Additional Funding for Ongoing Work.—The agreement includes funds above the budget request for Water and Related Resources studies, projects, and activities. This funding is for additional work that either was not included in the budget request or was inadequately budgeted. Priority in allocating these funds should be given to advance and complete ongoing work, including preconstruction activities and where environmental compliance has been completed; improve water supply reliability; improve water deliveries; enhance national, regional, or local economic development; promote job growth; advance tribal and nontribal water settlement studies and activities; or address critical backlog maintenance and rehabilitation activities.

Of the additional funding provided under the heading ''Water Conservation and Delivery'', $117,250,000 shall be for water storage projects as authorized in section 4007 of the WIIN Act (Public Law 114–322).

Of the additional funding provided under the heading ''Water Conservation and Delivery'', $25,000,000 shall be for implementing the Drought Contingency Plan in the Lower Colorado River Basin to create or conserve recurring Colorado River water that contributes to supplies in Lake Mead and other Colorado River water reservoirs in the Lower Colorado River Basin or projects to improve the long-term efficiency of operations in the Lower Colorado River Basin, consistent with the Secretary's obligations under the Colorado River Drought Contingency Plan Authorization Act (Public Law 116–14) and related agreements. None of these funds shall be used for the operation of the Yuma Desalting Plant and nothing in this section shall be construed as limiting existing or future opportunities to augment the water supplies of the Colorado River.

Of the additional funding provided under the heading ''Water Conservation and Delivery'', not less than $5,000,000 shall be for construction activities related to projects found to be feasible by the Secretary and that are ready to initiate for the repair of critical Reclamation canals where operational conveyance capacity has been seriously impaired by factors such as age or land subsidence, especially those that would imminently jeopardize Reclamation's ability to meet water delivery obligations.

Of the additional funding provided under the heading ''Environmental Restoration or Compliance'', not less than $10,000,000 shall be for activities authorized under sections 4001 and 4010 of the WIIN Act (Public Law 114–322) or as set forth in federal-state plans for restoring threatened and endangered fish species affected by the operation of Reclamation's water projects.

Of the additional funding provided under the heading ''Fish Passage and Fish Screens'', $6,000,000 shall be for the Anadromous Fish Screen Program.

Reclamation is directed to provide to the Committees not later than 45 days after enactment of this Act a report delineating how these funds are to be distributed, in which phase the work is to be accomplished, and an explanation of the criteria and rankings used to justify each allocation.

Reclamation is reminded that the following activities are eligible to compete for funding under the appropriate heading: activities authorized under Indian Water Rights Settlements; aquifer recharging efforts to address the ongoing backlog of related projects; all authorized rural water projects, including those with tribal components, those with non-tribal components, and those with both; conjunctive use projects and other projects to maximize groundwater storage and beneficial use; ongoing work, including preconstruction activities, on projects that provide new or existing water supplies through additional infrastructure; and activities authorized under section 206 of Public Law 113—235.

Aquifer Recharge.—Of the funds provided in this account above the budget request, $18,000,000 shall be for Aquifer Storage and Recovery projects focused on ensuring sustainable water supply and protecting water quality of aquifers in the Great Plains Region with shared or multi-use aquifers, for municipal, agricultural irrigation, industrial, recreation, and domestic users.

Boulder Canyon Project, Dam Fund.—The agreement reiterates Senate direction.

Klamath Basin Project.—Reclamation is encouraged to continue collaborative agreements with state agencies to support ground water monitoring in the Klamath Basin. Further, Reclamation is directed to consider restoring agreements with Klamath Basin tribes to support surface monitoring efforts and to provide to the Committees not later than 90 days after enactment of this Act a briefing on the status of such agreements.

Research and Development: Desalination and Water Purification Program.—Of the funding provided for this program, $10,500,000 shall be for desalination projects as authorized in section 4009(a) of Public Law 114–322.

Research and Development: Science and Technology Program: Airborne Snow Observatory Program.—The agreement provides an additional $2,000,000 for this program, which advances snow and water supply forecasting.

Research and Development: Science and Technology Program: Snow Modeling Data Processing.—The agreement provides an additional $1,500,000 to support Reclamation's efforts to support the U.S. Department of Agriculture and National Oceanic and Atmospheric Administration efforts to improve real-time and derived snow water equivalent information such that it can be immediately used for water resources decision-making.

