microbiome database to maintain leadership in the field.

The Committee continues to support the Department's funding for academia to perform studies, including independent evaluations using existing data sets and peer-reviewed publications that include the collection and evaluation of atmospheric data from satellite observations obtained in cooperation with NASA. Satellite observations of the atmosphere, within the context of the Earth as a global system, provide information that is critical in the interpretation of earth-based observations.

The Committee supports the Department's proposal to initiate a terrestrial-aquatic interfaces pilot project and encourages the Department to explore the resiliency of coastal ecosystems as part of this project.

Within available funds, the Department is directed to continue to support NGEE–Arctic, NGEE–Tropics, the SPRUCE field site, the Watershed Function Science Focus Area, and the AmeriFLUX project.

FUSION ENERGY SCIENCES

The Fusion Energy Sciences program supports basic research and experimentation aiming to harness nuclear fusion for energy production.

Research.—The Committee recommends $281,704,000 for burning plasma science foundations, $61,246,000 for burning plasma science long pulse, and $84,050,000 for discovery plasma science. Within available funds, the recommendation provides $18,000,000 for High Energy Density Laboratory Plasmas, $25,000,000 for Scientific Discovery through Advanced Computing, $2,500,000 to provide upgrades to the Safety and Tritium Applied Research facility, and $7,000,000 for the Materials Plasma Exposure Experiment.

Construction.—The Committee recommends $163,000,000 for the U.S. contribution to the ITER project. The Committee continues to believe the ITER project represents an important step forward for

energy sciences and has the potential to revolutionize the current understanding of fusion energy.

HIGH ENERGY PHYSICS

The High Energy Physics program supports fundamental research into the elementary constituents of matter and energy and ultimately into the nature of space and time. The program focuses on particle physics theory and experimentation in three areas: the energy frontier, which investigates new particles and fundamental forces through high-energy experimentation; the intensity frontier, which focuses on rare events to better understand our fundamental model of the universe's elementary constituents; and the cosmic frontier, which investigates the nature of the universe and its form of matter and energy on cosmic scales.

Research.—Within available funds, the recommendation provides $22,450,000 to complete the dark energy and dark matter experiments, $105,000,000 for the HL–LHC Upgrade Projects, $31,000,000 for PIP–II, and $10,000,000 to continue the upgrade of FACET II.

The Committee supports the Department's efforts to advance laser-driven accelerators and encourages the Department to explore how this technology fits within future planning efforts for the High Energy Physics program. In addition, the Committee strongly urges the Department to maintain a balanced portfolio of small, medium, and large scale experiments, and to ensure adequate funding for research performed at universities and the national laboratories.

NUCLEAR PHYSICS

The Nuclear Physics program supports basic research into the fundamental particles that compose nuclear matter, how they interact, and how they combine to form the different types of matter observed in the universe today.

Operations and Maintenance.—Within available funds, the recommendation provides $10,000,000 for the Stable Isotope Production Facility, $6,600,000 for the Gamma-Ray Energy Tracking Array, and $5,660,000 for the Super Pioneering High Energy Nuclear Interaction Experiment. The Committee directs the Department to give priority to optimizing the operations for the Relativistic Heavy Ion Collider, the Continuous Electron Beam Accelerator Facility, the Argonne Tandem Linac Accelerator System, and the Brookhaven Linac Isotope Producer Facility.

NUCLEAR WASTE DISPOSAL

Appropriation, 2018	$– – –
Budget estimate, 2019	90,000,000
Recommended, 2019	190,000,000
Comparison:	
Appropriation, 2018	+190,000,000
Budget estimate, 2019	+100,000,000

The Committee recommendation includes $190,000,000 for Nuclear Waste Disposal to continue the Department of Energy's statutorily required activities for the Yucca Mountain license application. Within available funds, the Department is directed to reestablish its capability to respond to the Nuclear Regulatory Commission during the adjudicatory process and to otherwise fully support the

Yucca Mountain licensing process. The recommendation includes support for affected units of local government that have formally consented to host Yucca Mountain.

Educational Institutions.—The Department is reminded that, to the extent that funding or other assistance is made available to educational institutions pursuant to the Nuclear Waste Policy Act of 1982, institutions in the Nevada System of Higher Education, as defined by the State of Nevada, with experience in nuclear waste research and environmental monitoring are eligible for such assistance.

ADVANCED RESEARCH PROJECTS AGENCY—ENERGY

Appropriation, 2018	$353,314,000
Budget estimate, 2019	– – –
Recommended, 2019	325,000,000
Comparison:	
Appropriation, 2018	−28,314,000
Budget estimate, 2019	+325,000,000

The Advanced Research Projects Agency-Energy (ARPA–E) supports research aimed at rapidly developing energy technologies whose development and commercialization are too risky to attract sufficient private sector investment but are capable of significantly changing the energy sector to address our critical economic and energy security challenges. Projects funded by ARPA–E include such wide-ranging areas as production processes for transportation fuel alternatives that can reduce our dependence on imported oil, heating and cooling technologies with exceptionally high energy efficiency, and improvements in petroleum refining processes.

The Department is directed to disburse funds appropriated for ARPA–E on eligible projects within a reasonable time period, consistent with past practices.

TITLE 17 INNOVATIVE TECHNOLOGY LOAN GUARANTEE PROGRAM

ADMINISTRATIVE EXPENSES

GROSS APPROPRIATION

Appropriation, 2018	$33,000,000
Budget estimate, 2019	10,000,000
Recommended, 2019	32,000,000
Comparison:	
Appropriation, 2018	−1,000,000
Budget estimate, 2019	+22,000,000

OFFSETTING COLLECTIONS

Appropriation, 2018	$−10,000,000
Budget estimate, 2019	−15,000,000
Recommended, 2019	−15,000,000
Comparison:	
Appropriation, 2018	−5,000,000
Budget estimate, 2019	– – –

RESCISSION

Appropriation, 2018	$– – –
Budget estimate, 2019	– 240,000,000
Recommended, 2019	– – –
Comparison:	
Appropriation, 2018	– – –
Budget estimate, 2019	+240,000,000

NET APPROPRIATION

Appropriation, 2018	$23,000,000
Budget estimate, 2019	– 245,000,000
Recommended, 2019	17,000,000
Comparison:.	
Appropriation, 2018	– 6,000,000
Budget estimate, 2019	+262,000,000

The funds provided to the Title 17 Innovative Technology Loan Guarantee Program support administrative operations only.

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING LOAN PROGRAM

Appropriation, 2018	$5,000,000
Budget estimate, 2019	1,000,000
Recommended, 2019	5,000,000
Comparison:	
Appropriation, 2018	– – –
Budget estimate, 2019	+4,000,000

The Energy Independence and Security Act of 2007 established a direct loan program to support the development of advanced technology vehicles and associated components in the United States. The program provides loans to automobile and automobile part manufacturers for the cost of re-equipping, expanding, or establishing manufacturing facilities in the United States to produce advanced technology vehicles or qualified components, and for associated engineering integration costs. The funds provided support administrative operations only.

TRIBAL ENERGY LOAN GUARANTEE PROGRAM

Appropriation, 2018	$1,000,000
Budget estimate, 2019	– 8,500,000
Recommended, 2019	1,000,000
Comparison:	
Appropriation, 2018	– – –
Budget estimate, 2019	+9,500,000

The Energy Policy Act of 2005 established a loan guarantee program for energy development to provide or expand electricity on Indian land. The funds provided support administrative operations only.

DEPARTMENTAL ADMINISTRATION

GROSS APPROPRIATION

Appropriation, 2018	$285,652,000
Budget estimate, 2019	235,534,000
Recommended, 2019	280,524,000
Comparison:	
Appropriation, 2018	– 5,128,000
Budget estimate, 2019	+44,990,000

REVENUES

Appropriation, 2018	$−96,000,000
Budget estimate, 2019	−96,000,000
Recommended, 2019	−96,000,000
Comparison:	
Appropriation, 2018	− − −
Budget estimate, 2019	− − −

NET APPROPRIATION

Appropriation, 2018	$189,652,000
Budget estimate, 2019	139,534,000
Recommended, 2019	184,524,000
Comparison:	
Appropriation, 2018	−5,128,000
Budget estimate, 2019	+44,990,000

Funding recommended for Departmental Administration provides for general management and program support functions benefiting all elements of the Department of Energy, including the National Nuclear Security Administration. The account funds a wide array of Headquarters activities not directly associated with the execution of specific programs. The recommendation includes six reprogramming control points in this account to provide flexibility in the management of support functions. Other Departmental Administration includes Management, Project Management Oversight and Assessments, Chief Human Capital Officer, Office of Technology Transitions, Office of Small and Disadvantaged Business Utilization, General Counsel, Office of Policy, International Affairs, and Public Affairs. The Department is directed to continue to submit a budget request that proposes a separate funding level for each of these activities. Within International Affairs, the recommendation includes $2,000,000 for the Israel Binational Industrial Research and Development (BIRD) Foundation, which was previously funded in the EERE account, and $4,000,000 for the U.S.–Israel Center of Excellence in Energy, Engineering and Water Technology.

Economic Impact and Diversity.—The recommendation includes $10,169,000 for Economic Impact and Diversity, the same as fiscal year 2018 and $164,000 above the budget request.

Chief Information Officer.—To enhance the accountability for management of cyber resources, the Committee recommendation consolidates cybersecurity funding under the Office of the Chief Information Officer. The recommendation includes $131,624,000, including $96,793,000 as requested within Departmental Administration and $34,831,000 as requested for CyberOne activities within the DOE working capital fund. Within this amount, not less than $71,501,000 shall be for cybersecurity and secure information.

Nuclear Power Plant Closings.—Prior to the opening of a permanent repository or monitored retrievable storage for spent nuclear fuel, power plant sites serve as de facto storage facilities for this nuclear waste. When a plant closes, onsite storage of spent nuclear fuel can be a factor affecting redevelopment of the location. The Committee directs the Department to submit to the Committees on Appropriations of both Houses of Congress not later than 180 days after the enactment of this Act a study on existing public and private resources and funding for which municipalities where a nuclear power plant is decommissioned, in the process of decommis-

sioning, or plans to shut down within 3 years of enactment of this Act and contains nuclear waste within its boundaries may be eligible.

Radium Contamination.—The Department shall review the details of any facility of the Nevada System of Higher Education, as defined by the State of Nevada, that is contaminated with radium to determine whether the Department has a legal liability or authorization for remediation of such facility.

OFFICE OF THE INSPECTOR GENERAL

Appropriation, 2018	$49,000,000
Budget estimate, 2019	51,330,000
Recommended, 2019	51,330,000
Comparison:	
Appropriation, 2018	+2,330,000
Budget estimate, 2019	– – –

The Office of the Inspector General performs agency-wide audit, inspection, and investigative functions to identify and correct management and administrative deficiencies that create conditions for existing or potential instances of fraud, waste, and mismanagement. The audit function provides financial and performance audits of programs and operations. The inspections function provides independent inspections and analyses of the effectiveness, efficiency, and economy of programs and operations. The investigative function provides for the detection and investigation of improper and illegal activities involving programs, personnel, and operations.

ATOMIC ENERGY DEFENSE ACTIVITIES

The Atomic Energy Defense Activities programs of the Department of Energy in the National Nuclear Security Administration (NNSA) consist of Weapons Activities, Defense Nuclear Nonproliferation, Naval Reactors, and Federal Salaries and Expenses; outside of the NNSA, these include Defense Environmental Cleanup, Other Defense Activities, and Defense Nuclear Waste Disposal. Descriptions of each of these accounts are provided below.

NATIONAL NUCLEAR SECURITY ADMINISTRATION

The Department of Energy is responsible for enhancing U.S. national security through the military application of nuclear technology and reducing the global danger from the proliferation of weapons of mass destruction. The NNSA, a semi-autonomous agency within the Department, carries out these responsibilities. Established in March 2000 pursuant to title 32 of the National Defense Authorization Act for Fiscal Year 2000, the NNSA is responsible for the management and operation of the nation's nuclear weapons complex, naval reactors, and nuclear nonproliferation activities.

Indirect Overhead and Administrative Costs.—The Committee expects the NNSA to take prompt action to reduce the size of the overhead and administrative costs that are being charged to its programmatic activities, as directed in the fiscal year 2018 Act. The Committee is awaiting the receipt of required reports on the Department's indirect cost pools and a plan by the NNSA to reduce the size of the administrative and other overhead charges levied on its major nuclear modernization programs. None of the funds shall

be used for an Institutional Plant Project that is funded through an indirect cost pool of an NNSA site. The recommendation provides robust direct funding for the NNSA's infrastructure needs, and the Committee will consider funding infrastructure investments through the site indirect cost pools after receipt of the outstanding reporting requirements. The NNSA is directed to provide to the Committees on Appropriations of both Houses of Congress not later than 90 days after the enactment of this Act a report that accounts for the number of personnel at NNSA sites whose costs are entirely funded through site indirect cost pools.

The recommendation includes $15,313,147,000 for the NNSA, $644,195,000 above fiscal year 2018 and $222,097,000 above the budget request.

WEAPONS ACTIVITIES

Appropriation, 2018	$10,642,138,000
Budget estimate, 2019	11,017,078,000
Recommended, 2019	11,200,000,000
Comparison:	
Appropriation, 2018	+557,862,000
Budget estimate, 2019	+182,922,000

Weapons Activities ensures the safety, security, reliability, and effectiveness of the nation's nuclear weapons stockpile without nuclear testing by providing funding to four main elements: Directed Stockpile Work; Research, Development, Technology and Engineering; Infrastructure and Operations; and Security.

The NNSA's budget request for Weapons Activities proposed significant reductions to infrastructure recapitalization and deferred maintenance reduction efforts. The Committee is concerned that, in order to pay for the projected costs of its major nuclear modernization programs, the NNSA is undercutting the investments needed to address the entirety of its aging infrastructure problems and to build a nuclear weapons workforce that possesses the skills and knowledge needed to design, develop, test, and manufacture warheads, as endorsed in the Administration's Nuclear Posture Review. As the costs of the major modernization programs continue to increase, the NNSA must take concerted action to prevent cost growth associated with underperforming and poorly scoped activities. The recommendation provides additional funding above the request to continue the current pace of infrastructure recapitalization efforts across the nuclear security enterprise, including efforts to reduce the backlog of deferred maintenance and to upgrade physical security systems to improve the security posture of the NNSA sites.

The Committee notes that the original fiscal year 2019 budget request did not contain adequate information regarding the Department's request for low-yield ballistic missile funding, but a technical amendment with additional details was later submitted. When proposing new or modified nuclear weapons activities, the Committee expects the Department to follow the requirements of 50 U.S.C. 2529, including requesting a single dedicated line item for such activities.

Plutonium.—While the NNSA was directed in the fiscal year 2017 and 2018 Acts to request funding to meet additional plutonium infrastructure mission needs under a new and separate

project that could be clearly presented for consideration, the NNSA's fiscal year 2019 budget request does not contain such a project and continues to disregard Congressional direction to remove specific scope from the Chemistry and Metallurgy Research Replacement project that was in excess of the scope originally authorized by Congress. The NNSA's five year budget plans include approximately $4,000,000,000 for unspecified activities within Plutonium Sustainment to achieve long-term pit production capacity targets. The specific activities and total costs needed to achieve these targets are not described, and a management plan with near-term milestones for carrying out this significant multi-year effort are not presented. The NNSA's continued inability to produce a transparent plan to establish a pit production capability that includes a resource-loaded schedule that can be independently verified for reasonableness creates significant concerns. The recommendation establishes a new construction project within Infrastructure and Operations that shall be utilized to carry out any capital improvements and equipment installations that are needed at Los Alamos National Laboratory to meet plutonium mission needs. Not later than 60 days after the enactment of this Act, the NNSA shall provide to the Committees on Appropriations a report that describes in detail the scope, costs, and schedule, with near term milestones for any capital improvements needed, to meet its plutonium mission needs.

DIRECTED STOCKPILE WORK

Directed Stockpile Work includes all activities that directly support weapons in the nuclear stockpile, including maintenance, research, development, engineering, certification, dismantlement, and disposal activities. The Committee recommends $4,581,296,000 for Directed Stockpile Work, $571,849,000 above fiscal year 2018 and $84,909,000 below the budget request.

Life Extension Programs.—The recommendation provides full funding for the NNSA's life extension programs, including the ongoing refurbishment efforts for the B61, W76, W88, and W80 warheads. The recommendation also provides funding requested for a new modification to the W76 warhead to achieve a lower-yield capability for that system and to initiate phase 6.1 efforts on a life extension or replacement of the W78 warhead.

W76-2 Modification Program.—Not later than 30 days after the enactment of this Act, the NNSA shall provide to the Committees on Appropriations of both Houses of Congress a report detailing the plan, rationale, costs, and implications of producing a low-yield variant of the W76 warhead. The report shall include the cost and schedule estimates for the engineering phase, and any subsequent phase, of the W76-2 modification program; detailed discussion of the military requirements associated with the W76-2, including Nuclear Weapons Council decisions and U.S. Strategic Command requirements; estimated long-term maintenance costs; impacts on other current or planned warhead programs; impacts on the planned cost and schedule in the event of a time delay in the engineering phase, or any subsequent phase, of the W76-2; and impacts on other current or planned warhead programs in the event of a time delay in the W76-2 modification program,

W78 Life Extension Program.—The Committee is concerned that the NNSA is proceeding with a premature decision to replace the W78 with an interoperable warhead based on a stockpile strategy that was not endorsed in the Administration's Nuclear Posture Review and that was not funded by the Congress when first proposed under the previous Administration. The NNSA has not resolved major technical issues identified by the JASONs Defense Advisory Group in 2015 associated with modifying existing warheads to achieve interoperability or to increase the usage of insensitive high explosives (IHE) in the stockpile. Specifically, the JASONs found that these warhead modifications may result in sub-optimal designs and may force a reduction in design yield margins. The rationale for converting warheads from CHE to IHE is not clear considering the technical risks, the high costs involved, and the current lack of a pit production capability that could produce such warheads in quantities needed for the stockpile. The NNSA carried out a Pit Manufacturing and Certification Campaign to restore the capability to manufacture and certify up to ten plutonium pits per year from 1996 to 2007. However, the NNSA never demonstrated production at full capacity and lost the limited capacity it had built due to safety missteps that shut down plutonium operations in the PF–4 facility for several years. The NNSA hopes to achieve a far greater production capacity over the same period of time. Given the NNSA's past performance, any nuclear modernization program that relies on the successful establishment of a near-term pit production capacity should be considered by the Administration to be a high-risk endeavor and a program that does not rely on pit production should be pursued in parallel to ensure stockpile needs will continue to be met.

In lieu of the request to begin phase 6.2 activities for an interoperable warhead to replace the W78, the recommendation provides funding to begin a phase 6.1 study to fully analyze all available alternatives for the W78 warhead. Upon conclusion of phase 6.1 efforts and prior to initiation of phase 6.2 efforts, the NNSA shall provide to the Committees on Appropriations of both Houses of Congress a report that compares the costs associated with replacing the W78 warhead with an IHE design that may require new pit manufacturing to the costs of extending the life of the W78. The report shall include a detailed description of the comparative costs that may be needed to upgrade Department of Defense facilities to continue to safely handle CHE or that otherwise may reduce drivers for replacing CHE warheads with IHE.

Domestic Uranium Enrichment.—The recommendation provides $100,704,000. Within these funds, not less than $25,000,000 is for continued research, operation, and further advancement of gas centrifuge technology. The Committee supports continued operations and testing of gas centrifuge technology to further advance the technology and to maintain the specialty expertise and operational proficiency that will be necessary to meet future U.S. defense and non-defense needs for enriched uranium.

Comprehensive Beryllium Strategy.—Beryllium has been labeled a critical mineral by the United States Geological Survey for a wide variety of needs and is the only material qualified by field tests for certain nuclear weapons requirements. The Committee encourages the NNSA to continue efforts to create a unified approach to secu-

rity of supply for beryllium and urges the national laboratories to create a joint plan to ensure that beryllium is available to support all the requirements of the Stockpile Stewardship and Management Plan.

RESEARCH, DEVELOPMENT, TECHNOLOGY, AND ENGINEERING

The NNSA's Research, Development, Technology, and Engineering (RDT&E) activities focus on the development and maintenance of critical capabilities, tools, and processes that support science-based stockpile stewardship and continued certification of the stockpile in the absence of underground nuclear testing. For RDT&E, the Committee recommends $2,028,366,000, $5,999,000 below fiscal year 2018 and $32,973,000 above the budget request.

Academic Alliances and Partnerships.—Within Academic Alliances and Partnerships, not less than $20,000,000 shall be for the Minority Serving Institution Partnerships Program and not less than $9,000,000 shall be for academic grants for high energy density laboratory plasmas previously funded within the Inertial Confinement Fusion Ignition and High Yield program. The Committee supports continued research into high energy density plasmas and recognizes the partnerships between the national laboratories and research universities to address the critical need for skilled graduates to replace an aging workforce.

Enhanced Capabilities for Subcritical Experiments.—The recommendation does not include funding requested for the Advanced Sources and Detectors Major Item of Equipment (MIE). DOE project management reports indicate the NNSA has not yet achieved Critical Decision-1 (CD–1) for this MIE, despite the NNSA's budget justification that lists CD–1 as a fiscal year 2017 achievement. Rather, significant portions of the technology are reported to be at low technology readiness levels and need to be advanced prior to the issuance of CD–1. The recommendation includes $20,000,000 to continue to advance technologies needed for the MIE. The NNSA is directed to submit a project data sheet for the Advanced Sources and Detectors MIE with the scope, cost, and schedule for carrying out this project clearly presented in its fiscal year 2020 budget request.

Stockpile Responsiveness Program.—The recommendation includes additional funding above the budget request for the congressionally-mandated Stockpile Responsiveness Program.

Inertial Confinement Fusion (ICF) and High Yield.—The recommendation rejects the NNSA's request to discontinue major experimental activities within the ICF program. Funds provided to the ICF program support unique experimental platforms that help assess the state of the current stockpile and enable decisions on life extension programs without underground nuclear weapons testing. While progress in achieving ignition at the National Ignition Facility has been slow, the value of maintaining a robust research program in high energy density physics will continue to be recognized and strongly supported. To ensure that funds provided will be used to adequately maintain the NNSA's experimental capabilities as intended, the recommendation includes new funding controls within the ICF program for the National Ignition Facility at Lawrence Livermore National Laboratory, the Z Pulsed Power Facility at Sandia National Laboratories, and the Omega Laser Facility at the

Laboratory for Laser Energetics. Within funds for High Energy Density R&D, the recommendation includes funding for research and support activities at Los Alamos National Laboratory, target fabrication, and not less than $8,000,000 for the Nike Laser at the Naval Research Laboratory.

While the Committee continues to support the full utilization of ICF experimental facilities, the Committee also recognizes the need to save costs to ensure adequate funding for high priority stockpile modernization activities. The NNSA is directed to pursue full cost recovery for all users at the National Ignition Facility as previously recommended by the Department of Defense Office of Cost Assessment and Program Evaluation and to ensure that all users are transitioned to a full cost recovery model by fiscal year 2020.

Advanced Simulation and Computing.—Within amounts for Advanced Simulation and Computing (ASC), the recommendation includes $20,000,000 to continue research on advanced memory technology to address future architecture technical challenges. The Committee is concerned that the increased costs of the Exascale Computing Initiative compared to previous high performance computing (HPC) efforts are not transparently presented because the NNSA's budget request contains inadequate detail on the cost of its HPC procurements. In its fiscal year 2020 budget request, the NNSA shall submit a budget justification for ASC that clearly details funding amounts requested for base research and development activities, operations, procurements, and the Exascale Computing Initiative.

While the NNSA's next generation of HPC systems are major acquisitions, the Committee is concerned that the NNSA's procurement decisions have not been derived by conducting a thorough analysis of alternatives that will meet a set of clearly identified threshold requirements. The NNSA is directed to provide to the Committees on Appropriations of both Houses of Congress not later than 60 days after the enactment of this Act an analysis of alternatives for the NNSA's HPC acquisitions that clearly maps future system requirements to stockpile needs, compares costs and benefits of various alternatives, and provides a justification for the NNSA's preferred alternative. The Committee directs the Comptroller General to undertake a review of the NNSA's management of the ASC program to evaluate the NNSA's process for setting requirements and evaluating alternatives for the ASC program and to identify the estimated costs of the NNSA's future systems compared to previous HPC acquisitions.

INFRASTRUCTURE AND OPERATIONS

Infrastructure and Operations provides funding for the base operations, maintenance, and recapitalization of NNSA facilities and infrastructure. The Committee recommends $3,188,594,000 for Infrastructure and Operations, $70,791,000 above fiscal year 2018 and $185,858,000 above the budget request. Within Infrastructure and Operations, the NNSA shall ensure that incremental funding needed to meet individual programmatic goals are fully accounted for within funds for the corresponding programmatic activity. The Committee notes that the NNSA has been requesting significant funding amounts for projects while they are still in the very early planning stages, in violation of the requirements in 50 U.S.C. 2746

that require the NNSA to complete a conceptual design before requesting funding for a major construction project.

Maintenance and Repair of Facilities.—The Committee recommends $515,138,000, $150,138,000 above the budget request, to sustain momentum on reducing the backlog of deferred maintenance and to carry out cost accounting changes needed to ensure direct funding of maintenance at the NNSA's national laboratories and other sites.

Recapitalization.—The Committee recommends $612,661,000, $71,973,000 above the budget request, to restore funding for the Recapitalization program to the fiscal year 2018 level.

19–D-650 Plutonium Production Capability, LANL.—The recommendation includes a new construction start for infrastructure upgrades needed to carry out the NNSA's plutonium mission at Los Alamos National Laboratory.

06–D-141 Uranium Processing Facility (UPF), Y–12.—The NNSA approved starting major construction activities for the Uranium Processing Facility project without having a certified and compliant earned value management system in place for the project to accurately track project performance. The Committee is also concerned that the Department does not have adequate capacity for project review that is independent of NNSA program personnel that are accountable for project performance. While the NNSA continues to request an increasingly large amount for the project, prior year funds have not been fully expended. The recommendation provides funding at the fiscal year 2018 enacted level. The Committee will monitor project performance via financial reporting of project commitments to determine future funding needs.

04–D-125 Chemistry and Metallurgy Research (CMR) Replacement Project, LANL.—As directed by Congress in the fiscal year 2018 Act and previous years, funding for the CMR Replacement Project shall be limited to that of the original mission need for the project, that is, to relocate existing analytic chemistry and materials characterization capabilities from the legacy CMR facility.

SECURITY

Secure Transportation Asset.—Within Secure Transportation Asset Operations and Equipment, the recommendation includes $10,000,000 above the budget request to expedite procurement of the next generation Mobile Guardian Transporter (MGT). The Committee is concerned that the NNSA's program to replace its aging nuclear weapons transporter fleet with the MGT is proceeding excessively slowly. The current transporters are far beyond their 20-year service life, yet the NNSA's program would carry out planning and design activities over the next six fiscal years and would not procure the first replacement unit until fiscal year 2025. The NNSA is directed to undertake a review of its MGT program and provide to the Committees on Appropriations of both Houses of Congress not later than 120 days after the enactment of this Act a plan to carry out an expedited design and procurement program that will address its aging fleet in a more timely manner and that will better ensure that its weapons transportation programs continue to meet stringent safety and security standards.

Physical Security Improvement Program.—The Committee recommends $30,000,000 to modernize and upgrade physical security systems at the NNSA sites that are nearing the end of design life.

LEGACY CONTRACTOR PENSIONS

The Committee provides $162,292,000 for payments into the legacy University of California contractor employee defined benefit pension plans.

DEFENSE NUCLEAR NONPROLIFERATION

Appropriation, 2018	$1,999,219,000
Budget estimate, 2019	1,862,825,000
Recommended, 2019	1,902,000,000
Comparison:	
Appropriation, 2018	−97,219,000
Budget estimate, 2019	+39,175,000

The Defense Nuclear Nonproliferation account provides funding to programs of the National Nuclear Security Administration that prevent, counter, and respond to global nuclear threats. The recommendation includes $15,000,000 for the University Consortia for Nuclear Nonproliferation Research program and not less than $18,000,000 to enhance nonproliferation and emergency response training capabilities at the Department's national laboratories.

New U.S. Nonproliferation Activities in Russia.—The recommendation includes no new funds to enter into contracts and agreements with Russia in fiscal year 2019, the same as fiscal year 2018 and the budget request.

Commercial Nuclear Fuel Reprocessing.—In 1977, President Carter issued a presidential policy statement prohibiting the commercial reprocessing and recycling of plutonium. The Committee awaits submission of requirements in the fiscal year 2018 Act for the Department to investigate the status of this policy and provide a report to the Committees on Appropriations of both Houses of Congress.

DEFENSE NUCLEAR NONPROLIFERATION

Funding for the Office of Defense Nuclear Nonproliferation is provided across five programmatic areas: Global Material Security, Material Management and Minimization, Nonproliferation and Arms Control, Defense Nuclear Nonproliferation R&D, and Nonproliferation Construction.

Material Management and Minimization.—The recommendation for Material Management and Minimization includes funding for Nuclear Material Removal, Material Disposition, and Laboratory and Partnership Support, consistent with the fiscal year 2018 Act. The NNSA is directed to utilize this budget structure in future budget requests. Within funds for Material Management and Minimization, the recommendation includes $30,000,000 to expedite the removal of one metric ton of plutonium from the state of South Carolina. The recommendation does not include funding requested to start related construction activities for the dilute and dispose alternative to MOX. The NNSA has yet to submit a legislative proposal or an independent life cycle cost estimate for its dilute and dispose program.

Laboratory and Partnership Support.—The recommendation for Laboratory and Partnership Support includes $3,100,000 above the budget request to provide technical support to industry partners seeking to minimize the use of highly enriched uranium in Mo-99 production.

Since the enactment of the American Medical Isotopes Production Act of 2012, the NNSA has invested $100,000,000 of taxpayer funding with the goal of fielding a stable, domestic commercial supply of Mo-99 without the use of highly enriched uranium, but has only made limited gains on that investment. Recent foreign facility outages have resulted in additional shortages, indicating the U.S. supply remains vulnerable to supply chain disruptions caused by aging production facilities. The recommendation includes an additional $20,000,000 for a new funding opportunity directed in the fiscal year 2018 Act. The Committee encourages the NNSA to utilize advice from other Department of Energy programs with experience in fielding advanced technologies to the commercial sector to better evaluate potential projects to ensure that additional funds are awarded to projects that are likely to provide a stable, long-term domestic supply of this important medical isotope.

MOX Fuel Fabrication Facility.—The Committee recommends $335,000,000 to sustain the current pace of construction on the MOX facility in fiscal year 2019. The bill contains a provision to allow the Secretary of Energy to terminate the project if requirements in Section 3121(b) of the Fiscal Year 2018 National Defense Authorization Act are satisfied.

Defense Nuclear Nonproliferation Research and Development (DNN R&D).—The recommendation includes $7,500,000 for the research and development of technologies to advance stable isotope, actinides, and other radioisotope production using novel techniques to support nonproliferation goals, including identification and characterization of foreign nuclear weapons programs.

Nonproliferation Fuels Development.—The recommendation includes separate funding to develop fuels to advance U.S. nonproliferation goals within DNN R&D. The NNSA is directed to utilize this budget structure in future budget requests. The recommendation includes up to $10,000,000 for research and development of low-enriched uranium fuels suitable for naval applications. The recommendation does not include funds to convert the Advanced Test Reactor (ATR) at Idaho National Laboratory or the High Flux Isotope Reactor (HFIR) at Oak Ridge National Laboratory. The NNSA estimates its program to convert five research reactors will cost approximately $1,100,000,000 and that, even at this cost, the ATR and HFIR reactors would not be converted until at least the 2030s. These reactors and their fuels are located in highly secure facilities on Department of Energy sites that have safe storage for significant quantities of nuclear materials. With no plans to otherwise remove nuclear materials from those sites, there are few benefits to proceeding with a costly effort to convert those reactors. Rather than allocate limited defense funding to conversion, the recommendation prioritizes funding to extend the life of these facilities and to upgrade safety and security postures at those sites within the respective infrastructure funding lines.

Use of Prior-Year Balances.—The NNSA has been slow to make progress on reducing the size of its prior-year balances. To offset

fiscal year 2019 needs and to close out discontinued activities, the recommendation directs the use of $36,396,000 in prior-year balances within the following programs that have not received funding since fiscal year 2015: Elimination of Weapons Grade Plutonium Production in Russia, Global Threat Reduction Initiative, International Nuclear Materials Protection and Cooperation, Nonproliferation and Verification Research and Development, Nonproliferation and International Security, Russian Surplus Fissile Materials Disposition, Supporting Activities, U.S. Plutonium Disposition, U.S. Uranium Disposition, and Waste Solidification Building.

NUCLEAR COUNTERTERRORISM AND INCIDENT RESPONSE

The NNSA's Nuclear Counterterrorism and Incident Response programs respond to and mitigate nuclear and radiological incidents worldwide in order to defend the nation from the threat of nuclear terrorism. The Committee recommends $319,185,000.

The Radiological Assistance Program (RAP) is a critical activity that plays a major role in our nation's ability to detect, deter, and respond to a domestic nuclear or radiological incident. The Committee supports the Department's efforts to modernize mission critical equipment that has exceeded its useful life. It is imperative that response teams possess the best available technology to carry out their missions. The Committee urges the Department to move forward expeditiously with the RAP critical equipment modernization and provide the Committee with a timeline for this effort. High priority equipment recapitalization needs for this program include hand-held, high resolution, spectroscopic measurement instrumentation which is used to specifically identify nuclear threat materials.

LEGACY CONTRACTOR PENSIONS

The Committee provides $28,640,000 for payments into the legacy University of California contractor employee defined benefit pension plans.

NAVAL REACTORS

(INCLUDING TRANSFER OF FUNDS)

Appropriation, 2018	$1,620,000,000
Budget estimate, 2019	1,788,618,000
Recommended, 2019	1,788,618,000
Comparison:	
Appropriation, 2018	+168,618,000
Budget estimate, 2019	– – –

The Naval Reactors (NR) program is responsible for all aspects of naval nuclear propulsion from technology development through reactor operations to ultimate reactor plant disposal. The program provides for the design, development, testing, and evaluation of improved naval nuclear propulsion plants and reactor cores. The recommendation fully funds the request to develop the Columbia-Class submarine, previously identified as the Ohio-replacement submarine, and to refuel the S8G prototype, which is closely linked to the Columbia-Class submarine.

Naval Reactors Development.—Within amounts for Naval Reactors Development, $85,500,000 is provided for Advanced Test Reactor Operations.

FEDERAL SALARIES AND EXPENSES

Appropriation, 2018	$407,595,000
Budget estimate, 2019	422,529,000
Recommended, 2019	422,525,000
Comparison:	
Appropriation, 2018	+14,934,000
Budget estimate, 2019	– – –

The Federal Salaries and Expenses account provides corporate planning and oversight for Defense Programs, Defense Nuclear Nonproliferation, and Naval Reactors, including the NNSA field offices in New Mexico, Nevada, and California.

The Department is directed to undertake a review of the manning for the NNSA's Office of General Counsel and the NNSA's Office of Congressional and Intergovernmental Affairs to determine whether those functions could be combined with the Department of Energy's Office of the General Counsel and the Department of Energy's Office of Congressional and Intergovernmental Affairs to eliminate duplication. The Department shall report the results of its review to the Committees on Appropriations of both Houses of Congress not later 90 days after the enactment of this Act. The report shall include the Department's recommendations as well as potential savings in full time equivalent (FTE) NNSA employee allocations that the NNSA could otherwise assign to meet its needs for additional programmatic personnel under existing legislative caps. The review shall include consideration of transfer of Overseas Presence personnel that perform Department-wide duties and are funded via the Department's Working Capital Fund, but that currently count against the NNSA personnel caps on FTE staff.

ENVIRONMENTAL AND OTHER DEFENSE ACTIVITIES

DEFENSE ENVIRONMENTAL CLEANUP

Appropriation, 2018	$5,988,048,000
Budget estimate, 2019	5,630,217,000
Recommended, 2019	5,759,220,000
Comparison:	
Appropriation, 2018	−228,828,000
Budget estimate, 2019	+129,003,000

The Defense Environmental Cleanup account provides funding for identifying and reducing risks and managing waste at sites where the nation carried out defense-related nuclear research and production activities that resulted in radioactive, hazardous, and mixed waste contamination requiring remediation, stabilization, or some other cleanup action.

While the Department's budget request for the Office of Environmental Management (EM) included increases at some sites, those increases were at the expense of other important cleanup activities at Hanford, Idaho, and Oak Ridge. The Committee's recommendation continues to fund a balanced approach that sustains the momentum of ongoing cleanup activities more consistently across all DOE cleanup sites.

Not later than 15 days after the enactment of this Act, EM shall provide to the Committees of Appropriations of both Houses of Congress an updated project data sheet for each EM major construction project funded by this Act for which the Department listed a cost or schedule reporting element as "TBD" in its fiscal year 2019 budget request.

Excess Facilities.—The recommendation includes additional one-time increases to accelerate the decontamination and decommissioning of certain high-risk excess facilities that were previously not slated for cleanup in the near term. Since the excess facilities projects funded in fiscal year 2018 are not shovel-ready, final cost estimates and schedules for how soon those efforts can be accomplished have not yet been developed. The Committee will monitor the progress of the accelerations funded in fiscal year 2018 to determine when and where additional funds can be executed on specific projects.

Within amounts for OR Excess Facilities D&D, $15,000,000 is for demolition of Alpha-4 Building 9201–4 COLEX Process Equipment and $10,000,000 is for demolition of Building 9213. Within ID Excess Facilities D&D, $10,000,000 is provided for the D&D of excess facilities and infrastructure at Idaho National Laboratory. Within RL Excess Facilities D&D, EM shall commence work on high risk contaminated excess facilities at the Hanford Site identified in its Plan for Deactivation and Decommissioning of Nonoperational Defense Nuclear Facilities submitted to Congress in December 2016. In identifying new accelerations, EM should prioritize higher risk facilities identified as "Tier I" to take advantage of the current skilled workforce at the site.

Hanford Site.—The recommendation includes funds above the budget request for the Richland Operations Office to support stable funding for general cleanup activities at the Hanford Site, to ensure expeditious completion of the remaining Columbia River Corridor work, and to prevent delays to existing and new Tri-Party Agreement milestones.

Within the Office of River Protection, $15,000,000 is provided for the planning and conduct of a pilot plant demonstration project to validate commercial scale application of treatment, stabilization, transportation, and disposal of Hanford tank waste that includes, among other activities, filtration and ion-exchange of tank waste to qualify the pretreated waste stream as low-activity waste (LAW). The Department shall submit to the Committees on Appropriations of both Houses of Congress not later than September 30, 2019, a report that includes the lessons learned from the demonstration, estimated potential tank waste lifecycle cost and schedule savings, and recommendations, including alternatives for off-site commercial LAW treatment and disposal from an initial set of three Hanford tanks.