Rural Water Projects.—Reclamation is reminded that voluntary funding in excess of legally required cost shares for rural water projects is acceptable, but shall not be used by Reclamation as a criterion for allocating additional funding provided in this agreement or for budgeting in future years.

Salton Sea.—Reclamation is directed to provide to the Committees not later than 90 days after enactment of this Act a briefing on Reclamation's plan for managing the air quality impacts of the estimated 8.75 square miles of lands it owns that will emerge from the receding Sea over the next decade.

San Joaquin River Restoration.—Permanent appropriations, newly available for the program in fiscal year 2020, should not supplant continued annual appropriations. Reclamation is encouraged to include adequate funding in future budget requests.

Upper Rio Grande Basin Study.—The agreement reiterates House and Senate direction.

Verde River Basin.—The agreement reiterates House direction.

WaterSMART Program: Title XVI Water Reclamation & Reuse Program.—Of the additional funding provided for this program, $17,500,000 shall be for water recycling and reuse projects as authorized in section 4009(c) of Public Law 114–322.

CENTRAL VALLEY PROJECT RESTORATION FUND

The agreement provides $56,499,000 for the Central Valley Project Restoration Fund.

CALIFORNIA BAY DELTA RESTORATION
(INCLUDING TRANSFERS OF FUNDS)

The agreement provides $33,000,000 for the California Bay-Delta Restoration Program.

POLICY AND ADMINISTRATION

The agreement provides $64,400,000 for Policy and Administration.

ADMINISTRATIVE PROVISION

The agreement includes a provision limiting Reclamation to purchase not more than thirty passenger vehicles for replacement only.

GENERAL PROVISIONS—DEPARTMENT OF THE INTERIOR

The agreement includes a provision outlining the circumstances under which the Bureau of Reclamation may reprogram funds.

The agreement includes a provision regarding the San Luis Unit and Kesterson Reservoir in California.

The agreement includes a provision regarding section 9504(e) of the Omnibus Public Land Management Act of 2009.

The agreement includes a provision regarding the CALFED Bay-Delta Authorization Act.

The agreement includes a provision regarding section 9106(g)(2) of the Omnibus Public Land Management Act of 2009.

The agreement includes a provision regarding the Reclamation States Emergency Drought Relief Act of 1991.

The agreement includes a provision regarding the Reclamation Projects Authorization and Adjustment Act of 1992.

The agreement includes a provision prohibiting the use of funds in this Act for certain activities.

TITLE III—DEPARTMENT OF ENERGY

The agreement provides $44,855,624,000 for the Department of Energy to fund programs in its primary mission areas of science, energy, environment, and national security.

CONGRESSIONAL DIRECTION

The Committees count on a timely and accessible executive branch in the course of fulfilling its constitutional role in the appropriations process. Requesting and receiving basic, factual information, including budget justification materials and responses to inquiries, is vital in order to ensure transparency and accountability. While some discussions internal to the executive branch may be pre-decisional in nature and therefore not subject to release, the Committees' access to the facts, figures, and statistics that inform the decisions of the executive branch are not subject to those same sensitivities. The Committees shall have ready and timely access to information from the Department, Federally Funded Research and Development Centers, and any recipient of funding from this Act. Further, the Committees appreciate the ability for open and direct communication with all recipients of funding from this Act, and the Department shall not interfere with such communication and shall not penalize recipients of funding from this Act for such communication.

REPROGRAMMING REQUIREMENTS

The agreement carries the Department's reprogramming authority in statute to ensure that the Department carries out its programs consistent with congressional direction. The Department shall, when possible, submit consolidated, cumulative notifications to the Committees.

Definition.—A reprogramming includes the reallocation of funds from one program, project, or activity to another within an appropriation. 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.

FINANCIAL REPORTING AND MANAGEMENT

The Department is still not in compliance with its statutory requirement to submit to Congress, at the time that the budget request is submitted, a future-years energy program that covers the fiscal year of the budget request 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. The Department is directed to provide these requirements not later than 30 days after enactment of this Act. The Department may not obligate more than 95 percent of amounts provided to the Chief Financial Officer until the Department provides to the Committees a briefing on a plan to become fully compliant with this requirement.

Working Capital Fund.—The agreement reiterates House direction on this topic.

Congressional Reporting Requirements.—The Department is directed to provide quarterly updates to the Committees on this issue. Further, the Department is directed to provide all Congressionally required reports digitally in addition to traditional correspondence.