Waste Treatment Plant (WTP).—The recommendation provides funding for the Waste Treatment Plant consistent with the reprogramming control points in the fiscal year 2018 Act, which better reflects the actual execution of the project. The Department is directed to submit its fiscal year 2020 budget request consistent with this budget structure.

The Department is directed to resume full engineering design to resolve safety-related design issues for the High-Level Waste Treat-

ment facility and the Pretreatment facility and shall report to the Committees on Appropriations of both Houses of Congress before moving forward with any plans to place the High-Level Waste Treatment facility and the Pre-Treatment facility into preservation mode for an extended period of time.

The Government Accountability Office recently produced a report that cast doubt on the Office of River Protection's ability to carry out oversight of its contractors' quality assurance programs for the WTP project because its organizational structure did not ensure the independence of its oversight division. To ensure that oversight has been effectively conducted and that quality assurance issues have been appropriately identified prior to startup, the Department is directed to contract with an outside, independent agent with expertise in quality assurance programs to review current quality assurance procedures and to determine the full extent to which problems exist in all WTP structures.

Idaho Site.—Within amounts for Idaho, $5,000,000 is provided for maturing the application of technologies to retrieve and disposition remote-handled mixed low level radioactive waste.

Savannah River Site.—Within available funds for Site Risk Management, $3,000,000 shall be to support the disposition of spent fuel from the High Flux Isotope Reactor. As directed in fiscal year 2018, EM shall not change cost sharing arrangements to reallocate site indirect costs from the NNSA to EM. The recommendation does not include additional funds for the Emergency Operations Center as EM has not yet completed a conceptual design for that project. Per 50 U.S.C. 2746, the Department is required to complete a conceptual design before requesting funding for a major construction project. The recommendation reallocates prior-year balances from Saltstone Disposal Unit 6 to fund additional needs of follow-on disposal unit projects at Savannah River.

19–D–710 Savannah River Security System Replacement.—The recommendation includes $10,000,000. The project to upgrade the security systems at H, L, and K area facilities is a major construction activity, and the Department is required to obtain congressional authorization for carrying out the project as it did for similar projects at the Nevada National Security Site, Los Alamos National Laboratory, and the Y–12 National Security Complex. Not later than 30 days after the enactment of this Act, EM shall submit a project data sheet that includes planned scope, cost estimates, and schedule for the upgrade project.

Technology Development.—Within Technology Development and Deployment, $5,000,000 is provided for the National Spent Nuclear Fuel Program to address issues related to storing, transporting, processing, and disposing of DOE-owned and managed spent nuclear fuel. Within these amounts, EM shall utilize funding to address the need for additional assessments into material degradation that may occur as a result of multiple decades of EM spent nuclear fuel storage facilities, nuclear material measuring and monitoring in DOE storage systems, and other activities recommendation by the U.S. Nuclear Waste Technical Review Board in its 2017 report on the Management and Disposal of U.S. Department of Energy Spent Nuclear Fuel. Also within Technology Development and Deployment, up to $5,000,000 shall be for research and development projects to improve worker safety and the Department is en-

couraged to consider exploring options to develop and deploy wearable robotic devices to enhance worker safety.

The Committee encourages the Department to continue a robust research effort to advance nuclear filtration testing and the development of state of the art containment ventilation systems.

OTHER DEFENSE ACTIVITIES

Appropriation, 2018	$840,000,000
Budget estimate, 2019	853,300,000
Recommended, 2019	870,300,000
Comparison:	
Appropriation, 2018	+30,300,000
Budget estimate, 2019	+17,000,000

The Other Defense Activities account provides funding for the Office of Environment, Health, Safety and Security; the Office of Independent Enterprise Assessments; the Office of Legacy Management; Specialized Security Activities; Defense Related Administrative Support; and the Office of Hearings and Appeals.

Within the Office of Nuclear Safety, the Committee directs the Department to continue its research into developing an advanced simulation tool that can more realistically predict the nonlinear response of critical nuclear facilities during earthquakes. With many mission critical facilities in seismically active regions, this research is in our nation's vital interest.

The agreement includes $17,000,000 above the budget request for targeted investments to defend the U.S. energy sector against the evolving threat of cyber and other attacks in support of the resiliency of the nation's electric grid and energy infrastructure.

DEFENSE NUCLEAR WASTE DISPOSAL

Appropriation, 2018	$–––
Budget estimate, 2019	30,000,000
Recommended, 2019	30,000,000
Comparison:	
Appropriation, 2018	+30,000,000
Budget estimate, 2019	–––

The Defense Nuclear Waste Disposal appropriation was established by the Congress for activities related to the disposal of defense high-level waste from the Department's atomic energy defense activities in lieu of payment from the Department of Energy into the Nuclear Waste Fund.

POWER MARKETING ADMINISTRATIONS

Management of the federal power marketing functions was transferred from the Department of the Interior to the Department of Energy in the Department of Energy Organization Act of 1977 (Public Law 95–91). These functions include the power marketing activities authorized under section 5 of the Flood Control Act of 1944 and all other functions of the Bonneville Power Administration, the Southeastern Power Administration, the Southwestern Power Administration, and the power marketing functions of the Bureau of Reclamation that have been transferred to the Western Area Power Administration.

All four power marketing administrations give preference in the sale of their power to publicly-owned and cooperatively-owned utili-

ties. Operations of the Bonneville Power Administration are financed principally under the authority of the Federal Columbia River Transmission System Act (Public Law 93–454). Under this Act, the Bonneville Power Administration is authorized to use its revenues to finance the costs of its operations, maintenance, and capital construction, and to sell bonds to the Treasury if necessary to finance any additional capital program requirements.

Beginning in fiscal year 2011, power revenues from the Southeastern, Southwestern, and Western Area Power Administrations, which were previously classified as mandatory offsetting receipts, were reclassified as discretionary offsetting collections to directly offset annual expenses. The capital expenses of Southwestern and Western Area Power Administrations are appropriated annually.

Beginning in fiscal year 2018, the Congressional Budget Office (CBO) changed its scoring of the power marketing administrations (PMAs). The change stemmed from information on execution of language regarding purchase power and wheeling expenses and offsetting collections included in this bill each year. The Committee appreciates the PMAs' and their customers' efforts to provide additional financial information. To address the increased score in the short-term, the recommendation reduces the maximum level for purchase power and wheeling below the budget request. The Committee will continue to work with the PMAs, their customers, and CBO to resolve scoring issues appropriately.

Organizational Reporting.—The Department recently announced a change in organizational structure moving the point of reporting for the PMAs to the Assistant Secretary for Electricity from the Deputy Secretary. The Committee has heard concerns that the realignment may indicate an intention to change the substantive relationship between the Department and each PMA, including actions related to PMA leadership decisions, use of the PMAs and their resources, and ratemaking; the Committee does not support such a change. The PMAs have unique statutory requirements, and the Committee expects the Department to adhere to and not expand upon those requirements.

BONNEVILLE POWER ADMINISTRATION FUND

The Bonneville Power Administration (BPA) is the Department of Energy's marketing agency for electric power in the Pacific Northwest. Bonneville provides electricity to a 300,000 square mile service area in the Columbia River drainage basin. Bonneville markets the power from federal hydropower projects in the Northwest, as well as power from non-federal generating facilities in the region, and exchanges and markets surplus power with Canada and California.

The Committee encourages the Corps of Engineers and Bureau of Reclamation to work with the BPA on efforts to drive down costs and promote BPA's long-term competitiveness. Assuring BPA competitiveness is important not only for BPA's operation, but to ensure Treasury repayment and assist the Corps and Reclamation in meeting their core functions (including navigation, flood control, water supply, and irrigation). The Committee is pleased that the operating agencies have taken important short-term steps on cost control and encourages efforts to make long-term improvements. The Committee encourages the Corps and Bureau to work with

BPA to optimize investment in the federal hydropower system, including prioritization of investments, effective project management approaches, including efficient procurement of equipment and services, and ensuring the cost effectiveness of any proposed higher capital spending levels for hydropower facilities. In addition, the Committee urges the operating agencies to strongly consider a review of the allocation of project costs including joint costs for the projects in the Federal Columbia River Power System and a review of the authorities allowing changes to such allocations, and to explore matters such as: (1) a more flexible workforce and business-oriented organization; (2) increased reliance on system automation as appropriate; (3) strategies to get labor costs stable or reduced long-term; and (4) further review of costs of conducting the new environmental impact statement for Columbia River System Operations to determine what costs are truly incremental.

OPERATION AND MAINTENANCE, SOUTHEASTERN POWER ADMINISTRATION

Budget estimate, 2019	$– – –
Appropriation, 2018	– – –
Recommended, 2019	– – –
Comparison:	
Appropriation, 2018	– – –
Budget estimate, 2019	– – –

The Southeastern Power Administration (SEPA) markets hydroelectric power produced at 22 Corps Projects in 11 states in the southeast. Southeastern does not own or operate any transmission facilities, so it contracts to "wheel" its power using the existing transmission facilities of area utilities.

OPERATION AND MAINTENANCE, SOUTHWESTERN POWER ADMINISTRATION

Appropriation, 2018	$11,400,000
Budget estimate, 2019	10,400,000
Recommended, 2019	10,400,000
Comparison:	
Appropriation, 2018	– 1,000,000
Budget estimate, 2019	– – –

The Southwestern Power Administration (SWPA) markets hydroelectric power produced at 24 Corps projects in the six-state area of Arkansas, Kansas, Louisiana, Missouri, Oklahoma, and Texas. SWPA operates and maintains 1,380 miles of transmission lines, along with supporting substations and communications sites.

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

Appropriation, 2018	$93,372,000
Budget estimate, 2019	89,372,000
Recommended, 2019	89,372,000
Comparison:	
Appropriation, 2018	– 4,000,000
Budget estimate, 2019	– – –

The Western Area Power Administration is responsible for marketing the electric power generated by the Bureau of Reclamation, the Corps, and the International Boundary and Water Commission. Western also operates and maintains a system of transmission

lines nearly 17,000 miles long. Western provides electricity to 15 western states over a service area of 1.3 million square miles.

FALCON AND AMISTAD OPERATING AND MAINTENANCE FUND

Appropriation, 2018	$228,000
Budget estimate, 2019	228,000
Recommended, 2019	228,000
Comparison:	
Appropriation, 2018	– – –
Budget estimate, 2019	– – –

Falcon Dam and Amistad Dam are two international water projects located on the Rio Grande River between Texas and Mexico. Power generated by hydroelectric facilities at these two dams is sold to public utilities through the Western Area Power Administration. The Foreign Relations Authorization Act for Fiscal Years 1994 and 1995 created the Falcon and Amistad Operating and Maintenance Fund to defray the costs of operation, maintenance, and emergency activities. The Fund is administered by the Western Area Power Administration for use by the Commissioner of the U.S. Section of the International Boundary and Water Commission.

The budget request includes a proposal for authority to accept contributed funds in fiscal year 2019 for use in fulfilling duties associated with the Falcon and Amistad Dams. This authority would be equivalent to the authority used throughout the Western Area Power Administration to secure alternative financing. The Committee includes this proposal.

The Committee continues to hear concerns that additional infrastructure investments are necessary at these dams. The fiscal year 2018 Act directed Western to coordinate with the International Boundary and Water Commission to determine a plan for addressing any needed improvements and brief the Committees on Appropriations of both Houses of Congress not later than 90 days after the enactment of this Act on progress towards finalizing a plan. The Committee reiterates this direction.

FEDERAL ENERGY REGULATORY COMMISSION

SALARIES AND EXPENSES

Appropriation, 2018	$367,600,000
Budget estimate, 2019	369,900,000
Recommended, 2019	369,900,000
Comparison:	
Appropriation, 2018	+2,300,000
Budget estimate, 2019	– – –

REVENUES

Appropriation, 2018	$ – 367,600,000
Budget estimate, 2019	– 369,900,000
Recommended, 2019	– 369,900,000
Comparison:	
Appropriation, 2018	– 2,300,000
Budget estimate, 2019	– – –

The Committee recommendation for the Federal Energy Regulatory Commission (FERC) is $369,900,000, the same as the budget request. Revenues for FERC are established at a rate equal to the budget authority, resulting in a net appropriation of $0.

The fiscal year 2018 Act directed FERC to analyze electricity transmission investment incentives in rate treatments to determine ways to encourage efficient investment for critical infrastructure security and to report this analysis to the Committees on Appropriations of both Houses of Congress not later than 180 days after the enactment of the Act. The Committee encourages FERC to meet the provided deadline.

Resilience.—California recently experienced one of its worst fire seasons in modern history, resulting in severe challenges to the well-being of utilities and the electric system in that state. The Committee is concerned that the safe, reliable, and affordable delivery of electricity to consumers could be compromised by the increasing frequency and severity of natural disasters—including hurricanes, floods, and wildfires. The Committee directs the Federal Energy Regulatory Committee (FERC) to continue working with industry on cost-effective ways within its jurisdiction to increase the resilience of the electric transmission system. These efforts shall include just and reasonable cost-recovery mechanisms for the development of resilient infrastructure and system repair and restoration, as well as practices to better prepare the nation's bulk power system for natural disasters. FERC shall study the impacts and effects of strict liability doctrines on utilities' ability to invest in the reliability and resilience of transmission systems. FERC is directed to report its findings and recommendations to the Committees on Appropriations of both Houses of Congress, as well as the House Energy and Commerce Committee and the Senate Energy and Natural Resources Committee, not later than 90 days after the enactment of this Act.

COMMITTEE RECOMMENDATION

The Committee's detailed funding recommendations for programs in Title III are contained in the following table:

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
ENERGY PROGRAMS					
ENERGY EFFICIENCY AND RENEWABLE ENERGY					
Sustainable Transportation:					
Vehicle technologies	337,500	68,500	303,000	-34,500	+234,500
Bioenergy technologies	221,545	37,000	205,000	-16,545	+168,000
Hydrogen and fuel cell technologies	115,000	58,000	102,000	-13,000	+44,000
Subtotal, Sustainable Transportation	674,045	163,500	610,000	-64,045	+446,500
Renewable Energy:					
Solar energy	241,600	67,000	189,000	-52,600	+122,000
Wind energy	92,000	33,000	84,440	-7,560	+51,440
Water power	105,000	45,000	95,000	-10,000	+50,000
Geothermal technologies	80,906	30,000	69,500	-11,406	+39,500
Subtotal, Renewable Energy	519,506	175,000	437,940	-81,566	+262,940
Energy Efficiency:					
Advanced manufacturing	305,000	75,000	260,000	-45,000	+185,000
Building technologies	220,727	57,000	180,000	-40,727	+123,000
Federal energy management program	27,000	10,000	27,000	---	+17,000
Weatherization and Intergovernmental Programs:					
Weatherization:					
Weatherization assistance program	248,000	---	248,000	---	+248,000

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Training and technical assistance	3,000	---	3,000	---	+3,000
Subtotal, Weatherization	251,000	---	251,000	---	+251,000
State Energy Program Grants	55,000	---	55,000	---	+55,000
Subtotal, Weatherization and Intergovernmental Program	306,000	---	306,000	---	+306,000
Subtotal, Energy Efficiency	858,727	142,000	773,000	-85,727	+631,000
Corporate Support:					
Facilities and infrastructure:					
National Renewable Energy Laboratory (NREL)	92,000	90,000	92,000	---	+2,000
Program direction	162,500	125,110	153,700	-8,800	+28,590
Strategic programs	15,000	---	12,000	-3,000	+12,000
Subtotal, Corporate Support	269,500	215,110	257,700	-11,800	+42,590
Subtotal, Energy efficiency and renewable energy	2,321,778	695,610	2,078,640	-243,138	+1,383,030
TOTAL, ENERGY EFFICENCY AND RENEWABLE ENERGY	2,321,778	695,610	2,078,640	-243,138	+1,383,030

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
ELECTRICITY DELIVERY AND ENERGY RELIABILITY					
Research and development:					
Transmission Reliability	39,000	---	---	-39,000	---
Resilient Distribution Systems	38,000	---	---	-38,000	---
Cyber security for energy delivery systems	75,829	---	---	-75,829	---
Energy storage	41,000	---	---	-41,000	---
Transformer resilience and advanced components	7,000	---	---	-7,000	---
Subtotal	200,829	---	---	-200,829	---
Transmission Permitting and Technical Assistance	7,000	---	---	-7,000	---
Infrastructure security and energy restoration	12,000	---	---	-12,000	---
Program direction	28,500	---	---	-28,500	---
Subtotal, Electricity Delivery and Energy Reliability	248,329	---	---	-248,329	---
TOTAL, ELECTRICITY DELIVERY AND ENERGY RELIABILITY	248,329	---	---	-248,329	---
CYBERSECURITY, ENERGY SECURITY, AND EMERGENCY RESPONSE					
Cybersecurity for energy delivery systems	---	70,000	116,500	+116,500	+46,500
Infrastructure security and energy restoration	---	18,000	18,000	+18,000	---

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Program direction	---	7,800	11,500	+11,500	+3,700
TOTAL, CYBERSECURITY, ENERGY SECURITY, AND EMERGENCY RESPONSE	---	95,800	146,000	+146,000	+50,200
ELECTRICITY DELIVERY					
Transmission reliability	---	13,000	45,000	+45,000	+32,000
Resilient distribution systems	---	10,000	48,000	+48,000	+38,000
Energy storage	---	8,000	51,000	+51,000	+43,000
Transformer resilience and advanced components	---	5,000	7,000	+7,000	+2,000
Transmission permitting and technical assistance	---	6,000	7,000	+7,000	+1,000
Program direction	---	19,309	17,000	+17,000	-2,309
TOTAL, ELECTRICITY DELIVERY	---	61,309	175,000	+175,000	+113,691
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	159,000	116,000	164,300	+5,300	+48,300
Reactor concepts RD&D	237,000	163,000	370,000	+133,000	+207,000
Fuel cycle research and development	260,056	60,000	255,200	-4,856	+195,200
International nuclear energy cooperation	3,000	2,500	3,000	---	+500
Subtotal	669,056	341,500	802,500	+133,444	+461,000

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Infrastructure:					
Radiological facilities management:					
Space and defense infrastructure	20,000	---	---	-20,000	---
Research reactor infrastructure	9,000	9,000	9,000	---	---
Subtotal	29,000	9,000	9,000	-20,000	---
INL facilities management:					
INL operations and infrastructure	288,000	204,000	300,000	+12,000	+96,000
Construction:					
16-E-200 Sample preparation laboratory	6,000	---	22,000	+16,000	+22,000
Subtotal, INL facilities management	294,000	204,000	322,000	+28,000	+118,000
Subtotal, Infrastructure	323,000	213,000	331,000	+8,000	+118,000
Idaho sitewide safeguards and security	133,000	136,090	146,090	+13,090	+10,000
Program direction	80,000	66,500	66,500	-13,500	---
Subtotal, Nuclear Energy	1,205,056	757,090	1,346,090	+141,034	+589,000
TOTAL, NUCLEAR ENERGY	1,205,056	757,090	1,346,090	+141,034	+589,000
FOSSIL ENERGY RESEARCH AND DEVELOPMENT					
Coal CCS and Power Systems:					
Carbon Capture	100,671	20,000	95,000	-5,671	+75,000

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Carbon Storage	98,096	20,000	97,000	-1,096	+77,000
Advanced Energy Systems	112,000	135,000	162,000	+50,000	+27,000
Cross Cutting Research	58,350	78,300	73,300	+14,950	-5,000
NETL Coal Research and Development	53,000	65,000	58,000	+5,000	-7,000
STEP (Supercritical CO2)	24,000	25,000	22,430	-1,570	-2,570
Transformational Coal Pilots	35,000	---	25,000	-10,000	+25,000
Subtotal, CCS and Power Systems	481,117	343,300	532,730	+51,613	+189,430
Natural Gas Technologies: Research	50,000	5,500	50,000	---	+44,500
Unconventional fossil energy technologies from petroleum - oil technologies	40,000	14,000	40,000	---	+26,000
Program direction	60,000	61,070	61,070	+1,070	---
Special recruitment programs	700	200	700	---	+500
NETL Research and Operations	50,000	40,000	52,500	+2,500	+12,500
NETL Infrastructure	45,000	38,000	48,000	+3,000	+10,000
Subtotal, Fossil Energy Research and Development	726,817	502,070	785,000	+58,183	+282,930
TOTAL, FOSSIL ENERGY RESEARCH AND DEVELOPMENT	726,817	502,070	785,000	+58,183	+282,930
NAVAL PETROLEUM AND OIL SHALE RESERVES	20,200	20,550	10,000	-10,200	-10,550
Use of prior year balances	-15,300	-10,550	---	+15,300	+10,550
TOTAL, NAVAL PETROLEUM AND OIL SHALE RESERVES	4,900	10,000	10,000	+5,100	---

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
STRATEGIC PETROLEUM RESERVE					
STRATEGIC PETROLEUM RESERVE	252,000	175,105	252,000	---	+76,895
Sale of crude oil	-350,000	-300,000	-300,000	+50,000	---
Use of sale proceeds	350,000	---	300,000	-50,000	+300,000
TOTAL, STRATEGIC PETROLEUM RESERVE	252,000	-124,895	252,000	---	+376,895
SPR PETROLEUM ACCOUNT					
SPR Petroleum Account	8,400	---	10,000	+1,600	+10,000
TOTAL, SPR PETROLEUM ACCOUNT	8,400	---	10,000	+1,600	+10,000
NORTHEAST HOME HEATING OIL RESERVE					
NORTHEAST HOME HEATING OIL RESERVE	10,000	10,000	10,000	---	---
Use of prior year balances	-3,500	---	---	+3,500	---
TOTAL, NORTHEAST HOME HEATING OIL RESERVE	6,500	10,000	10,000	+3,500	---
ENERGY INFORMATION ADMINISTRATION	125,000	115,035	125,000	---	+9,965

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
NON-DEFENSE ENVIRONMENTAL CLEANUP					
Fast Flux Test Reactor Facility (WA)	2,240	2,240	2,240	---	---
Gaseous Diffusion Plants	101,304	100,575	100,575	-729	---
Small sites	119,856	55,031	62,185	-57,671	+7,154
West Valley Demonstration Project	75,000	60,554	75,000	---	+14,446
TOTAL, NON-DEFENSE ENVIRONMENTAL CLEANUP	298,400	218,400	240,000	-58,400	+21,600
URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING FUND					
Oak Ridge	194,673	151,039	179,454	-15,219	+28,415
Nuclear facility D&D, Paducah	205,530	202,581	223,000	+17,470	+20,419
Portsmouth:					
Nuclear facility D&D, Portsmouth	342,389	306,931	372,389	+30,000	+65,458
Construction:					
15-U-408 On-site waste disposal facility, Portsmouth	38,882	41,168	41,168	+2,286	---
Total, Portsmouth	381,271	348,099	413,557	+32,286	+65,458
Pension and community and regulatory support	22,794	21,030	21,030	-1,764	---
Title X uranium/thorium reimbursement program	35,732	30,000	32,959	-2,773	+2,959
TOTAL, UED&D FUND	840,000	752,749	870,000	+30,000	+117,251

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
SCIENCE					
Advanced scientific computing research	605,000	666,304	689,500	+84,500	+23,196
Construction:					
17-SC-20 SC Exascale Computing Project	205,000	232,706	225,000	+20,000	-7,706
Subtotal, Advanced scientific computing research	810,000	899,010	914,500	+104,500	+15,490
Basic energy sciences:					
Research	1,744,900	1,635,700	1,759,933	+15,033	+124,233
Construction:					
13-SC-10 LINAC coherent light source II, SLAC	192,100	139,300	129,300	-62,800	-10,000
18-SC-10 APS Upgrade, ANL	93,000	60,000	130,000	+37,000	+70,000
18-SC-11 Spallation Neutron Source Proton Power Upgrade (PPU), ORNL	36,000	---	20,000	-16,000	+20,000
18-SC-12 Advanced Light Source Upgrade (ALS-U), LBNL	16,000	10,000	50,000	+34,000	+40,000
18-SC-13 LINAC coherent light source II HE, SLAC	8,000	5,000	40,000	+32,000	+35,000
Subtotal, Construction	345,100	214,300	369,300	+24,200	+155,000
Subtotal, Basic energy sciences	2,090,000	1,850,000	2,129,233	+39,233	+279,233
Biological and environmental research	673,000	500,000	673,000	---	+173,000

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Fusion energy sciences:					
Research	410,111	265,000	427,000	+16,889	+162,000
Construction:					
14-SC-60 ITER	122,000	75,000	163,000	+41,000	+88,000
Subtotal, Fusion energy sciences	532,111	340,000	590,000	+57,889	+250,000
High energy physics:					
Research	767,600	627,000	789,510	+21,910	+162,510
Construction:					
11-SC-40 Long baseline neutrino facility / deep underground neutrino experiment, FNAL	95,000	113,000	175,000	+80,000	+62,000
11-SC-41 Muon to electron conversion experiment, FNAL	44,400	30,000	30,000	-14,400	---
18-SC-42 PIP-II, FNAL	1,000	---	10,000	+9,000	+10,000
Subtotal, Construction	140,400	143,000	215,000	+74,600	+72,000
Subtotal, High energy physics	908,000	770,000	1,004,510	+96,510	+234,510
Nuclear physics:					
Operations and maintenance	586,800	525,000	615,000	+28,200	+90,000

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Construction:					
14-SC-50 Facility for rare isotope beams, Michigan State University	97,200	75,000	75,000	-22,200	---
Subtotal, Nuclear physics	684,000	600,000	690,000	+6,000	+90,000
Workforce development for teachers and scientists	19,500	19,000	19,500	---	+500
Science laboratories infrastructure:					
Infrastructure support:					
Payment in lieu of taxes	1,713	1,513	1,513	-200	---
Oak Ridge landlord	6,382	6,434	6,434	+52	---
Facilities and infrastructure	70,347	30,724	80,000	+9,653	+49,276
Oak Ridge nuclear operations	26,000	10,000	10,000	-16,000	---
Subtotal	104,442	48,671	97,947	-6,495	+49,276
Construction:					
19-SC-71 Science User Support Center, BNL	---	2,000	10,000	+10,000	+8,000
19-SC-72 Electrical Capacity and Distribution Capability, ANL	---	20,000	60,000	+60,000	+40,000
18-SC-71 Energy Sciences Capability, PNNL	20,000	4,000	40,000	+20,000	+36,000
17-SC-71 Integrated Engineering Research Center, FNAL	20,000	5,000	40,000	+20,000	+35,000
17-SC-73 Core Facility Revitalization, BNL	30,000	13,632	42,200	+12,200	+28,568
15-SC-78 Integrative genomics building, LBNL	38,350	13,549	---	-38,350	-13,549

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
15-SC-76 Materials design laboratory, ANL	44,500	20,000	---	-44,500	-20,000
Subtotal	152,850	78,181	192,200	+39,350	+114,019
Subtotal, Science laboratories infrastructure	257,292	126,852	290,147	+32,855	+163,295
Safeguards and security	103,000	106,110	106,110	+3,110	---
Science program direction	183,000	180,000	183,000	---	+3,000
Subtotal, Science	6,259,903	5,390,972	6,600,000	+340,097	+1,209,028
TOTAL, SCIENCE	6,259,903	5,390,972	6,600,000	+340,097	+1,209,028
NUCLEAR WASTE DISPOSAL	---	90,000	190,000	+190,000	+100,000
ADVANCED RESEARCH PROJECTS AGENCY-ENERGY					
ARPA-E projects	324,064	---	295,750	-28,314	+295,750
Program direction	29,250	---	29,250	---	+29,250
Subtotal, ARPA-E	353,314	---	325,000	-28,314	+325,000
TOTAL, ARPA-E	353,314	---	325,000	-28,314	+325,000

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
TITLE 17 - INNOVATIVE TECHNOLOGY LOAN GUARANTEE PGM					
Administrative expenses	33,000	10,000	32,000	-1,000	+22,000
Offsetting collection	-10,000	-15,000	-15,000	-5,000	---
Rescission	---	-240,000	---	---	+240,000
TOTAL, TITLE 17 - INNOVATIVE TECHNOLOGY LOAN GUARANTEE PROGRAM	23,000	-245,000	17,000	-6,000	+262,000
ADVANCED TECHNOLOGY VEHICLES MANUFACTURING LOAN PGM					
Administrative expenses	5,000	1,000	5,000	---	+4,000
TOTAL, ADVANCED TECHNOLOGY VEHICLES MANUFACTURING LOAN PROGRAM	5,000	1,000	5,000	---	+4,000
TRIBAL ENERGY LOAN GUARANTEE PROGRAM	1,000	---	1,000	---	+1,000
Rescission	---	-8,500	---	---	+8,500
TOTAL, TRIBAL ENERGY LOAN GUARANTEE PROGRAM	1,000	-8,500	1,000	---	+9,500
DEPARTMENTAL ADMINISTRATION					
Administrative operations:					
Salaries and expenses:					
Office of the Secretary:					
Program direction	5,300	5,395	5,395	+95	---
Chief Financial Officer	48,484	48,912	48,912	+428	---

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Chief Information Officer	126,274	96,793	131,624	+5,350	+34,831
Office of Indian energy policy and programs	18,000	10,005	20,000	+2,000	+9,995
Congressional and intergovernmental affairs	6,200	6,212	6,212	+12	---
Economic impact and diversity	10,169	10,005	10,169	---	+164
Other Departmental Administration	174,225	173,901	173,901	-324	---
Subtotal, Salaries and expenses	388,652	351,223	396,213	+7,561	+44,990
Subtotal, Administrative operations	388,652	351,223	396,213	+7,561	+44,990
Strategic partnership projects	40,000	40,000	40,000	---	---
Subtotal, Departmental administration	428,652	391,223	436,213	+7,561	+44,990
Use of prior-year balances	---	-2,000	-2,000	-2,000	---
Funding from other defense activities	-143,000	-153,689	-153,689	-10,689	---
Total, Departmental administration (gross)	285,652	235,534	280,524	-5,128	+44,990
Miscellaneous revenues	-96,000	-96,000	-96,000	---	---
TOTAL, DEPARTMENTAL ADMINISTRATION (net)	189,652	139,534	184,524	-5,128	+44,990

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
OFFICE OF THE INSPECTOR GENERAL					
Office of the inspector general	49,000	51,330	51,330	+2,330	---
TOTAL, ENERGY PROGRAMS	12,918,049	8,512,504	13,421,584	+503,535	+4,909,080
ATOMIC ENERGY DEFENSE ACTIVITIES					
NATIONAL NUCLEAR SECURITY ADMINISTRATION					
WEAPONS ACTIVITIES					
Directed stockpile work:					
B61 Life extension program	788,572	794,049	794,049	+5,477	---
W76 Life extension program	224,134	48,888	48,888	-175,246	---
W88 Alteration program	332,292	304,285	304,285	-28,007	---
W80-4 Life extension program	399,090	654,766	654,766	+255,676	---
IW-1	---	53,000	---	---	-53,000
W76-2 Modification program	---	65,000	65,000	+65,000	---
W78 Life extension program	---	---	53,000	+53,000	+53,000
Subtotal	1,744,088	1,919,988	1,919,988	+175,900	---
Stockpile systems:					
B61 Stockpile systems	59,729	64,547	64,547	+4,818	---
W76 Stockpile systems	51,400	94,300	94,300	+42,900	---
W78 Stockpile systems	60,100	81,329	81,329	+21,229	---
W80 Stockpile systems	80,087	80,204	80,204	+117	---

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
B83 Stockpile systems	35,762	35,082	35,082	-680	---
W87 Stockpile systems	83,200	83,107	83,107	-93	---
W88 Stockpile systems	131,576	180,913	180,913	+49,337	---
Subtotal	501,854	619,482	619,482	+117,628	---
Weapons dismantlement and disposition	56,000	56,000	56,000	---	---
Stockpile services:					
Production support	485,400	512,916	500,000	+14,600	-12,916
Research and Development support	31,150	38,129	34,000	+2,850	-4,129
R and D certification and safety	196,840	216,582	210,000	+13,160	-6,582
Management, technology, and production	285,400	300,736	300,736	+15,336	---
Subtotal	998,790	1,068,363	1,044,736	+45,946	-23,627
Strategic materials:					
Uranium sustainment	24,000	87,182	87,182	+63,182	---
Plutonium sustainment	210,367	361,282	300,000	+89,633	-61,282
Tritium sustainment	198,152	205,275	205,275	+7,123	---
Lithium sustainment	---	29,135	29,135	+29,135	---
Domestic uranium enrichment	60,000	100,704	100,704	+40,704	---
Strategic materials sustainment	216,196	218,794	218,794	+2,598	---
Subtotal	708,715	1,002,372	941,090	+232,375	-61,282
Subtotal, Directed stockpile work	4,009,447	4,666,205	4,581,296	+571,849	-84,909

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Research, Development, Test and Evaluation (RDT&E):					
Science:					
Advanced certification	57,710	57,710	57,710	---	---
Primary assessment technologies	89,313	95,057	95,057	+5,744	---
Dynamic materials properties	120,000	131,000	131,000	+11,000	---
Advanced radiography	37,600	32,544	32,544	-5,056	---
Secondary assessment technologies	76,833	77,553	77,553	+720	---
Academic alliances and partnerships	52,963	53,364	63,364	+10,401	+10,000
Enhanced capabilities for subcritical experiments	40,105	117,632	20,000	-20,105	-97,632
Subtotal	474,524	564,860	477,228	+2,704	-87,632
Engineering:					
Enhanced surety	39,717	43,226	43,226	+3,509	---
Weapons system engineering assessment technology	23,029	27,536	27,536	+4,507	---
Nuclear survivability	45,230	48,230	48,230	+3,000	---
Enhanced surveillance	45,147	58,375	50,000	+4,853	-8,375
Stockpile responsiveness	30,000	34,000	55,000	+25,000	+21,000
Subtotal	183,123	211,367	223,992	+40,869	+12,625
Inertial confinement fusion ignition and high yield:					
Ignition	79,575	22,434	---	-79,575	-22,434
Support of other stockpile programs	23,565	17,397	---	-23,565	-17,397
Diagnostics, cryogenics and experimental support	77,915	51,453	---	-77,915	-51,453
Pulsed power inertial confinement fusion	7,596	8,310	---	-7,596	-8,310

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Joint program in high energy density laboratory plasmas	9,492	---	---	-9,492	---
Facility operations and target production	346,791	319,333	---	-346,791	-319,333
High energy density R&D	---	---	50,000	+50,000	+50,000
National ignition facility, LLNL	---	---	330,000	+330,000	+330,000
Z Facility, SNL	---	---	61,600	+61,600	+61,600
Omega laser facility, URochester	---	---	68,000	+68,000	+68,000
Subtotal	544,934	418,927	509,600	-35,334	+90,673
Advanced simulation and computing:					
Advanced simulation and computing	721,244	656,401	676,401	-44,843	+20,000
Construction:					
18-D-670 Exascale class computer cooling equipment, LANL	22,000	24,000	24,000	+2,000	---
18-D-620 Exascale computing facility modernization project, LLNL	3,000	23,000	23,000	+20,000	---
Subtotal, Construction	25,000	47,000	47,000	+22,000	---
Subtotal, Advanced simulation, Computing and Construction	746,244	703,401	723,401	-22,843	+20,000
Advanced manufacturing development:					
Additive manfacturing	12,000	17,447	17,447	+5,447	---
Component manufacturing development	38,644	48,477	45,784	+7,140	-2,693

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Process technology development	34,896	30,914	30,914	-3,982	---
Subtotal	85,540	96,838	94,145	+8,605	-2,693
Subtotal, RDT&E	2,034,365	1,995,393	2,028,366	-5,999	+32,973
Infrastructure and Operations:					
Operations of facilities	848,470	891,000	880,000	+31,530	-11,000
Safety and environmental operations	110,000	115,000	110,000	---	-5,000
Maintenance and repair of facilities	515,138	365,000	515,138	---	+150,138
Recapitalization:					
Infrastructure and safety	482,661	431,631	482,661	---	+51,030
Capability based investments	130,000	109,057	130,000	---	+20,943
Subtotal, Recapitalization	612,661	540,688	612,661	---	+71,973
Construction:					
19-D-125 Plutonium infrastructure recapitalization, LANL	---	---	60,000	+60,000	+60,000
19-D-670 138kV Power Transmission System Replacement, NNSS	---	6,000	6,000	+6,000	---
18-D-680 Material staging facility, PX	5,200	---	---	-5,200	---
18-D-660 Fire station, Y-12	28,000	---	---	-28,000	---
18-D-650 Tritium production capability, SRS	---	27,000	2,000	+2,000	-25,000
18-D-690 Lithium production capability, Y-12	5,000	19,000	19,000	+14,000	---
17-D-640 U1a complex enhancements project, NNSA	22,100	53,000	53,000	+30,900	---
17-D-630 Electrical distribution system, LLNL	6,000	---	---	-6,000	---

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
16-D-515 Albuquerque Complex project	98,000	47,953	47,953	-50,047	---
15-D-613 Emergency Operations Center, Y-12	7,000	---	---	-7,000	---
07-D-220 Radioactive liquid waste treatment facility, LANL	2,100	---	---	-2,100	---
07-D-220-04 TRU liquid waste facility, LANL	17,895	---	---	-17,895	---
06-D-141 Uranium Processing Facility, Y-12	663,000	703,000	663,000	---	-40,000
Chemistry and metallurgy replacement (CMRR):					
04-D-125 Chemistry and metallurgy replacement project, LANL	---	235,095	---	---	-235,095
04-D-125-04 RLUOB equipment installation, phase 2	127,025	---	149,262	+22,237	+149,262
04-D-125-05 PF-4 equipment installation	50,214	---	70,580	+20,366	+70,580
Subtotal, CMRR	177,239	235,095	219,842	+42,603	-15,253
Subtotal, Construction	1,031,534	1,091,048	1,070,795	+39,261	-20,253
Subtotal, Infrastructure and Operations	3,117,803	3,002,736	3,188,594	+70,791	+185,858
Secure transportation asset:					
Operations and equipment	185,568	176,617	186,617	+1,049	+10,000
Program direction	105,600	102,022	102,022	-3,578	---
Subtotal, Secure transportation asset	291,168	278,639	288,639	-2,529	+10,000
Defense nuclear security:					
Defense nuclear security	686,977	690,638	699,638	+12,661	+9,000