SBIR and STTR Programs.—The agreement reiterates House direction on this topic.

Mortgaging Future-Year Awards.—The agreement reiterates House direction on this topic.

General Plant Projects.—The agreement reiterates House direction on this topic.

Competitive Procedures.—The agreement reiterates House direction on this topic.

Workforce Development.—The agreement reiterates House direction on this topic.

CROSSCUTTING INITIATIVES

Energy Storage.—The Department is directed to carry out these activities in accordance with sections 3201 and 3202 of the Energy Act of 2020. The agreement provides not less than $500,000,000 for energy storage, including not less than $347,000,000 from the Office of Energy Efficiency and Renewable Energy (EERE), not less than $120,000,000 from the Office of Electricity (OE), not less than $5,000,000 from the Office of Fossil Energy and Carbon Management (FECM), not less than $4,000,000 from the Office of Nuclear Energy (NE), and not less than $24,000,000 from the Office of Science. The agreement reiterates Senate direction related to periodic updates on the Energy Storage Grand Challenge (ESGC) and ESGC roadmap.

Critical Minerals.—The agreement provides not less than $167,000,000 for research, development, demonstration, and commercialization activities on the development of alternatives to, recycling of, and efficient production and use of critical minerals, including not less than $100,000,000 from EERE, not less than $50,000,000 from FECM, and not less than $17,000,000 from the Office of Science.

Industrial Decarbonization.—The agreement provides not less than $510,000,000 for industrial decarbonization activities, including not less than $240,000,000 from EERE, not less than $250,000,000 from FECM, and not less than $20,000,000 from the Office of Science. The agreement provides not less than $25,000,000 for low-carbon feedstocks in the steel, cement, concrete, and other heavy industrial sectors and not less than $25,000,000 for clean heat alternatives for industrial processes.

Grid Modernization.—The agreement reiterates House and Senate direction on Grid Modernization and the Grid Modernization Lab Consortium.

Carbon Dioxide Removal.—The agreement provides not less than $104,000,000 for research, development, and demonstration of carbon dioxide removal technologies, including not less than $20,000,000 from EERE, not less than $49,000,000 from FECM, and not less than $35,000,000 from the Office of Science. Within available funds for carbon dioxide removal, the agreement provides not less than $75,000,000 for direct air capture. The Department is directed to coordinate these activities among EERE, FECM, and the Office of Science.

Hydrogen Energy and Fuel Cell Coordination.—The Department is directed to coordinate its efforts in hydrogen energy and fuel cell technologies across its various departments and offices in order to maximize the effectiveness of investments in hydrogen-related activities. This coordination shall include EERE, FECM, NE, OE, the Office of Science, and the Advanced Research Projects Agency—Energy.

Harmful Algal Blooms.—The agreement reiterates House direction on this topic.

DOE and USDA Interagency Working Group.—The agreement reiterates House direction on this topic.

Landfill Emissions.—The agreement reiterates House direction on this topic.

COVID—19 Research Delays.—The agreement reiterates House and Senate direction on this topic.

Interagency Working Group on Coal and Power Plant Communities and Economic Revitalization.—The Department is directed to include an itemization of funding for these activities in future budget requests.

Sexual Harassment.—The agreement reiterates Senate direction on this topic.

The agreement provides no direction on Equity and Justice.

The agreement provides no direction on the Civilian Climate Corps.

ENERGY PROGRAMS

ENERGY EFFICIENCY AND RENEWABLE ENERGY

The agreement provides $3,200,000,000 for Energy Efficiency and Renewable Energy.

The agreement provides not less than $10,000,000 for the Energy Transitions Initiative.

The agreement provides up to $5,000,000 for university-led research in order to increase recycling rates for polyethylene plastics and develop conversion of waste polyethylene to more recyclable and biodegradable plastics.

The agreement provides $10,000,000 for a consortium of universities in the United States that has established agreements with universities in Canada and Mexico to conduct research on a broad array of energy sources and topics.

SUSTAINABLE TRANSPORTATION

The Vehicle Technologies, Bioenergy Technologies, and Hydrogen and Fuel Cell Technologies offices are directed to work closely with the Department of Agriculture and the private sector to develop common metrics to evaluate and compare the impact of the emerging clean hydrogen industry on the ethanol and biodiesel industries.

Within available funds, the agreement provides not less than $30,000,000 to continue the SuperTruck III program.