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Security improvements program	30,000	---	30,000	---	+30,000
Construction:					
17-D-710 West end protected area reduction project, Y-12	53,600	---	---	-53,600	---
Subtotal, Defense nuclear security	770,577	690,638	729,638	-40,939	+39,000
Information technology and cyber security	186,728	221,175	221,175	+34,447	---
Legacy contractor pensions	232,050	162,292	162,292	-69,758	---
Subtotal, Weapons Activities	10,642,138	11,017,078	11,200,000	+557,862	+182,922
TOTAL, WEAPONS ACTIVITIES	10,642,138	11,017,078	11,200,000	+557,862	+182,922
DEFENSE NUCLEAR NONPROLIFERATION					
Global material security:					
International nuclear security	46,339	46,339	46,339	---	---
Domestic radiologic security	110,433	90,764	90,764	-19,669	---
International radiologic security	78,907	59,576	59,576	-19,331	---
Nuclear smuggling detection	154,429	140,429	140,429	-14,000	---
Subtotal, Global material security	390,108	337,108	337,108	-53,000	---
Material management and minimization:					
Conversion	---	98,300	---	---	-98,300

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Nuclear material removal	32,925	32,925	32,925	---	---
Material disposition	183,669	200,869	183,669	---	-17,200
Laboratory and partnership support	92,000	---	52,400	-39,600	+52,400
Subtotal, Material management and minimization	308,594	332,094	268,994	-39,600	-63,100
Nonproliferation and arms control	134,703	129,703	129,703	-5,000	---
Defense nuclear nonproliferation R&D:					
Proliferation detection	278,255	273,200	280,700	+2,445	+7,500
Nuclear detonation detection	195,749	182,895	182,895	-12,854	---
Nonproliferation fuels development	82,500	---	56,171	-26,329	+56,171
Subtotal, Defense nuclear nonproliferation R&D	556,504	456,095	519,766	-36,738	+63,671
Nonproliferation construction:					
99-D-143 Mixed Oxide (MOX) Fuel Fabrication Facility, SRS	335,000	220,000	335,000	---	+115,000
18-D-150 Surplus plutonium disposition project, SRS	---	59,000	---	---	-59,000
Subtotal, Nonproliferation construction	335,000	279,000	335,000	---	+56,000
Legacy contractor pensions	40,950	28,640	28,640	-12,310	---
Nuclear counterterrorism and incident response	282,360	319,185	319,185	+36,825	---
Use of prior-year balances	---	-19,000	-36,396	-36,396	-17,396
Subtotal, Defense Nuclear Nonproliferation	2,048,219	1,862,825	1,902,000	-146,219	+39,175

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Rescission	-49,000	---	---	+49,000	---
TOTAL, DEFENSE NUCLEAR NONPROLIFERATION	1,999,219	1,862,825	1,902,000	-97,219	+39,175
NAVAL REACTORS					
Naval reactors development	473,065	514,951	514,951	+41,886	---
Columbia-class reactor systems development	156,700	138,000	138,000	-18,700	---
S8G Prototype refueling	250,000	250,000	250,000	---	---
Naval reactors operations and infrastructure	466,884	525,764	525,764	+58,880	---
Construction:					
19-D-930 KS Overhead Piping	---	10,994	10,994	+10,994	---
17-D-911 BL Fire System Upgrade	---	13,200	13,200	+13,200	---
15-D-904 NRF Overpack Storage Expansion 3	13,700	---	---	-13,700	---
15-D-903 KL Fire System Upgrade	15,000	---	---	-15,000	---
14-D-901 Spent fuel handling recapitalization project, NRF	197,000	287,000	287,000	+90,000	---
Subtotal, Construction	225,700	311,194	311,194	+85,494	---
Program direction	47,651	48,709	48,709	+1,058	---
Subtotal, Naval Reactors	1,620,000	1,788,618	1,788,618	+168,618	---
TOTAL, NAVAL REACTORS	1,620,000	1,788,618	1,788,618	+168,618	---

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
FEDERAL SALARIES AND EXPENSES	407,595	422,529	422,529	+14,934	---
TOTAL, FEDERAL SALARIES AND EXPENSES	407,595	422,529	422,529	+14,934	---
TOTAL, NATIONAL NUCLEAR SECURITY ADMINISTRATION	14,668,952	15,091,050	15,313,147	+644,195	+222,097
DEFENSE ENVIRONMENTAL CLEANUP					
Closure sites administration	4,889	4,889	4,889	---	---
Richland:					
River corridor and other cleanup operations	183,692	89,577	183,692	---	+94,115
Central plateau remediation	662,879	562,473	638,379	-24,500	+75,906
RL Community and regulatory support	10,121	5,121	5,121	-5,000	---
RL Excess facilities D&D	---	---	35,000	+35,000	+35,000
Construction:					
18-D-404 WESF Modifications and capsule storage	6,500	1,000	1,000	-5,500	---
Subtotal, Richland	863,192	658,171	863,192	---	+205,021
Office of River Protection:					
Waste treatment and immobilization plant commissioning	8,000	15,000	15,000	+7,000	---
Rad liquid tank waste stabilization and disposition	719,000	677,460	719,000	---	+41,540
Construction:					
15-D-409 Low activity waste pretreatment system	93,000	56,053	56,053	-36,947	---
01-D-16 A-D Waste treatment and immobilization plant	---	675,000	---	---	-675,000

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
18-D-16 Waste treatment and immobilization plant - LBL/Direct feed LAW	630,000	---	655,000	+25,000	+655,000
01-D-16 D High-level waste facility	75,000	---	20,000	-55,000	+20,000
01-D-16 E Pretreatment facility	35,000	15,000	15,000	-20,000	---
Total, Construction	833,000	746,053	746,053	-86,947	---
Subtotal, Office of River Protection	1,560,000	1,438,513	1,480,053	-79,947	+41,540
Idaho National Laboratory:					
Idaho cleanup and waste disposition	420,000	346,026	420,000	---	+73,974
Idaho community and regulatory support	4,071	3,200	3,200	-871	---
ID Excess facilities D&D	10,000	---	10,000	---	+10,000
Total, Idaho National Laboratory	434,071	349,226	433,200	-871	+83,974
NNSA sites and Nevada offsites:					
Lawrence Livermore National Laboratory	1,175	1,704	1,704	+529	---
Separations Process Research Unit	4,800	15,000	15,000	+10,200	---
Nevada	60,136	60,136	60,136	---	---
Sandia National Laboratory	2,600	2,600	2,600	---	---
Los Alamos National Laboratory	220,000	191,629	198,000	-22,000	+6,371
LLNL Excess facilities D&D	100,000	---	---	-100,000	---
Total, NNSA sites and Nevada off-sites	388,711	271,069	277,440	-111,271	+6,371
Oak Ridge Reservation:					
OR Nuclear facility D&D	118,203	90,221	112,479	-5,724	+22,258
U233 disposition program	50,311	45,000	52,300	+1,989	+7,300

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
OR Cleanup and disposition	71,000	67,000	67,000	-4,000	---
Construction:					
17-D-401 On-site waste disposal facility	10,000	5,000	5,000	-5,000	---
14-D-403 Outfall 200 mercury treatment facility	17,100	11,274	21,079	+3,979	+9,805
Subtotal, Construction	27,100	16,274	26,079	-1,021	+9,805
OR Community & regulatory support	5,605	4,711	4,711	-894	---
OR Technology development and deployment	3,000	3,000	3,000	---	---
OR Excess facilities D&D	125,000	---	25,000	-100,000	+25,000
Total, Oak Ridge Reservation	400,219	226,206	290,569	-109,650	+64,363
Savannah River Site:					
SR Site risk management operations	482,960	517,436	495,960	+13,000	-21,476
SR Community and regulatory support	11,249	4,749	4,749	-6,500	---
SR Radioactive liquid tank waste stabilization and disposition	637,105	805,686	752,105	+115,000	-53,581
Construction:					
19-D-701 SR Security system replacement	---	---	10,000	+10,000	+10,000
18-D-402 Saltstone disposal unit #8/9	500	37,450	7,577	+7,077	-29,873
18-D-402 Emergency Operations Center Replacement, SR	500	1,259	---	-500	-1,259
17-D-402 Saltstone disposal Unit #7, SRS	30,000	41,243	41,243	+11,243	---

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
05-D-405 Salt waste processing facility, SRS	150,000	65,000	65,000	-85,000	---
Subtotal, Construction	181,000	144,952	123,820	-57,180	-21,132
Total, Savannah River Site	1,312,314	1,472,823	1,376,634	+64,320	-96,189
Waste Isolation Pilot Plant:					
Waste Isolation Pilot Plant	270,971	311,695	311,695	+40,724	---
Construction:					
15-D-411 Safety significant confinement ventilation system, WIPP	86,000	84,212	84,212	-1,788	---
15-D-412 Exhaust shaft, WIPP	19,600	1,000	1,000	-18,600	---
Total, Waste isolation pilot plant	376,571	396,907	396,907	+20,336	---
Program direction	300,000	300,000	295,000	-5,000	-5,000
Program support	14,979	12,979	12,979	-2,000	---
Safeguards and Security	298,102	324,434	304,434	+6,332	-20,000
Technology development	35,000	25,000	31,500	-3,500	+6,500
Excess facilities	---	150,000	---	---	-150,000
Use of prior year balances	---	---	-7,577	-7,577	-7,577
Subtotal, Defense Environmental Cleanup	5,988,048	5,630,217	5,759,220	-228,828	+129,003
TOTAL, DEFENSE ENVIRONMENTAL CLEAN UP	5,988,048	5,630,217	5,759,220	-228,828	+129,003

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
OTHER DEFENSE ACTIVITIES					
Environment, health, safety and security:					
Environment, health, safety and security	130,693	135,194	135,194	+4,501	---
Program direction	68,253	70,653	70,653	+2,400	---
Subtotal, Environment, Health, safety and security	198,946	205,847	205,847	+6,901	---
Independent enterprise assessments:					
Independent enterprise assessments	24,068	24,068	24,068	---	---
Program direction	50,863	52,702	52,702	+1,839	---
Subtotal, Independent enterprise assessments	74,931	76,770	76,770	+1,839	---
Specialized security activities	262,912	254,378	271,378	+8,466	+17,000
Office of Legacy Management:					
Legacy management	137,674	140,575	140,575	+2,901	---
Program direction	16,932	18,302	18,302	+1,370	---
Subtotal, Office of Legacy Management	154,606	158,877	158,877	+4,271	---
Defense related administrative support	143,000	153,689	153,689	+10,689	---
Office of hearings and appeals	5,605	5,739	5,739	+134	---
Use of prior year balances	---	-2,000	-2,000	-2,000	---
TOTAL, OTHER DEFENSE ACTIVITIES	840,000	853,300	870,300	+30,300	+17,000

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
DEFENSE NUCLEAR WASTE DISPOSAL	---	30,000	30,000	+30,000	---
TOTAL, ATOMIC ENERGY DEFENSE ACTIVITIES	21,497,000	21,604,567	21,972,667	+475,667	+368,100
POWER MARKETING ADMINISTRATIONS (1)					
SOUTHEASTERN POWER ADMINISTRATION					
Operation and maintenance:					
Purchase power and wheeling	66,070	73,184	69,184	+3,114	-4,000
Program direction	6,379	6,500	6,500	+121	---
Subtotal, Operation and maintenance	72,449	79,684	75,684	+3,235	-4,000
Less alternative financing (PPW)	-15,070	-13,824	-13,824	+1,246	---
Offsetting collections (for PPW)	-51,000	-59,360	-55,360	-4,360	+4,000
Offsetting collections (PD)	-6,379	-6,500	-6,500	-121	---
TOTAL, SOUTHEASTERN POWER ADMINISTRATION	---	---	---	---	---
SOUTHWESTERN POWER ADMINISTRATION					
Operation and maintenance:					
Operating expenses	16,680	17,006	17,006	+326	---
Purchase power and wheeling	50,000	93,000	20,000	-30,000	-73,000
Program direction	31,335	32,995	32,995	+1,660	---

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Construction	14,932	16,875	16,875	+1,943	---
Subtotal, Operation and maintenance	112,947	159,876	86,876	-26,071	-73,000
Less alternative financing (for O&M)	-9,042	-8,894	-8,894	+148	---
Less alternative financing (for PPW)	-10,000	-10,000	-10,000	---	---
Less alternative financing (Const)	-9,417	-12,180	-12,180	-2,763	---
Offsetting collections (PD)	-16,035	-29,695	-29,695	-13,660	---
Offsetting collections (for O&M)	-2,853	-5,707	-5,707	-2,854	---
Offsetting collections (for PPW)	-40,000	-83,000	-10,000	+30,000	+73,000
Use of prior year balances	-14,200	---	---	+14,200	---
TOTAL, SOUTHWESTERN POWER ADMINISTRATION	11,400	10,400	10,400	-1,000	---
WESTERN AREA POWER ADMINISTRATION					
Operation and maintenance:					
Construction and rehabilitation	52,272	32,632	32,632	-19,640	---
Operation and maintenance	72,407	77,056	77,056	+4,649	---
Purchase power and wheeling	498,072	567,362	441,362	-56,710	-126,000
Program direction	235,722	238,483	238,483	+2,761	---
Subtotal, Operation and maintenance	858,473	915,533	789,533	-68,940	-126,000
Less alternative financing (for O&M)	-5,068	-7,758	-7,758	-2,690	---
Less alternative financing (for Construction)	-40,500	-27,077	-27,077	+13,423	---
Less alternative financing (for Program Dir.)	-38,398	-39,136	-39,136	-738	---
Less alternative financing (for PPW)	-289,072	-260,954	-260,954	+28,118	---
Offsetting collections (for program direction)	-116,050	-150,761	-150,761	-34,711	---

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Offsetting collections (for O&M)	-13,854	-25,009	-25,009	-11,155	---
Offsetting collections (P.L. 108-477, P.L. 109-103)	-209,000	-306,408	-180,408	+28,592	+126,000
Offsetting collections (P.L. 98-381)	-9,306	-9,058	-9,058	+248	---
Use of prior-year balances	-43,853	---	---	+43,853	---
TOTAL, WESTERN AREA POWER ADMINISTRATION	93,372	89,372	89,372	-4,000	---
FALCON AND AMISTAD OPERATING AND MAINTENANCE FUND					
Operation and maintenance	5,048	5,329	5,329	+281	---
Offsetting collections	-3,948	-4,979	-4,979	-1,031	---
Less alternative financing	-872	-122	-122	+750	---
TOTAL, FALCON AND AMISTAD O&M FUND	228	228	228	---	---
TOTAL, POWER MARKETING ADMINISTRATIONS	105,000	100,000	100,000	-5,000	---
FEDERAL ENERGY REGULATORY COMMISSION					
Federal Energy Regulatory Commission	367,600	369,900	369,900	+2,300	---
FERC revenues	-367,600	-369,900	-369,900	-2,300	---
General Provisions					
Title III Rescissions:					
Northeast gasoline supply reserve sale	---	-71,000	---	---	+71,000
Strategic Petroleum Reserve crude oil sale	---	-15,000	---	---	+15,000

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Strategic Petroleum Reserve use of sale proceeds	---	15,000	---	---	-15,000
Total, General Provisions	---	-71,000	---	---	+71,000
GRAND TOTAL, DEPARTMENT OF ENERGY	34,520,049	30,146,071	35,494,251	+974,202	+5,348,180
(Total amount appropriated)	(34,569,049)	(30,394,571)	(35,494,251)	(+925,202)	(+5,099,680)
(Rescissions)	(-49,000)	(-248,500)	---	(+49,000)	(+248,500)
SUMMARY OF ACCOUNTS					
Energy efficiency and renewable energy	2,321,778	695,610	2,078,640	-243,138	+1,383,030
Electricity delivery and energy reliability	248,329	---	---	-248,329	---
Cybersecurity, Energy Security, and Emergency Response	---	95,800	146,000	+146,000	+50,200
Electricity delivery	---	61,309	175,000	+175,000	+113,691
Nuclear energy	1,205,056	757,090	1,346,090	+141,034	+589,000
Fossil Energy Research and Development	726,817	502,070	785,000	+58,183	+282,930
Naval Petroleum & Oil Shale Reserves	4,900	10,000	10,000	+5,100	---
Strategic petroleum reserve	252,000	-124,895	252,000	---	+376,895
SPR Petroleum Account	8,400	---	10,000	+1,600	+10,000
Northeast home heating oil reserve	6,500	10,000	10,000	+3,500	---
Energy Information Administration	125,000	115,035	125,000	---	+9,965
Non-Defense Environmental Cleanup	298,400	218,400	240,000	-58,400	+21,600
Uranium enrichment D&D fund	840,000	752,749	870,000	+30,000	+117,251
Science	6,259,903	5,390,972	6,600,000	+340,097	+1,209,028
Nuclear Waste Disposal	---	90,000	190,000	+190,000	+100,000

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Advanced Research Projects Agency-Energy	353,314	---	325,000	-28,314	+325,000
Title 17 Innovative technology loan guarantee program	23,000	-245,000	17,000	-6,000	+262,000
Advanced technology vehicles manufacturing loan pgm	5,000	1,000	5,000	---	+4,000
Tribal Energy Loan Guarantee program	1,000	-8,500	1,000	---	+9,500
Departmental administration	189,652	139,534	184,524	-5,128	+44,990
Office of the Inspector General	49,000	51,330	51,330	+2,330	---
Atomic energy defense activities:					
National Nuclear Security Administration:					
Weapons activities	10,642,138	11,017,078	11,200,000	+557,862	+182,922
Defense nuclear nonproliferation	1,999,219	1,862,825	1,902,000	-97,219	+39,175
Naval reactors	1,620,000	1,788,618	1,788,618	+168,618	---
Federal Salaries and Expenses	407,595	422,529	422,529	+14,934	---
Subtotal, National Nuclear Security Admin	14,668,952	15,091,050	15,313,147	+644,195	+222,097
Defense environmental cleanup	5,988,048	5,630,217	5,759,220	-228,828	+129,003
Other defense activities	840,000	853,300	870,300	+30,300	+17,000
Defense nuclear waste disposal	---	30,000	30,000	+30,000	---
Total, Atomic Energy Defense Activities	21,497,000	21,604,567	21,972,667	+475,667	+368,100
Power marketing administrations (1):					
Southeastern Power Administration	---	---	---	---	---
Southwestern Power Administration	11,400	10,400	10,400	-1,000	---
Western Area Power Administration	93,372	89,372	89,372	-4,000	---
Falcon and Amistad operating and maintenance fund	228	228	228	---	---
Total, Power Marketing Administrations	105,000	100,000	100,000	-5,000	---

DEPARTMENT OF ENERGY
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Federal Energy Regulatory Commission:					
Salaries and expenses	367,600	369,900	369,900	+2,300	---
Revenues	-367,600	-369,900	-369,900	-2,300	---
General Provisions	---	-71,000	---	---	+71,000
Total Summary of Accounts, Department of Energy	34,520,049	30,146,071	35,494,251	+974,202	+5,348,180

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

(INCLUDING TRANSFERS OF FUNDS)

The bill includes a provision that prohibits the use of funds provided in this title to initiate requests for proposals, other solicitations or arrangements for new programs or activities that have not yet been approved and funded by the Congress; requires notification or a report for certain funding actions; prohibits funds to be used for certain multi-year "Energy Programs" activities without notification; prohibits the obligation or expenditure of funds provided in this title through a reprogramming of funds except in certain circumstances; and permits the transfer and merger of unexpended balances of prior appropriations with appropriation accounts established in this bill.

The bill continues a provision that authorizes intelligence activities of the Department of Energy for purposes of section 504 of the National Security Act of 1947.

The bill continues a provision that prohibits the use of funds in this title for capital construction of high hazard nuclear facilities, unless certain independent oversight is conducted.

The bill continues a provision that prohibits the use of funds provided in this title to approve critical decision-2 or critical decision-3 for certain construction projects, unless a separate independent cost estimate has been developed for that critical decision.

The bill includes a provision limiting the amount of funds to be used for the working capital fund.

The bill continues a provision restricting certain activities in the Russian Federation.

The bill continues a provision regarding management of the Strategic Petroleum Reserve.

The bill includes a provision restricting the use of funds for the Mixed Oxide Fuel Fabrication Facility Project.

The bill includes a provision regarding authority to release refined petroleum product from the Strategic Petroleum Reserve (SPR). Instead of engaging the Congress on developing appropriate legislation for a regional refined petroleum product reserve, the previous Administration chose to establish the Northeast Gasoline Supply Reserve (NGSR) under the existing authorities of the SPR. As such, the NGSR is subject to national impact thresholds for releases, making it operationally ineffective as a regional product reserve. The Committee on Energy and Commerce of the House of Representatives is evaluating the proper configuration of the SPR in light of current circumstances. This evaluation will be informed, in part, by an assessment of the SPR being undertaken by the Government Accountability Office. While this work is ongoing, this bill includes temporary authority to ensure the operational effectiveness of the NGSR.

The bill includes a provision regarding a report on the potential of locating a reprocessing or recycling facility for spent nuclear fuel near the Yucca Mountain site.

TITLE V—GENERAL PROVISIONS

The bill continues a provision that prohibits the use of funds provided in this Act to, in any way, directly or indirectly influence congressional action on any legislation or appropriation matters pending before the Congress, other than to communicate to Members of Congress as described in section 1913 of Title 18, United States Code.

The bill continues a provision consolidating the transfer authorities into and out of accounts funded by this Act. No additional transfer authority is implied or conveyed by this provision. For the purposes of this provision, the term "transfer" shall mean the shifting of all or part of the budget authority in one account to another.

The bill continues a provision prohibiting funds in contravention of E.O. 12898 of February 11, 1994, regarding environmental justice.

The bill includes a provision prohibiting funds in this Act from being used to maintain or establish computer networks unless such networks block the viewing, downloading, or exchange of pornography.

The bill includes a provision prohibiting the use of funds to further implementation of components of the National Ocean Policy developed under E.O. 13547.

The bill includes a provision prohibiting the use of funds to operate the Federal Columbia River Power System in a manner inconsistent with the Army Corps of Engineers' 2017 Fish Operations Plan.

The bill includes a provision prohibiting the use of funds for the removal of any federally-owned or operated dam unless the removal was previously authorized by Congress.

The bill continues a provision prohibiting funds in this Act from being used to close the Yucca Mountain license application process or for actions that would remove the possibility that Yucca Mountain might be an option in the future.

The bill includes a provision regarding the spending reduction account.

HOUSE OF REPRESENTATIVES REPORT REQUIREMENTS

The following items are included in accordance with various requirements of the Rules of the House of Representatives.

STATEMENT OF GENERAL PERFORMANCE GOALS AND OBJECTIVES

Pursuant to clause 3(c)(4) of rule XIII of the Rules of the House of Representatives, the following is a statement of general performance goals and objectives for which this measure authorizes funding:

The Committee on Appropriations considers program performance, including a program's success in developing and attaining outcome-related goals and objectives, in developing funding recommendations.

TRANSFER OF FUNDS

Pursuant to clause 3(f)(2) of rule XIII of the Rules of the House of Representatives, the following is submitted describing the transfer of funds provided in the accompanying bill.

TITLE I—CORPS OF ENGINEERS—CIVIL

Under section 103, "General Provisions, Corps of Engineers—Civil", $5,400,000 under the heading "Operation and Maintenance" may be transferred to the Fish and Wildlife Service to mitigate for fisheries lost due to Corps projects.

TITLE II—BUREAU OF RECLAMATION

Under "Water and Related Resources", $67,393,000 is available for transfer to the Upper Colorado River Basin Fund and $5,551,000 is available for transfer to the Lower Colorado River Basin Development Fund. Such funds as may be necessary may be advanced to the Colorado River Dam Fund. The amounts of transfers may be increased or decreased within the overall appropriation under the heading.

Under "California Bay Delta Restoration", such sums as may be necessary to carry out authorized purposes may be transferred to appropriate accounts of other participating federal agencies.

TITLE III—DEPARTMENT OF ENERGY

Under "Atomic Energy Defense Activities—National Nuclear Security Administration—Naval Reactors", $85,500,000 shall be transferred to "Department of Energy—Energy Programs—Nuclear Energy" for the Advanced Test Reactor.

Under section 301, "General Provisions—Department of Energy", unexpended balances of prior appropriations provided for activities in this Act may be transferred to appropriation accounts for such activities established pursuant to this title. Balances so transferred may be merged with funds in the applicable established accounts and thereafter may be accounted for as one fund for the same time period as originally enacted.

DISCLOSURE OF EARMARKS AND CONGRESSIONALLY DIRECTED SPENDING ITEMS

Neither the bill nor the report contains any congressional earmarks, limited tax benefits, or limited tariff benefits as defined in clause 9 of rule XXI.

CHANGES IN THE APPLICATION OF EXISTING LAW

Pursuant to clause 3(f)(1)(A) of rule XIII of the Rules of the House of Representatives, the following statements are submitted describing the effect of provisions in the accompanying bill which directly or indirectly change the application of existing law.

TITLE I—CORPS OF ENGINEERS

Language has been included under Corps of Engineers, Investigations, providing for detailed studies and plans and specifications of projects prior to construction.

Language has been included under General Provisions, Department of the Interior, section 206, prohibiting funds to purchase water in certain circumstances.

Language has been included under General Provisions, Department of the Interior, section 207, regarding pumped storage hydropower development.

TITLE III—DEPARTMENT OF ENERGY

Language has been included under Energy Efficiency and Renewable Energy for the purchase, construction, and acquisition of plant and capital equipment.

Language has been included under Electricity Delivery and Energy Reliability for the purchase, construction, and acquisition of plant and capital equipment.

Language has been included under Nuclear Energy for the purchase, construction, and acquisition of plant and capital equipment.

Language has been included under Fossil Energy Research and Development for the acquisition of interest, including defeasible and equitable interest in any real property or any facility or for plant or facility acquisition or expansion, and for conducting inquires, technological investigations, and research concerning the extraction, processing, use and disposal of mineral substances without objectionable social and environmental costs under 30 U.S.C. 3, 1602 and 1603.

Language has been included under the Naval Petroleum and Oil Shale Reserves, permitting the use of unobligated balances.

Language has been included under the Strategic Petroleum Reserve, directing the Secretary of Energy to draw down and sell crude oil from the Strategic Petroleum and providing that the proceeds be deposited in the Energy Security and Infrastructure Modernization Fund for use in carrying out the Life Extension II project.

Language has been included under Science providing for the purchase, construction, and acquisition of plant and capital equipment; and for the purchase of motor vehicles and an airplane.

Language has been included under Nuclear Waste Disposal for the acquisition of real property or facility construction or expansion.

Language has been included under Innovative Technology Loan Guarantee Program crediting fees collected pursuant to section 1702(h) of the Energy Policy Act of 2005 as offsetting collections to this account and making fees collected under section 1702(h) in excess of the appropriated amount unavailable for expenditure until appropriated.

Language has been included under Innovative Technology Loan Guarantee Program prohibiting the subordination of certain interests.

Language has been included under Innovative Technology Loan Guarantee Program rescinding subsidy amounts for the cost of loan guarantees.

Language has been included under Departmental Administration providing for the hire of passenger vehicles and for official reception and representation expenses.

Language has been included under Departmental Administration providing, notwithstanding the provisions of the Anti-Deficiency

Act, such additional amounts as necessary to cover increases in the estimated amount of cost of work for others, as long as such increases are offset by revenue increases of the same or greater amounts.

Language has been included under Departmental Administration, notwithstanding 31 U.S.C. 3302, and consistent with the authorization in Public Law 95–238, to permit the Department of Energy to use revenues to offset appropriations. The appropriations language for this account reflects the total estimated program funding to be reduced as revenues are received.

Language has been included under Weapons Activities for the purchase, construction, and acquisition of plant and capital equipment.

Language has been included under Defense Nuclear Nonproliferation for the purchase, construction, and acquisition of plant and capital equipment and other incidental expenses.

Language has been included under Naval Reactors for the purchase, construction, and acquisition of plant and capital equipment, facilities, and facility expansion and for the purchase of aircraft.

Language has been included under Naval Reactors transferring certain funds to Nuclear Energy.

Language has been included under Federal Salaries and Expenses providing funding for official reception and representation expenses.

Language has been included under Defense Environmental Cleanup for the purchase, construction, and acquisition of plant and capital equipment; and for the purchase of passenger vehicles.

Language has been included under Other Defense Activities for the purchase, construction, and acquisition of plant and capital equipment.

Language has been included under Defense Nuclear Waste Disposal for the acquisition of real property or facility construction or expansion.

Language has been included under Bonneville Power Administration Fund providing funding for official reception and representation expenses and precluding any new direct loan obligations.

Language has been included under Southeastern Power Administration providing funds for official reception and representation expenses.

Language has been included under Southeastern Power Administration providing that, notwithstanding 31 U.S.C. 3302 and 16 U.S.C. 825s, amounts collected from the sale of power and related services shall be credited to the account as discretionary offsetting collections and remain available until expended for the sole purpose of funding the annual expenses of the Southeastern Power Administration; amounts collected to recover purchase power and wheeling expenses shall be credited to the account as offsetting collections and remain available until expended for the sole purpose of making purchase power and wheeling expenditures.

Language has been included under Southwestern Power Administration providing funds for official reception and representation expenses.

Language has been included under Southwestern Power Administration providing that, notwithstanding 31 U.S.C. 3302 and 16 U.S.C. 825s, amounts collected from the sale of power and related

services shall be credited to the account as discretionary offsetting collections and remain available until expended for the sole purpose of funding the annual expenses of the Southwestern Power Administration; amounts collected to recover purchase power and wheeling expenses shall be credited to the account as offsetting collections and remain available until expended for the sole purpose of making purchase power and wheeling expenditures.

Language has been included under Construction, Rehabilitation, Operation and Maintenance, Western Area Power Administration, providing funds for official reception and representation expenses.

Language has been included under Construction, Rehabilitation, Operation and Maintenance, Western Area Power Administration providing that, notwithstanding 31 U.S.C. 3302, 16 U.S.C. 825s, and 43 U.S.C. 392a, amounts collected from the sale of power and related services shall be credited to the account as discretionary offsetting collections and remain available until expended for the sole purpose of funding the annual expenses of the Western Area Power Administration; amounts collected to recover purchase power and wheeling expenses shall be credited to the account as offsetting collections and remain available until expended for the sole purpose of making purchase power and wheeling expenditures.

Language has been included under Falcon and Amistad Operating and Maintenance Fund providing that, notwithstanding 68 Stat. 255 and 31 U.S.C. 3302, amounts collected from the sale of power and related services shall be credited to the account as discretionary offsetting collections and remain available until expended for the sole purpose of funding the annual expenses of the hydroelectric facilities of those dams and associated Western Area Power Administration activities.

Language has been included under Falcon and Amistad Operating and Maintenance Fund providing that the Western Area Power Administration may accept a limited amount of contributions from the United States power customers of the Falcon and Amistad Dams for use by the Commissioner of the United States Section of the International Boundary and Water Commission for operating and maintenance of hydroelectric facilities.

Language has been included under Federal Energy Regulatory Commission to permit the hire of passenger motor vehicles, to provide official reception and representation expenses, and to permit the use of revenues collected to reduce the appropriation as revenues are received.

Language has been included under Department of Energy, General Provisions, section 301, prohibiting the use of funds to prepare or initiate requests for proposals or other solicitations or arrangements for programs that have not yet been fully funded by the Congress; requiring notification and reporting requirements for certain funding awards; limiting the use of multi-year funding mechanisms; providing that none of the funds may be available for obligation or expenditure through a reprogramming of funds except in certain circumstances; and providing that unexpended balances of prior appropriations may be transferred and merged with new appropriation accounts established in this Act.

Language has been included under Department of Energy, General Provisions, section 302, providing that funds for intelligence activities are deemed to be specifically authorized for purposes of

section 504 of the National Security Act of 1947 during fiscal year 2019 until enactment of the Intelligence Authorization Act for fiscal year 2019.

Language has been included under Department of Energy, General Provisions, section 303, prohibiting the use of funds for capital construction of high hazard nuclear facilities unless certain independent oversight is conducted.

Language has been included under Department of Energy, General Provisions, section 304, prohibiting the use of funds to approve critical decision-2 or critical decision-3 for certain construction projects, unless a separate independent cost estimate has been developed for that critical decision.

Language has been included under Department of Energy, General Provisions, section 305, limiting the amount of funds that may be transferred to the working capital fund.

Language has been included under Department of Energy, General Provisions, section 306, prohibiting nonproliferation activities in the Russian Federation until certain reporting requirements are met.

Language has been included under Department of Energy, General Provisions, section 307, limiting the authority of the Secretary of Energy to establish regional petroleum product reserves.

Language has been included under Department of Energy, General Provisions, section 308, prohibiting the use of funds for the Mixed Oxide Fuel Fabrication Facility project unless certain requirements in the National Defense Authorization Act of 2018 are met.

Language has been included under Department of Energy, General Provisions, section 309, authorizing the Secretary of Energy to draw down and sell refined petroleum product from the Strategic Petroleum Reserve under certain circumstances.

Language has been included under Department of Energy, General Provisions, section 310, requiring the Secretary of Energy to submit a report regarding spent nuclear fuel.

TITLE IV—INDEPENDENT AGENCIES

Language has been included under Appalachian Regional Commission providing for the hire of passenger vehicles and services authorized by 5 U.S.C. 3109.

Language has been included under Delta Regional Authority allowing the expenditure of funds as authorized by the Delta Regional Authority Act without regard to section 382C(b)(2), 382F(d), 382M and 382N of said Act.

Language has been included under Denali Commission allowing the expenditure of funds notwithstanding section 306(g) of the Denali Commission Act of 1998, and providing for cost-share requirements for Commission-funded construction projects in distressed and non-distressed communities, as defined by section 307 of the Denali Commission Act of 1998 (Division C, Title III, Public Law 105–277), and an amount not to exceed 50 percent for non-distressed communities.

Language has been included under Denali Commission allowing funding to be available for payment of a non-federal share for certain programs.

Language has been included under Northern Border Regional Commission for expenditure as authorized by subtitle V of title 40, United States Code, without regard to section 15751(b).

Language has been included under Nuclear Regulatory Commission, Salaries and Expenses that provides for salaries and other support costs for the Office of the Commission, to be controlled by majority vote of the Commission.

Language has been included under Nuclear Regulatory Commission, Salaries and Expenses that provides for official representation expenses and permits the use of revenues from licensing fees, inspections services, and other services for salaries and expenses to reduce the appropriation as revenues are received. Funding is provided to support university research and development, and for a Nuclear Science and Engineering Grant Program.

Language has been included under the Nuclear Regulatory Commission providing funds that are not derived from fee revenues.

Language has been included under Office of Inspector General that provides for the use of revenues from licensing fees, inspections services, and other services for salaries and expenses, notwithstanding section 3302 of title 31, United States Code, to reduce the appropriation as revenues are received.

Language has been included under Independent Agencies, General Provisions, section 401, requiring the NRC to comply with certain procedures when responding to Congressional requests for information.

Language has been included under Independent Agencies, General Provision, section 402, providing that none of the funds may be available for obligation or expenditure through a reprogramming of funds except in certain circumstances.

TITLE V—GENERAL PROVISIONS

Language has been included under General Provisions, section 501, prohibiting the use of funds in this Act to influence congressional action on any legislation or appropriation matters pending before the Congress.

Language has been included under General Provisions, section 502, prohibiting the transfer of funds except pursuant to a transfer made by, or transfer authority provided in this or any other appropriations Act, or certain other authorities, and requiring a report.

Language has been included under General Provisions, section 503, prohibiting funds in contravention of Executive Order No. 12898 of February 11, 1994, regarding environmental justice.

Language has been included under General Provisions, section 504, prohibiting funds from being used to maintain or establish computer networks unless such networks block the viewing, downloading, or exchange of pornography.

Language has been included under General Provisions, section 505, prohibiting the use of funds to further implementation of components of the National Ocean Policy developed under Executive Order 13547.

Language has been included under General Provisions, section 506, prohibiting the use of funds to operate the Federal Columbia River Power System hydroelectric dams in a manner inconsistent with a 2017 operations plan.

Language has been included under General Provisions, section 507, prohibiting the use of funds for the removal of any federally-owned or operated dam unless the removal has been previously authorized by Congress.

Language has been included under General Provisions, section 508, prohibiting funds in this Act from being used to close the Yucca Mountain license application process, or for actions that would remove the possibility that Yucca Mountain might be an option in the future.

Language has been included under General Provisions, section 509, setting at $0 the amount that the proposed new budget authority exceeds the allocation made by the Committee on Appropriations under section 302(b) of the Congressional Budget Act of 1974.

PROGRAM DUPLICATION

No provision of this bill establishes or reauthorizes a program of the Federal Government known to be duplicative of another Federal program, a program that was included in any report from the Government Accountability Office to Congress pursuant to section 21 of Public Law 111–139, or a program related to a program identified in the most recent Catalog of Federal Domestic Assistance.

DIRECTED RULE MAKING

The bill does not direct any rule making.

COMPLIANCE WITH RULE XIII, CL. 3(e) (RAMSEYER RULE)

In compliance with clause 3(e) of rule XIII of the Rules of the House of Representatives, changes in existing law made by the bill, as reported, are shown as follows (existing law proposed to be omitted is enclosed in black brackets, new matter is printed in italics, existing law in which no change is proposed is shown in roman):

OMNIBUS PUBLIC LAND MANAGEMENT ACT OF 2009

* * * * * * *

TITLE IX—BUREAU OF RECLAMATION AUTHORIZATIONS

Subtitle A—Feasibility Studies

SEC. 9001. SNAKE, BOISE, AND PAYETTE RIVER SYSTEMS, IDAHO.

(a) IN GENERAL.—The Secretary of the Interior, acting through the Bureau of Reclamation, may conduct feasibility studies on projects that address water shortages within the Snake, Boise, and Payette River systems in the State of Idaho, and are considered appropriate for further study by the Bureau of Reclamation Boise Payette water storage assessment report issued during 2006.

(b) BUREAU OF RECLAMATION.—A study conducted under this section shall comply with Bureau of Reclamation policy standards and guidelines for studies.

(c) AUTHORIZATION OF APPROPRIATIONS.—There is authorized to be appropriated to the Secretary of the Interior to carry out this section $3,000,000.

(d) TERMINATION OF EFFECTIVENESS.—The authority provided by this section terminates on the date that is [10] *20* years after the date of enactment of this Act.

* * * * * * *

SECTION 9 OF THE RECLAMATION PROJECT ACT OF 1939

SEC. 9. (a) No expenditures for the construction of any new project, new division of a project, or new supplemental works on a project shall be made, nor shall estimates be submitted therefor, by the Secretary until after he has made an investigation thereof and has submitted to the President and to the Congress his report and findings on—

(1) the engineering feasibility of the proposed construction;

(2) the estimated cost of the proposed construction;

(3) the part of the estimated cost which can properly be allocated to irrigation and probably be repaid by the water users;

(4) the part of the estimated cost which can properly be allocated to power and probably be returned to the United States in net power revenues;

(5) the part of the estimated cost which can properly be allocated to municipal water supply or other miscellaneous purposes and probably be returned to the United States.