Vehicle Technologies.—The agreement provides not less than $200,000,000 for Battery and Electrification Technologies.

The agreement provides up to $15,000,000 to advance energy efficiency and low emissions technologies for off-road application vehicles, including commercial, of which up to $5,000,000 is for fluid power systems.

The agreement provides up to $10,000,000 to support research and development relevant to two-stroke opposed-piston engines.

The agreement provides not less than $80,000,000 for Technology Integration, previously called Outreach, Deployment, and Analysis. Within available funds, the agreement provides not less than $50,000,000 for deployment through the Clean Cities program, including not less than $30,000,000 for competitive grants.

The agreement provides not less than $40,000,000 for Energy Efficient Mobility Systems.

The agreement provides not less than $5,000,000 for electric vehicle workforce development activities and reiterates House direction on the related report and roadmap.

The agreement reiterates House direction on the assessment and briefing related to electric vehicle charging infrastructure in underserved or disadvantaged communities.

The agreement provides up to $5,000,000 for research on direct injection, engine technology, and the use of dimethyl ether as fuel.

The agreement provides up to $10,000,000 to address technical barriers to the increased use of natural gas vehicles, including for applications in on-road vehicles, off-road vehicles, maritime, or rail.

Bioenergy Technologies.—The agreement provides not less than $42,000,000 for Feedstock Technologies and the Biomass Feedstock National User Facility.

The agreement provides not less than $40,000,000 for advanced algal systems to sustain the investment in development of algal biofuels.

The agreement provides $3,000,000 for research, at commercially relevant processing scales, into affordable wood chip fractionation technologies and other processing improvements relevant to biorefineries in order to enable economic production of cellulose nanomaterials and economic upgrading of hemicelluloses and lignin.

Within available funds for Conversion Technologies, the agreement provides not less than $23,000,000 for the Agile BioFoundry, including not less than $3,000,000 to continue developing methods and technologies to advance biological engineering, to support expanded focus on artificial intelligence and machine learning and software development, to improve the predictive design of organisms and pathways, to build tools accessible to the wider scientific community, and for the purchase of state-of-technology instrumentation that will enable better and more expansive collaborations. Within available funds for Conversion Technologies, the agreement provides $5,000,000 to demonstrate the use of and improve the efficiency of community-scale digesters with priority given for projects in states and tribal areas that have adopted statutory requirements for the diversion of a high percentage of food material from municipal waste streams.

The agreement provides up to $5,000,000 for continued support of the development and testing of new domestic manufactured low-emission, high-efficiency, residential wood heaters that supply easily accessed and affordable renewable energy and have the potential to reduce the national costs associated with thermal energy.

Hydrogen and Fuel Cell Technologies.—The agreement provides $157,500,000 for Hydrogen and Fuel Cell Technologies to maintain a diverse program which focuses on early-, mid-, and late-stage research and development and technology acceleration including market transformation.

The agreement provides not less than $60,000,000 for technologies to advance hydrogen use for heavy-duty transportation and industrial applications.

The agreement provides $2,500,000 for research that tightly couples advanced modeling, characterization, and controlled synthesis to elucidate the key mechanisms in this technology. This research should include participation by a university with demonstrated expertise with perovskite materials.

The agreement provides not less than $15,000,000 to cost share the Office of Nuclear Energy hydrogen demonstration project, including for high temperature electrolysis research and development at a national laboratory. The agreement provides up to $14,000,000 to support ongoing efforts for high- and low-temperature electrolyzer development.

The agreement provides not less than $10,000,000 for solar fuels research and development.

NAVAL PETROLEUM AND OIL SHALE RESERVES

The agreement provides $13,650,000 for the operation of the Naval Petroleum and Oil Shale Reserves.

STRATEGIC PETROLEUM RESERVE

The agreement includes $219,000,000 for the Strategic Petroleum Reserve, of which $22,000,000 is for the Northeast Gasoline Supply Reserve.

No funding is requested for the establishment of a new regional petroleum product reserve, and no funding is provided for this purpose. Further, the Department may not establish any new regional petroleum product reserves unless funding for such a proposed regional petroleum product reserve is explicitly requested in advance in an annual budget request and approved by Congress in an appropriations Act.

SPR PETROLEUM ACCOUNT

The agreement provides $7,350,000 for the SPR Petroleum Account.

NORTHEAST HOME HEATING OIL RESERVE

The agreement provides $6,500,000 for the Northeast Home Heating Oil Reserve.

ENERGY INFORMATION ADMINISTRATION

The agreement provides $129,087,000 for the Energy Information Administration.

NON-DEFENSE ENVIRONMENTAL CLEANUP

The agreement provides $333,863,000 for Non-Defense Environmental Cleanup.

Small Sites.—The agreement provides $119,340,000 for Small Sites cleanup. Within this amount, $21,340,000 is for the Energy Technology Engineering Center, $11,000,000 is for Idaho National Laboratory, $5,000,000 is to continue work at Lawrence Berkeley National Laboratory, $67,000,000 is for Moab, and $15,000,000 is for excess Office of Science facilities.

Gaseous Diffusion Plants.—The agreement provides $121,203,000 for cleanup activities at the Gaseous Diffusion Plants, including an additional $5,000,000 above the budget request for treatment and shipping of cylinders.

URANIUM ENRICHMENT DECONTAMINATION AND DECOMMISSIONING FUND

The agreement provides $860,000,000 for activities funded from the Uranium Enrichment Decontamination and Decommissioning Fund.

Portsmouth Site.—Within funds available for Pensions and Community and Regulatory Support, the agreement provides an additional $500,000 above the budget request for the Department to establish a community liaison and to provide technical and regulatory assistance to the local community and surrounding counties. The agreement reiterates House direction on air and ground water monitoring and reporting, land use planning, and Committee briefings following additional environmental sampling.

SCIENCE

The agreement provides $7,475,000,000 for Science.

The agreement provides not less than $120,000,000 for Artificial Intelligence and Machine Learning capabilities across the Office of Science programs.

The agreement provides not less than $2,000,000 for collaboration with the National Institutes of Health within the Department's data and computational mission space.

The agreement provides not less than $245,000,000 for quantum information science, including not less than $120,000,000 for research and $125,000,000 for the five National Quantum Information Science Research Centers.

The agreement reiterates House direction on traineeships.

The Department is directed to provide to the Committees not later than 90 days after enactment of this Act and annually thereafter briefings on implementation of the new workforce initiative.

The Department is directed to award up to 10 Lawrence Awards with an honorarium of not less than $20,000 per awardee.

ADVANCED SCIENTIFIC COMPUTING RESEARCH

The agreement provides not less than $160,000,000 for the Argonne Leadership Computing Facility, $250,000,000 for the Oak Ridge Leadership Computing Facility, not less than $120,000,000 for the National Energy Research Scientific Computing Center at Lawrence Berkeley National Laboratory, and not less than $90,000,000 for ESnet.

The agreement provides not less than $260,000,000 for Mathematical, Computational, and Computer Sciences Research, including not less than $15,000,000 for computational sciences workforce programs.

The agreement provides not less than $15,000,000 and up to $40,000,000 for the development of AI-optimized emerging memory technology for AI-specialized hardware allowing for new computing capabilities tailored to the demands of artificial intelligence systems.

BASIC ENERGY SCIENCES

The agreement provides not less than $130,000,000 for the Energy Frontier Research Centers, $25,000,000 for EPSCoR, $25,000,000 for the Batteries and Energy Storage Innovation Hub, and not less than $20,000,000 for the Fuels from Sunlight Innovation Hub.

The agreement provides not less than $538,000,000 for facilities operations of the nation's light sources, not less than $294,000,000 for facilities operations of the high-flux neutron sources, and not less than $142,000,000 for facilities operations and recapitalization of the Nanoscale Science Research Centers (NSRC).

The agreement provides not less than $14,300,000 for other project costs, including $4,300,000 for Linac Coherent Light Source-II, $5,000,000 for Advanced Photon Source Upgrade, $3,000,000 for Linac Coherent Light Source-II HE, and $2,000,000 for Cryomodule Repair & Maintenance Facility. The agreement provides $15,000,000 for NSRC Recapitalization and not less than $15,000,000 for NSLS II Experimental Tools-II. The agreement reiterates House and Senate direction regarding the importance of additional beamlines at NSLS II and the development of a related plan.

BIOLOGICAL AND ENVIRONMENTAL RESEARCH

The agreement provides not less than $395,000,000 for Biological Systems Science and not less than $410,000,000 for Earth and Environmental Systems Sciences.

Within available funds, the agreement provides up to $8,000,000 to develop and test novel sensor technologies, procure second generation EcoPOD units, and create the computational and experimental infrastructures necessary to dissect field observations at atomic and molecular levels in fabricated ecosystems.