If the proposed construction is found by the Secretary to have engineering feasibility and if the repayable and returnable allocations to irrigation, power, and municipal water supply or other miscellaneous purposes found by the Secretary to be proper, together with any allocation to flood control or navigation made under subsection (b) of this section, equal the total estimated cost of construction as determined by the Secretary, then the new project, new division of a project, or supplemental works on a project, covered by his findings, shall be deemed authorized and may be undertaken by the Secretary. If all such allocations do not equal said total estimated cost, then said new project, new division, or new supplemental works may be undertaken by the Secretary only after provision therefor has been made by Act of Congress enacted after the Secretary has submitted to the President and the Congress the report and findings involved.

(b) In connection with any new project, new division of a project, or supplemental works on a project there may be allocated to flood control or navigation the part of said total estimated cost which the Secretary may find to be proper. Items for any such allocations made in connection with projects which may be undertaken pursuant to subsection (a) of this section shall be included in the estimates of appropriations submitted by the Secretary for said projects, and funds for such portions of the projects shall not become available except as directly appropriated or allotted to the Department of the Interior. In connection with the making of such an allocation, the Secretary shall consult with the Chief of Engineers and the Secretary of the Army, and may perform any of the nec-

essary investigations or studies under a cooperative agreement with the Secretary of the Army. In the event of such an allocation the Secretary of the Interior shall operate the project for purposes of flood control or navigation, to the extent justified by said allocation therefor.

(c)

(1) The Secretary is authorized to enter into contracts to furnish water for municipal water supply or miscellaneous purposes: *Provided*, That any such contract either (A) shall require repayment to the United States, over a period of not to exceed forty years from the year in which water is first delivered for the use of the contracting party, with interest not exceeding the rate of 3½ per centum per annum if the Secretary determines an interest charge to be proper, of an appropriate share as determined by the Secretary of that part of the construction costs allocated by him to municipal water supply or other miscellaneous purposes; or (B) shall be for such periods, not to exceed forty years, and at such rates as in the Secretary's judgment will produce revenues at least sufficient to cover an appropriate share of the annual operation and maintenance cost and an appropriate share of such fixed charges as the Secretary deems proper, and shall require the payment of said rates each year in advance of delivery of water for said year. Any sale of electric power or lease of power privileges, made by the Secretary in connection with the operation of any project or division of a project, shall be for such periods, not to exceed forty years, and at such rates as in his judgment will produce power revenues at least sufficient to cover an appropriate share of the annual operation and maintenance cost, interest on an appropriate share of the construction investment at not less than 3 per centum per annum, and such other fixed charges as the Secretary deems proper: *Provided further*, That in said sales or leases preference shall be given to municipalities and other public corporations or agencies; and also to cooperatives and other nonprofit organizations financed in whole or in part by loans made pursuant to the Rural Electrification Act of 1936 and any amendments thereof. Nothing in this subsection shall be applicable to provisions in existing contracts, made pursuant to law, for the use of power and miscellaneous revenues of a project for the benefit of users of water from such project. The provisions of this subsection respecting the sales of electric power and leases of power privileges shall be an authorization in addition to and alternative to any authority in existing laws related to particular projects, including small conduit hydropower development *and pumped storage hydropower development exclusively using Bureau of Reclamation reservoirs*. No contract relating to municipal water supply or miscellaneous purposes or to electric power or power privileges shall be made unless, in the judgment of the Secretary, it will not impair the efficiency of the project for irrigation purposes.

(2)(A) When carrying out this subsection, the Secretary shall first offer the lease of power privilege to an irrigation district or water users association operating the applicable transferred conduit, or to the irrigation district or water users association receiving water from the applicable re-

served conduit. The Secretary shall determine a reasonable time frame for the irrigation district or water users association to accept or reject a lease of power privilege offer for a small conduit hydropower project.

(B) If the irrigation district or water users association elects not accept a lease of power privilege offer under subparagraph (A), the Secretary shall offer the lease of power privilege to other parties in accordance with this subsection.

(3) The Bureau of Reclamation shall apply its categorical exclusion process under the National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.) to small conduit hydropower development under this subsection, excluding siting of associated transmission facilities on Federal lands.

(4) The Power Resources Office of the Bureau of Reclamation shall be the lead office of small conduit hydropower policy and procedure-setting activities conducted under this subsection.

(5) Nothing in this subsection shall obligate the Western Area Power Administration, the Bonneville Power Administration, or the Southwestern Power Administration to purchase or market any of the power produced by the facilities covered under this subsection and none of the costs associated with production or delivery of such power shall be assigned to project purposes for inclusion in project rates.

(6) Nothing in this subsection shall alter or impede the delivery and management of water by Bureau of Reclamation facilities, as water used for conduit hydropower generation shall be deemed incidental to use of water for the original project purposes. Lease of power privilege shall be made only when, in the judgment of the Secretary, the exercise of the lease will not be incompatible with the purposes of the project or division involved, nor shall it create any unmitigated financial or physical impacts to the project or division involved. The Secretary shall notify and consult with the irrigation district or water users association operating the transferred conduit before offering the lease of power privilege and shall prescribe terms and conditions that will adequately protect the planning, design, construction, operation, maintenance, and other interests of the United States and the project or division involved.

(7) Nothing in this subsection shall alter or affect any existing agreements for the development of conduit hydropower projects or disposition of revenues.

(8) Nothing in this subsection shall alter or affect any existing preliminary permit, license, or exemption issued by the Federal Energy Regulatory Commission under Part I of the Federal Power Act (16 U.S.C. 792 et seq.) or any project for which an application has been filed with the Federal Energy Regulatory Commission as of the date of the enactment of the Bureau of Reclamation Small Conduit Hydropower Development and Rural Jobs Act.

(9) In this subsection:

(A) CONDUIT.—The term "conduit" means any Bureau of Reclamation tunnel, canal, pipeline, aqueduct, flume, ditch, or similar manmade water conveyance that is operated for the distribution of water for agricultural, municipal, or industrial consumption and not primarily for the generation of electricity.

(B) IRRIGATION DISTRICT.—The term "irrigation district" means any irrigation, water conservation or conservancy, multicounty water conservation or conservancy district, or any separate public entity composed of two or more such districts and jointly exercising powers of its member districts.

(C) RESERVED CONDUIT.—The term "reserved conduit" means any conduit that is included in project works the care, operation, and maintenance of which has been reserved by the Secretary, through the Commissioner of the Bureau of Reclamation.

(D) TRANSFERRED CONDUIT.—The term "transferred conduit" means any conduit that is included in project works the care, operation, and maintenance of which has been transferred to a legally organized water users association or irrigation district.

(E) SMALL CONDUIT HYDROPOWER.—The term "small conduit hydropower" means a facility capable of producing 5 megawatts or less of electric capacity.

(d) No water may be delivered for irrigation of lands in connection with any new project, new division of a project, or supplemental works on a project until an organization, satisfactory in form and powers to the Secretary, has entered into a repayment contract with the United States, in a form satisfactory to the Secretary, providing among other things—

(1) That the Secretary may fix a development period for each irrigation block, if any, of not to exceed ten years from and including the first calendar year in which water is delivered for the lands in said block; and that during the development period water shall be delivered to the lands in the irrigation block involved at a charge per annum per acre-foot, or other charge, to be fixed by the Secretary each year and to be paid in advance of delivery of water: Provided, That where the lands included in an irrigation block are for the most part lands owned by the United States, the Secretary, prior to execution of a repayment contract, may fix a development period, but in such case execution of such a contract shall be a condition precedent to delivery of water after the close of the development period: Provided further, That when the Secretary, by contract or by notice given thereunder, shall have fixed a development period of less than ten years, and at any time thereafter but before commencement of the repayment period conditions arise which in the judgment of the Secretary would have justified the fixing of a longer period, he may amend such contract or notice to extend such development period to a date not to exceed ten years from its commencement, and in a case where no development period was provided, he may amend such contract within the same limits: Provided further, That when the Secretary shall have deferred the payment of all or

any part of any installments of construction charges under any repayment contract pursuant to the authority of the Act of September 21, 1959 (73 Stat. 584), he may, at any time prior to the due date prescribed for the first installment not reduced by such deferment, and by agreement with the contracting organization, terminate the supplemental contract by which such deferment was effected, credit the construction payments made, and exercise the authority granted in this section. After the close of the development period, any such charges collected and which the Secretary determines to be in excess of the cost of the operation and maintenance during the development period shall be credited to the construction cost of the project in the manner determined by the Secretary.

(2) That the part of the construction costs allocated by the Secretary to irrigation shall be included in a general repayment obligation of the organization; and that the organization may vary its distribution of construction charges in a manner that takes into account the productivity of the various classes of lands and the benefits accruing to the lands by reason of the construction: Provided, That no distribution of construction charges over the lands included in the organization shall in any manner be deemed to relieve the organization or any party or any land therein of the organization's general obligation to the United States.

(3) That the general repayment obligation of the organization shall be spread in annual installments, of the number and amounts fixed by the Secretary, over a period of not more than 40 years, exclusive of any development period fixed under paragraph (1) of this subsection, for any project contract unit or, if the project contract unit be divided into two or more irrigation blocks, for any such block, or as near to said period of not more than forty years as is consistent with the adoption and operation of a variable payment formula which, being based on full repayment within such period under average conditions, permits variance in the required annual payments in the light of economic factors pertinent to the ability of the organization to pay.

(4) That the first annual installment for any project contract unit, or for any irrigation block, as the case may be, shall accrue, on the date fixed by the Secretary, in the year after the last year of the development period or, if there be not development period, in the calendar year after the Secretary announces that the construction contemplated in the repayment contract is substantially completed or is advanced to a point where delivery of water can be made to substantially all of the lands in said unit or block to be irrigated; and if there be no development period fixed, that prior to and including the year in which the Secretary makes said announcement water shall be delivered only on the toll charge basis hereinbefore provided for development periods.

(e) In lieu of entering into a repayment contract pursuant to the provisions of subsection (d) of this section to cover that part of the cost of the construction of works connected with water supply and allocated to irrigation, the Secretary, in his discretion, may enter into either short- or long-term contracts to furnish water for irriga-

tion purposes. Each such contract shall be for such period, not to exceed forty years, and at such rates as in the Secretary's judgment will produce revenues at least sufficient to cover an appropriate share of the annual operation and maintenance cost and an appropriate share of such fixed charges as the Secretary deems proper, due consideration being given to that part of the cost of construction of works connected with water supply and allocated to irrigation; and shall require payment of said rates each year in advance of delivery of water for said year. In the event such contracts are made for furnishing water for irrigation purposes, the costs of any irrigation water distribution works constructed by the United States in connection with the new project, new division of a project, or supplemental works on a project, shall be covered by a repayment contract entered into pursuant to said subsection (d).

(f) No less than sixty days before entering into or amending any repayment contract or any contract for the delivery of irrigation water (except any contract for the delivery of surplus or interim irrigation water whose duration is for one year or less) the Secretary shall—

(1) publish notice of the proposed contract or amendment in newspapers of general circulation in the affected area and shall make reasonable efforts to otherwise notify interested parties which may be affected by such contract or amendment, together with information indicating to whom comments or inquiries concerning the proposed actions can be addressed; and

(2) provide an opportunity for submission of written data, views and arguments, and shall consider all substantive comments so received.

APPROPRIATIONS NOT AUTHORIZED BY LAW

Pursuant to clause 3(f) of rule XIII of the Rules of the House of Representatives, the following table lists the appropriations in the accompanying bill which are not authorized:

[thousand dollars]

Agency/Program	Last Year of Authorization	Authorization Level	Appropriation in Last Year of Authorization	Net Appropriation in this Bill
Corps FUSRAP	.....	[1]	.....	150,000
EERE Program Direction	2006	110,500	164,198	153,700
EERE Weatherization Activities	2012	1,400,000	68,000	251,000
EERE State Energy Programs	2012	125,000	50,000	55,000
Nuclear Energy	2009	495,000	792,000	1,346,090
Nuclear Energy Infrastructure and Facilities	2009	145,000	245,000	331,000
Fossil Energy	2009	641,000	727,320	785,000
Naval Petroleum and Oil Shale Reserves	2014	20,000	20,000	10,000
Strategic Petroleum Reserve	2003	not specified	172,856	252,000
Northeast Home Heating Oil Reserve	2003	not specified	6,000	10,000
Energy Information Administration	1984	not specified	55,870	125,000
Office of Science	2013	6,007,000	4,876,000	6,600,000
Advanced Technology Vehicle Manufacturing Program	2012	not specified	6,000	5,000
Non-Defense Environmental Cleanup: West Valley Demonstration	1981	5,000	5,000	75,000
Departmental Administration	1984	246,963	185,682	184,524
Atomic Energy Defense Activities: National Nuclear Security Administration: Weapons Activities	2018	10,377,475	10,642,138	11,200,000

[thousand dollars]

Agency/Program	Last Year of Authorization	Authorization Level	Appropriation in Last Year of Authorization	Net Appropriation in this Bill
Defense Nuclear Nonproliferation	2018	1,883,310	1,999,219	1,902,000
Naval Reactors	2018	1,431,551	1,620,000	1,788,618
Federal Salaries and Expenses	2018	407,551	407,595	422,529
Defense Environmental Cleanup	2018	5,440,106	5,988,048	5,759,220
Other Defense Activities	2018	816,000	840,000	870,300
Defense Nuclear Waste Disposal	2018	30,000	0	30,000
Power Marketing Administrations:				
Southwestern	1984	40,254	36,229	10,400
Western Area	1984	259,700	194,630	89,372
Federal Energy Regulatory Commission	1984	not specified	29,582	0
Defense Nuclear Facilities Safety Board	2018	30,600	31,000	31,243
Delta Regional Authority	2018	30,000	25,000	15,000
Northern Border Regional Commission	2018	30,000	15,000	12,000
Southeast Crescent Regional Commission	2018	30,000	250	250
Nuclear Regulatory Commission	1985	460,000	448,200	191,664

[1] Program was initiated in 1972 and has never received a separate authorization.

RESCISSIONS

Pursuant to clause 3(f)(2) of rule XIII of the Rules of the House of Representatives, there are no rescissions recommended in the accompanying bill.

COMPARISON WITH THE BUDGET RESOLUTION

Pursuant to clause 3(c)(2) of rule XIII of the Rules of the House of Representatives and section 308(a)(1)(A) of the Congressional Budget Act of 1974, the following table compares the levels of new budget authority provided in the bill with the appropriate allocation under section 302(b) of the Budget Act.

[In millions of dollars]

	302(b) Allocation		This Bill	
	Budget Authority	Outlays	Budget Authority	Outlays
Mandatory	– – –	– – –	0	[1] 0
Discretionary	44,700	44,485	44,700	44,485

[1] Includes outlays from prior-year budget authority.

FIVE-YEAR OUTLAY PROJECTIONS

Pursuant to section 308(a)(1)(B) of the Congressional Budget Act of 1974, the following table contains five-year projections prepared by the Congressional Budget Office of outlays associated with the budget authority provided in the accompanying bill:

[In millions of dollars]

Projection of outlays associated with the recommendation:	
2019	[2] 26,161
2020	12,600
2021	4,279
2022	945
2023 and future years	554

[2] Excludes outlays from prior-year budget authority.

ASSISTANCE TO STATE AND LOCAL GOVERNMENTS

Pursuant to section 308(a)(1)(C) of the Congressional Budget Act of 1974, the amount of financial assistance to State and local governments is as follows:

[In millions of dollars]

	Budget Authority	Outlays
Financial assistance to State and local government for 2019	170	[2] 0

[2] Excludes outlays from prior-year budget authority.

FULL COMMITTEE VOTES

Pursuant to the provisions of clause 3(b) of rule XIII of the House of Representatives, the results of each rollcall vote on an amendment or on the motion to report, together with the names of those voting for and those voting against, are printed below:

FULL COMMITTEE VOTES

Pursuant to the provisions of clause 3(b) of rule XIII of the House of Representatives, the results of each roll call vote on an amendment or on the motion to report, together with the names of those voting for and those voting against, are printed below:

ROLL CALL NO. 1

Date: May 16, 2018
Measure: Energy and Water Appropriations Bill, FY 2019
Motion by: Ms. Kaptur
Description of Motion: To strike 6 provisions prohibiting funding for: requiring permits for certain agricultural activities, implementing the San Joaquin River Settlement Agreement, certain water purchases, implementing the National Ocean Policy, operating the Federal Columbia River Power System dams inconsistent with a prior year plan, and removing federally owned or operated dams without congressional approval; and to strike a provision related to the repeal of the Waters of the United States rule and a provision related to firearms on Army Corps of Engineers land.
Results: Defeated 19 yeas to 30 nays.

Members Voting Yea
Mr. Aguilar
Mr. Cartwright
Ms. Clark
Ms. DeLauro
Ms. Kaptur
Mr. Kilmer
Ms. Lee
Mrs. Lowey
Ms. McCollum
Ms. Meng
Ms. Pingree
Mr. Pocan
Mr. Price
Mr. Quigley
Ms. Roybal-Allard
Mr. Ruppersberger
Mr. Ryan
Mr. Serrano
Ms. Wasserman Schultz

Members Voting Nay
Mr. Aderholt
Mr. Amodei
Mr. Bishop
Mr. Calvert
Mr. Carter
Mr. Cole
Mr. Cuellar
Mr. Culberson
Mr. Diaz-Balart
Mr. Fleischmann
Mr. Fortenberry
Mr. Frelinghuysen
Ms. Granger
Mr. Graves
Dr. Harris
Ms. Herrera Beutler
Mr. Jenkins
Mr. Joyce
Mr. Moolenaar
Mr. Newhouse
Mr. Palazzo
Mrs. Roby
Mr. Rooney
Mr. Simpson
Mr. Stewart
Mr. Taylor
Mr. Valadao
Mr. Womack
Mr. Yoder
Mr. Young

FULL COMMITTEE VOTES

Pursuant to the provisions of clause 3(b) of rule XIII of the House of Representatives, the results of each roll call vote on an amendment or on the motion to report, together with the names of those voting for and those voting against, are printed below:

ROLL CALL NO. 2

Date: May 16, 2018
Measure: Energy and Water Appropriations Bill, FY 2019
Motion by: Mr. Cartwright
Description of Motion: To increase funds for energy efficiency and renewable energy and Advanced Research Projects Agency—Energy and to reduce funds for Mississippi River and Tributaries, water and related resources, policy and administration, fossil energy, uranium enrichment decontamination and decommissioning fund, and nuclear waste disposal.
Results: Defeated 21 yeas to 28 nays.