The agreement provides not less than $100,000,000 for the Bioenergy Research Centers.

The agreement provides not less than $109,000,000 for Foundational Genomics Research and not less than $82,500,000 for the Joint Genome Institute.

The agreement provides not less than $45,000,000 for Biomolecular Characterization and Imaging Science, including up to $15,000,000 to continue the development of a multi-scale genes-to ecosystems approach that supports a predictive understanding of gene functions and how they scale with complex biological and environmental systems.

The agreement provides not less than $8,000,000 for the low-dose radiation research program and reiterates House direction related to developing a plan for low-dose radiation research.

The agreement provides not less than $15,000,000 and up to $30,000,000 to build upon cloud aerosol effects research. Within those available funds, the Department is directed to support the modernization and acceleration of the Energy, Exascale, and Earth System Model program to improve earth system prediction and climate risk management in the service of U.S. public safety, security, and economic interests, including, in coordination with the Department of Homeland Security, evaluation of the modernization and adaptation of capabilities from the National Infrastructure Simulation and Analysis Center to support climate impacts on infrastructure and communities.

The agreement provides $2,000,000 in funding for academia to examine and perform independent evaluations of climate models using existing data sets and peer-reviewed publications of climate-scale processes to validate various models' ability to reproduce the actual climate.

The agreement provides not less than $105,000,000 for Environmental System Science. The Department is directed to continue to support NGEE Arctic, NGEE Tropics, the SPRUCE field site, the Watershed Function and Mercury Science Focus Areas, and the AmeriFLUX project.

The agreement provides not less than $30,000,000 to continue the development of observational assets and support associated research on the nation's major land-water interfaces, including the Great Lakes and the Puget Sound, that leverages national laboratories' assets as well as local infrastructure and expertise at universities and other research institutions. The agreement reiterates House direction on developing a ten-year research plan.

The Department is directed to give priority to optimizing the operation of BER user facilities.

FUSION ENERGY SCIENCES

The Department is directed to follow and embrace the recommendations of the Fusion Energy Sciences Advisory Committee's ''Powering the Future: Fusion and Plasmas''' report; the agreement reiterates House direction on the related briefing.

The agreement provides not less than $20,000,000 for the High-Energy-Density Laboratory Plasmas program to advance cutting-edge research in extreme states of matter; expand the capabilities of the LaserNetUS facilities; and provide initial investments in new intense, ultrafast laser technologies needed to retain U.S. leadership in these fields.

The agreement provides not less than $59,000,000 for NSTX–U Operations, not less than $33,000,000 for NSTX–U Research, and not less than $25,000,000 for the Material Plasma Exposure eXperiment.

The agreement reiterates House direction on the Milestone-Based Development Program and the stellarator facility.

The agreement provides $242,000,000 for the U.S. contribution to the ITER project, of which not less than $60,000,000 is for in-cash contributions. The agreement reiterates House direction on an updated baseline for Subproject 1 and a baseline for Subproject 2.

HIGH ENERGY PHYSICS

The agreement provides not less than $30,000,000 for the Sanford Underground Research Facility, up to $20,000,000 for Cosmic Microwave Background-Stage 4, and not less than $40,000,000 for the HL–LHC Upgrade projects.

The agreement supports activities for the LuSEE Night project.

The agreement provides up to $13,000,000 for other project costs for the Long Baseline

Neutrino Facility/Deep Underground Neutrino Experiment. Further, if the Department deems it necessary to provide further funding for this project, it is encouraged to seek a reprogramming, but these funds shall come from other research activities and projects currently funded at Fermi National Laboratory.

NUCLEAR PHYSICS

The Department is directed to give priority to optimizing operations for all Nuclear Physics user facilities.

The agreement provides for the completion of sPHENIX, up to $15,800,000 for the Gamma-Ray Energy Tracking Array, up to $16,200,000 for MOLLER, up to $1,400,000 for Ton-Scale Neutrinoless Double Beta Decay, and up to $13,000,000 for the High Rigidity Spectrometer.

ISOTOPES R&D AND PRODUCTION

The agreement supports the FRIB Isotope Harvesting projects.

WORKFORCE DEVELOPMENT FOR TEACHERS AND SCIENTISTS

The agreement reiterates House and Senate direction on a five-year educational and workforce development plan. The agreement reiterates Senate direction on the curriculum working group.