Members Voting Yea
Mr. Aguilar
Mr. Bishop
Mr. Cartwright
Ms. Clark
Mr. Cuellar
Ms. DeLauro
Ms. Kaptur
Mr. Kilmer
Ms. Lee
Mrs. Lowey
Ms. McCollum
Ms. Meng
Ms. Pingree
Mr. Pocan
Mr. Price
Mr. Quigley
Ms. Roybal-Allard
Mr. Ruppersberger
Mr. Ryan
Mr. Serrano
Ms. Wasserman Schultz

Members Voting Nay
Mr. Aderholt
Mr. Amodei
Mr. Calvert
Mr. Carter
Mr. Cole
Mr. Culberson
Mr. Diaz-Balart
Mr. Fleischmann
Mr. Fortenberry
Mr. Frelinghuysen
Ms. Granger
Mr. Graves
Dr. Harris
Ms. Herrera Beutler
Mr. Jenkins
Mr. Joyce
Mr. Moolenaar
Mr. Newhouse
Mr. Palazzo
Mrs. Roby
Mr. Rooney
Mr. Simpson
Mr. Stewart
Mr. Taylor
Mr. Valadao
Mr. Womack
Mr. Yoder
Mr. Young

FULL COMMITTEE VOTES

Pursuant to the provisions of clause 3(b) of rule XIII of the House of Representatives, the results of each roll call vote on an amendment or on the motion to report, together with the names of those voting for and those voting against, are printed below:

ROLL CALL NO. 3

Date: May 16, 2018
Measure: Energy and Water Appropriations Bill, FY 2019
Motion by: Mr. Aderholt
Description of Motion: To report the bill to the House, as amended.
Results: Adopted 29 yeas to 20 nays

Members Voting Yea
Mr. Aderholt
Mr. Amodei
Mr. Bishop
Mr. Calvert
Mr. Carter
Mr. Cole
Mr. Culberson
Mr. Diaz-Balart
Mr. Fleischmann
Mr. Fortenberry
Mr. Frelinghuysen
Ms. Granger
Mr. Graves
Dr. Harris
Ms. Herrera Beutler
Mr. Jenkins
Mr. Joyce
Mr. Moolenaar
Mr. Newhouse
Mr. Palazzo
Mrs. Roby
Mr. Rooney
Mr. Simpson
Mr. Stewart
Mr. Taylor
Mr. Valadao
Mr. Womack
Mr. Yoder
Mr. Young

Members Voting Nay
Mr. Aguilar
Mr. Cartwright
Ms. Clark
Ms. DeLauro
Ms. Kaptur
Mr. Kilmer
Ms. Lee
Mrs. Lowey
Ms. McCollum
Ms. Meng
Ms. Pingree
Mr. Pocan
Mr. Price
Mr. Quigley
Ms. Roybal-Allard
Mr. Ruppersberger
Mr. Ryan
Mr. Serrano
Mr. Visclosky
Ms. Wasserman Schultz

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR 2018
AND BUDGET REQUESTS AND AMOUNTS RECOMMENDED IN THE BILL FOR 2019
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
TITLE II - DEPARTMENT OF THE INTERIOR					
Central Utah Project					
Central Utah Project Completion Account	10,500	7,983	15,000	+4,500	+7,017
Bureau of Reclamation					
Water and Related Resources	1,332,124	891,017	1,381,992	+49,868	+490,975
Central Valley Project Restoration Fund	41,376	62,008	62,008	+20,632	---
California Bay-Delta Restoration	37,000	35,000	35,000	-2,000	---
Policy and Administration	59,000	61,000	61,000	+2,000	---
Total, Bureau of Reclamation	1,469,500	1,049,025	1,540,000	+70,500	+490,975
Total, title II, Department of the Interior	1,480,000	1,057,008	1,555,000	+75,000	+497,992
Appropriations	(1,480,000)	(1,057,008)	(1,555,000)	(+75,000)	(+497,992)
TITLE III - DEPARTMENT OF ENERGY					
Energy Programs					
Energy Efficiency and Renewable Energy	2,321,778	695,610	2,078,640	-243,138	+1,383,030
Electricity Delivery and Energy Reliability	248,329	---	---	-248,329	---
Cybersecurity, Energy Security, and Emergency Response	---	95,800	146,000	+146,000	+50,200
Electricity Delivery	---	61,309	175,000	+175,000	+113,691
Nuclear Energy	1,072,056	621,000	1,200,000	+127,944	+579,000

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR 2018
AND BUDGET REQUESTS AND AMOUNTS RECOMMENDED IN THE BILL FOR 2019
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Advanced Technology Vehicles Manufacturing Loans program	5,000	1,000	5,000	---	+4,000
Tribal Energy Loan Guarantee Program	1,000	---	1,000	---	+1,000
Rescission	---	-8,500	---	---	+8,500
Subtotal	1,000	-8,500	1,000	---	+9,500
Departmental Administration	285,652	235,534	280,524	-5,128	+44,990
Miscellaneous revenues	-96,000	-96,000	-96,000	---	---
Net appropriation	189,652	139,534	184,524	-5,128	+44,990
Office of the Inspector General	49,000	51,330	51,330	+2,330	---
Total, Energy programs	12,918,049	8,512,504	13,421,584	+503,535	+4,909,080
Atomic Energy Defense Activities					
National Nuclear Security Administration					
Weapons Activities	10,642,138	11,017,078	11,200,000	+557,862	+182,922
Defense Nuclear Nonproliferation	2,048,219	1,862,825	1,902,000	-146,219	+39,175
Rescission	-49,000	---	---	+49,000	---
Subtotal	1,999,219	1,862,825	1,902,000	-97,219	+39,175

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR 2018
AND BUDGET REQUESTS AND AMOUNTS RECOMMENDED IN THE BILL FOR 2019
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Construction, Rehabilitation, Operation and Maintenance, Western Area Power Administration	223,276	265,142	265,142	+41,866	---
Offsetting collections	-129,904	-175,770	-175,770	-45,866	---
Subtotal	93,372	89,372	89,372	-4,000	---
Falcon and Amistad Operating and Maintenance Fund	4,176	5,207	5,207	+1,031	---
Offsetting collections	-3,948	-4,979	-4,979	-1,031	---
Subtotal	228	228	228	---	---
Total, Power Marketing Administrations	105,000	100,000	100,000	-5,000	---
Federal Energy Regulatory Commission					
Salaries and expenses	367,600	369,900	369,900	+2,300	---
Revenues applied	-367,600	-369,900	-369,900	-2,300	---
General Provisions					
Title III Rescissions:					
Northeast gasoline supply reserve sale	---	-71,000	---	---	+71,000
Strategic Petroleum Reserve crude oil sale	---	-15,000	---	---	+15,000

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR 2018
AND BUDGET REQUESTS AND AMOUNTS RECOMMENDED IN THE BILL FOR 2019
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Strategic Petroleum Reserve use of sale proceeds	---	15,000	---	---	-15,000
Total, General Provisions	---	-71,000	---	---	+71,000
Total, title III, Department of Energy	34,520,049	30,146,071	35,494,251	+974,202	+5,348,180
Appropriations	(34,569,049)	(30,394,571)	(35,494,251)	(+925,202)	(+5,099,680)
Rescissions	(-49,000)	(-248,500)	---	(+49,000)	(+248,500)
TITLE IV - INDEPENDENT AGENCIES					
Appalachian Regional Commission	155,000	152,000	155,000	---	+3,000
Defense Nuclear Facilities Safety Board	31,000	31,243	31,243	+243	---
Delta Regional Authority	25,000	2,500	15,000	-10,000	+12,500
Denali Commission	30,000	7,300	15,000	-15,000	+7,700
Northern Border Regional Commission	15,000	850	12,000	-3,000	+11,150
Southeast Crescent Regional Commission	250	---	250	---	+250
Nuclear Regulatory Commission:					
Salaries and expenses	909,137	958,050	953,050	+43,913	-5,000
Revenues	-779,768	-805,019	-763,640	+16,128	+41,379
(Rescission)	-68	---	---	+68	---
Subtotal	129,301	153,031	189,410	+60,109	+36,379
Office of Inspector General	12,859	12,609	12,609	-250	---

COMPARATIVE STATEMENT OF NEW BUDGET (OBLIGATIONAL) AUTHORITY FOR 2018
AND BUDGET REQUESTS AND AMOUNTS RECOMMENDED IN THE BILL FOR 2019
(Amounts in thousands)

	FY 2018 Enacted	FY 2019 Request	Bill	Bill vs. Enacted	Bill vs. Request
Revenues	-10,555	-10,355	-10,355	+200	---
Subtotal	2,304	2,254	2,254	-50	---
Total, Nuclear Regulatory Commission	131,605	155,285	191,664	+60,059	+36,379
Appropriations	(131,673)	(155,285)	(191,664)	(+59,991)	(+36,379)
Rescissions	(-68)	---	---	(+68)	---
Nuclear Waste Technical Review Board	3,600	3,600	3,600	---	---
Total, title IV, Independent agencies	391,455	352,778	423,757	+32,302	+70,979
Appropriations	(391,523)	(352,778)	(423,757)	(+32,234)	(+70,979)
Rescissions	(-68)	---	---	(+68)	---
Grand total	43,218,504	36,340,440	44,751,008	+1,532,504	+8,410,568
Appropriations	(43,267,572)	(36,588,940)	(44,751,008)	(+1,483,436)	(+8,162,068)
Rescissions	(-49,068)	(-248,500)	---	(+49,068)	(+248,500)

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

MINORITY VIEWS

We commend Chairman Frelinghuysen and Chairman Simpson for their efforts to assemble portions of this bill in an inclusive manner. The bill funds critical water resource projects, supports science activities necessary for American competitiveness and contributes to our national defense through vital weapons, naval reactor research, and nonproliferation funding, all priorities that unite rather than divide us. Chairman Simpson has worked hard to incorporate the interests of Members from both parties. As a result, much of the funding reflects some priorities from both sides of the aisle. However, the Majority has made clear that this bill reflects their priorities—and the funding levels for programs of great importance to the nation, including Energy Efficiency and Renewable Energy, Advanced Research Projects Agency-Energy and Defense Nuclear Nonproliferation, show that these are not the priorities of the Majority.

Further, it is disappointing that the Majority has jeopardized the possibility of a bipartisan bill by adding ideological riders that are anti-environment, including gutting the Clean Water Act and overturning a court decision meant to protect endangered fish species, in addition to allowing guns on public lands. We should not have to remind our Majority colleagues that similar provisions have imperiled passage of this bill in the past, and that these riders cannot be included in any legislation that requires bipartisan support to pass. Yet they continue not only to include the same riders year after year, but this year brings a new, unnecessary version of a Waters of the United States (WOTUS) rider while introducing a new provision legislating an ongoing court case, both poison pills. These issues inject divisive partisan issues into must-pass spending bills, a recipe for chaos when Congress attempts to keep the government open for business.

The subcommittee's allocation is $44,700,000,000, $8,173,568,000 above the Administration's budget request and $1,500,000,000 above the Fiscal Year (FY) 2018 level. The defense allocation is $500,000,000 above FY 2018, while the non-defense allocation is $1,000,000,000 above FY 2018.

We commend the Chairman for increasing Corps of Engineers' funding by $2,493,417,000 above the President's completely inadequate request, ensuring that many ongoing projects will continue. The bill provides $7,278,000,000 for the Army Corps of Engineers, representing the highest funding level the agency has received in recent years. The bill provides $1,600,000,000 for projects funded from the Harbor Maintenance Trust Fund, $200,000,000 above FY 2018 and $160,000,000 above the FY 2019 target set by the Water Resources Reform and Development Act of 2014. This funding would allow preventive and proactive investments necessary for the economy and the safety of American citizens. The funding above the request would also allow investments in the nation's ports and waterways, which are critical to ensuring that American made goods can move to market, both domestically and abroad. We firmly believe that our underinvestment in infrastructure continues to hamper economic gains and prolongs the underemployment plaguing our middle class.

While this bill ensures increased investment beyond that included in the budget request, we should be doing even more to build infrastructure and create jobs. Federal support of water resource projects creates construction jobs and indirect economic benefits that encourage local businesses and individuals to embrace risk and make critical investments in their communities.

Every year, this important bill sets the path for America's energy future, and we have made enormous strides in increasing our energy independence. We now meet more than 90 percent of our energy needs with domestic sources, a great accomplishment. Renewable energy now accounts for 18 percent of U.S. electricity generation, nearly on par with the nation's nuclear fleet. Electricity made up a smaller share of consumer spending in 2017 than it ever has in recorded history.

These successes are due in no small part to federal investment in DOE's world-class research—both basic and applied. Research at the Department of Energy has led to the technological advances that have drastically altered global energy markets. These significant strides towards America's energy security are to be lauded, but now is not the time to rest on our laurels. Today, the price of oil is on the rise again, currently 50 percent higher than it was one year ago. Fuel prices are also rising, and when fuel prices rise consumer spending constricts, impacting the economy. Given these factors, we must not lose sight of the ultimate goal of energy independence.

Unfortunately, even with a generous allocation, the Majority chose to cut $243,138,000 from energy efficiency and renewable energy programs, which threatens to delay progress on breakthroughs in energy efficiency and clean energy and to hinder innovation to drive sustained economic growth in the clean energy economy of the future. It also leaves us perilously open to being overtaken by our competitors who are aggressively investing with the goal of overtaking us, at times using our own technologies. Renewable energy has achieved cost competitiveness in some areas, yet despite what we hear from this administration, further investment can drive down the costs of existing technology and provide breakthroughs in others. Investment in portfolio diversity remains necessary for the long term. The advances in renewable energy are not the drumbeats of some distant clean energy future. That future is now, and the rest of the world is ready to lay siege to our technologies if we do not continue to innovate. An investment in clean energy is an investment in American jobs: nearly 3.2 million Americans work in clean energy, including 2.5 million energy efficiency jobs, 457,000 solar and wind jobs, and 220,000 jobs making clean vehicles.

With regard to the applied energy programs at the Department of Energy, investments in energy technology programs are once again skewed too heavily toward nuclear and fossil fuels, though we recognize that the level of renewable energy funding is higher than recent years in a House bill. We must provide for critical research and development for the nuclear and fossil energy sectors to increase efficiency and reduce emissions of these sources, but continued and sustained research and development programs in renewable energy and energy efficiency are necessary and appropriate, and cannot be the price of increased support for other tech-

nologies. To finally free ourselves from our dependence on foreign energy sources, as well as to drastically cut our dangerous carbon emissions, we must continue to strongly fund DOE's research and development efforts.

The bill also cuts the Advanced Research Projects Agency-Energy (ARPA–E), which focuses on energy technologies that have the potential to be transformational and are too early for private sector investment. ARPA–E's approach is working-136 ARPA–E projects have attracted over $2,600,000,000 in private follow-on funding. Yet we have come to expect that the administration will propose to eliminate this important program each year. And again, despite the generous allocation we received, the Majority has opted to reduce funding by $28,314,000 from FY 2018.

One positive is the five percent increase over FY 2018 for the Office of Science. This is critical to the competitiveness of our nation and ensuring that the United States maintains its position as the global leader in innovation.

The bill provides $15,091,050,000 for the National Nuclear Security Administration (NNSA); these increases are seen in Weapons Activities, $557,862,000 above FY 2018, and Naval Reactors, $168,618,000 above FY 2018. We continue to be troubled by the continued unsustainable spending in the weapons program.

We are concerned by the inclusion of funding to build a new, low-yield ballistic missile as called for in the 2018 Nuclear Posture Review. The President's budget request did not include this warhead until mid-April, leaving our Committee without any time to appropriately consider this significant new request. We did not have this information during our Subcommittee budget hearings with the Secretary of Energy or with the NNSA Administrator.

We owe it to the American people to have a full discussion and debate about this new nuclear capability, including security, cost, schedule, and impact to the ongoing efforts to modernize our existing nuclear arsenal. We must have appropriate consideration before wandering down a pathway to new nuclear weapons varieties. Further, the NNSA is being asked to take on this additional weapons capability while it is in the midst of simultaneously executing four active warhead life extension programs and several major construction projects. The former NNSA Administrator has said that the NNSA is essentially working at capacity now, before taking on this new low-yield ballistic missile.

This is on top of the challenges brought on by the need to modernize a complex built substantially in the 1950s. While NNSA has made progress in mapping out the most urgent needs in this area, we remain concerned about the agency's ability to carry out the major construction projects necessary to modernize the complex.

With NNSA's history of staggering cost overruns and schedule delays, we continue to question whether the organization has the necessary tools, processes and workforce to manage large increases in weapons activities and infrastructure needs year after year. We appreciate and support the Chairman's continued strong oversight of the NNSA in these areas.

The majority has invested in a costly, unjustified new nuclear weapon while underfunding efforts to denuclearize the world. The bill includes $1,902,000,000 for these critical programs, $146,219,000 below the FY 2018 appropriation. The Nuclear Non-

proliferation program plays an important role in verification of treaties and agreements to curb nuclear weapons and weapons usable materials. The program develops technologies that help strengthen the safeguards mission of the International Atomic Energy Agency (IAEA)—for example, DOE's national laboratories created the Online Enrichment Monitor, which allows IAEA inspectors to measure in real time the enrichment level of uranium, an enormous step forward for verifying compliance with safeguards agreements and for keeping us safe. Yet the bill continues a downward trajectory of funding for this critical program, cut at the expense of providing continued increases to the weapons program. This is something we hope we can again reverse in conference.

Two of the partisan riders in this bill risk protection of the world's most precious resource: water. The first provides agricultural exemptions from the Clean Water Act. The second is a new version related to the WOTUS rule, which legislatively repeals the rule and directs agencies to act as if the rule had never been in place. This is a disturbing effort to sidestep law that establishes requirements for withdrawal of a regulation such as this. This effort would also effectively avoid the administration being required to provide a substantive rationale'as it considers changing regulations and taking into consideration public input.

The bill contains numerous other riders, including three related to Endangered Species Act issues, one of which would legislate an ongoing court case, and one that would prohibit activities related to the National Ocean Policy.

The inclusion of the rider allowing guns to be carried on all Corps of Engineers lands injects into the bill an unnecessarily partisan topic that is unwarranted. We disagree with the notion that reasonable limits on where guns can be carried are an infringement upon the Second Amendment. We see no need to contribute to an environment where guns are commonplace in recreational areas where families are trying to escape the pressures of everyday life.

In spite of these concerns, we would like to reiterate our appreciation for the Chairman's work with us on many issues, continuing the Energy and Water Development Subcommittee's tradition of a collegial and bipartisanship process. The Subcommittee has operated collaboratively and effectively for many years, and the bill addresses many of the interests we have expressed.

More broadly, the Bipartisan Budget Act enacted earlier this year provided relief from unworkable discretionary spending caps. The agreement was supposed to provide the country with stability following a year of shutdowns, last-minute veto threats, and general uncertainty in government. That stability lasted long enough for Congress to pass a bipartisan Omnibus appropriations bill for FY 2018, and then Republican chaos reigned again. The President threatened to veto the bill, unhappy with Congress' large investments in programs to help low-and middle-income Americans and rejection of his campaign-promised border wall.

Even after the President backed off his threat and signed the bill, the Administration and Republican leadership in Congress who voted for the Bipartisan Budget Act and the Omnibus bill have continued to attempt to undo those bipartisan agreements. Now, the majority s seeking to pass a rescissions bill to undo funding

and mollify an angry President. We have beep told by Office of Management and Budget Director Mick Mulvaney that this is the first of many rescission packages meant to bring spending in line with the President's priorities, ignoring Congressional action that dismissed the President's FY 2017 and FY 2018 draconian budget requests.

In addition to the unacceptable rescissions proposals, the majority's lack of transparency with regards to how it will allocate the FY 2019 discretionary budget also endangers future bipartisan compromise. The majority has abandoned longstanding committee practice to provide the Members and the public with a budget blueprint for domestic spending, known as 302(b) allocations. Members are being asked to vote on bills without having the full picture on what impact each bill will have on other bills. We are very concerned about what that means for programs in other bills that have yet to be considered. Democrats can only be left to assume that the majority is siphoning money from bills at the end of the process like the State and Foreign Operations bill and the Labor, Health and Human Services, and Education appropriations bill, which invests in priorities like education, job training, health, and workplace safety and rights.

In conclusion, the majority of Democrats on the committee voted no on the motion to advance the bill to the full House because this bill's funding level will ensure critical investments in other bills cannot be made, priorities related to achieving energy independence and a green future are underfunded, and extraneous, controversial policy riders are included. Without a full budget we are left to assume that the programs for the most vulnerable and American families who simply need a level playing field will be left on the chopping block. If that were not enough reason, the majority included controversial policy matters on the environment and guns. We look forward to the day when transparency returns to the Committee and all of the bills are adequately funded at the outset. Until then, Democrats stand ready to work in a bipartisan manner when our Republican colleagues eschew the fringe and want to pass bills into law.

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