SCIENCE LABORATORIES INFRASTRUCTURE

The Department is directed to provide to the Committees not later 90 days after enactment of this Act a briefing on the funding levels required for operations and maintenance of the Oak Ridge National Laboratory nuclear facilities. This is the only direction related to the Oak Ridge National Laboratory nuclear facilities.

NUCLEAR WASTE DISPOSAL

The agreement provides $27,500,000 for Nuclear Waste Disposal, of which $20,000,000 is for interim storage and $7,500,000 is for Nuclear Waste Fund oversight activities.

TECHNOLOGY TRANSITIONS

The agreement provides $19,470,000 for Technology Transitions. The agreement provides not less than $5,000,000 for a competitive funding opportunity for incubators supporting energy innovation clusters.

CLEAN ENERGY DEMONSTRATIONS

The agreement provides $20,000,000 for Clean Energy Demonstrations.

Pursuant to the budget request, the Office of Clean Energy Demonstrations (OCED) is intended to be a technology neutral office with expertise in large-scale energy project management and finance. It is expected that the Department avoid the practice of making awards dependent on funding from future years' appropriations. The Department is directed to provide to the Committees not later than 30 days after enactment of this Act a briefing on how OCED will conduct administrative and project management responsibilities.

ADVANCED RESEARCH PROJECTS AGENCY—ENERGY

The agreement provides $450,000,000 for the Advanced Research Projects Agency—Energy (ARPA–E). The Department is directed to consider activities proposed under ARPA–C that are consistent with ARPA–E's mission and authorization in addition to its other current and proposed activities.

TITLE 17 INNOVATIVE TECHNOLOGY LOAN GUARANTEE PROGRAM

The agreement provides a net appropriation of $29,000,000 in administrative expenses for the Title 17 Innovative Technology Loan Guarantee Program.

ADVANCED TECHNOLOGY VEHICLES MANUFACTURING LOAN PROGRAM

The agreement provides $5,000,000 for the Advanced Technology Vehicles Manufacturing Loan Program.

TRIBAL ENERGY LOAN GUARANTEE PROGRAM

The agreement provides $2,000,000 for the Tribal Energy Loan Guarantee Program.

INDIAN ENERGY POLICY AND PROGRAMS

The agreement provides $58,000,000 for Indian Energy Policy and Programs. The agreement provides not less than $20,000,000 to advance technical assistance, demonstration, and deployment of clean energy technologies, including solar and energy storage, for households and communities in tribal nations to improve reliability, resilience, and alleviate energy poverty.

DEPARTMENTAL ADMINISTRATION

The agreement provides $240,000,000 for Departmental Administration.

The agreement reiterates House direction on the report related to critical minerals assets.

Control Points.—The agreement includes eight reprogramming control points in this account to provide flexibility in the management of support functions. The Other Departmental Administration activities include Management, Project Management Oversight and Assessments, Chief Human Capital Officer, Office of Small and Disadvantaged Business Utilization, General Counsel, Office of Policy, 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.

Chief Information Officer.—The agreement provides not less than $71,800,000 for cybersecurity and secure information. In addition, the agreement provides not less than $55,000,000 to address the impacts of the SolarWinds incident across the Department.

International Affairs.—The agreement provides $2,000,000 for the Israel Binational Industrial Research and Development (BIRD) Foundation and $4,000,000 to continue the U.S. Israel Center of Excellence in Energy Engineering and Water Technology.

Other Departmental Administration.—The agreement provides not less than $28,000,000 for the Chief Human Capital Officer, up to $38,000,000 for the General Counsel, not less than $13,000,000 for Project Management Oversight and Assessments, not less than $3,500,000 for the Office of Small and Disadvantaged Business Utilization, and not less than $4,000,000 for Public Affairs.

U.S. Energy and Employment Report.—The agreement provides up to $2,000,000 for the Department to continue to complete an annual U.S. energy employment report that includes a comprehensive statistical survey to collect data, publish the data, and provide a summary report, with requirements as outlined in the House report. The Department is directed to produce and release this report annually.

The agreement reiterates Senate direction related to the CIO Business Operations Support Services (CBOSS) program.

OFFICE OF THE INSPECTOR GENERAL

The agreement provides $78,000,000 for the Office of the Inspector General. The following is the only direction for the Office of the Inspector General.

There continues to be concerns about how the new independent audit strategy will be implemented. As such, the Inspector General is directed to provide to the Committees not later than 15 days after enactment of this Act, and monthly thereafter, a briefing on the implementation of the independent audit strategy.

ATOMIC ENERGY DEFENSE ACTIVITIES

NATIONAL NUCLEAR SECURITY ADMINISTRATION

The agreement provides $20,656,000,000 for the National Nuclear Security Administration (NNSA).

WEAPONS ACTIVITIES

The agreement provides $15,920,000,000 for Weapons Activities.

Integrated Priorities Report.—The fiscal year 2021 Act directed NNSA to provide with its budget request an Integrated Priorities Report (IPR). The report NNSA submitted does not meet the direction set by the fiscal year 2021 Act and was identified by NNSA as not a final integrated priority report. The agreement reiterates House direction regarding NNSA's submission of an IPR with the annual budget request.

Stockpile Management.—In lieu of House and Senate direction, the agreement includes funding consistent with the budget request as Congress awaits the upcoming Nuclear Posture Review (NPR). NNSA is directed to brief the Congressional Defense Committees on any departures from the fiscal year 2022 budget request in the NPR.

Plutonium Pit Production Modernization.—GAO is engaged in an ongoing review of NNSA's integrated master schedule (IMS) that includes all pit production-related project and program activities. NNSA is directed to provide to the Committees not later than 30 days after enactment of this Act, and not less than quarterly thereafter, a briefing on progress on meeting the pit production cost and schedule milestones in the IMS.

Additionally, concerns remain about contingency planning for pit production given the timeline for achieving 80 pits per year will stretch beyond 2030. The contingency plan NNSA provided the Committees includes only minimal detail on meeting the needs of the nuclear deterrent that do not solely rely on the statutory milestones for pit production. NNSA is directed to provide to the Committees not later than 60 days after enactment of this Act an update detailing actionable plans based on current pit production timelines and coordinated with the Department of Defense. NNSA is further reminded that the contingency plan shall be updated and submitted annually with the budget request.

University Collaboration.—The agreement reiterates House direction regarding a Center of Excellence.

Academic Programs.—Within amounts for Academic Programs, the agreement provides $40,000,000 for the Minority Serving Institution Partnership Program and $10,000,000 for the Tribal Colleges and Universities Partnership Program. The agreement reiterates Senate direction regarding the distribution of funds.

Inertial Confinement Fusion (ICF) and High Yield.—Within available funds, the agreement provides not less than $350,000,000 for the National Ignition Facility (NIF), not less than $83,000,000 for OMEGA, not less than $66,900,000 for the Z Facility, and not less than $6,000,000 for the NIKE Laser at the Naval Research Laboratory. A predictable and sustained availability of targets is essential to the operations of NNSA's laser facilities, and the agreement provides not less than $33,000,000 for target research, development, and fabrication to cost-effectively operate the NIF, Z, and OMEGA facilities.

Advanced Simulation and Computing.—Within funds provided for Advanced Simulation and Computing (ASC), the agreement provides $25,000,000 for research in, and leading to the development of, memory technologies that will drive 40X performance gains beyond that achieved by exascale computing systems for critical mission applications. Within funds provided for ASC, the agreement provides $15,000,000 for scalable computational NVMe over fabrics for exascale computing applications at Los Alamos National Laboratory.

DEPARTMENT OF ENERGY

(Amounts in thousands)

	FY 2021 Enacted	FY 2022 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
Pension and Community and Regulatory Support	30,967	26,299	31,799	+832	+5,500
Title X Uranium/Thorium Reimbursement Program	5,000	33,500	16,155	+11,155	-17,345
TOTAL, UED&D FUND	841,000	831,340	860,000	+19,000	+28,660
SCIENCE					
Advanced Scientific Computing Research:					
Research	846,055	911,000	906,000	+59,945	-5,000
Construction:					
17-SC-20 Office of Science Exascale Computing Project (SC-ECP)	168,945	129,000	129,000	-39,945	---
Subtotal, Advanced Scientific Computing Research	1,015,000	1,040,000	1,035,000	+20,000	-5,000

DEPARTMENT OF ENERGY

(Amounts in thousands)

	FY 2021 Enacted	FY 2022 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
Basic Energy Sciences:					
Research	1,856,000	1,995,800	2,003,800	+147,800	+8,000
Construction:					
13-SC-10 LINAC coherent light source II (LCLS-II), SLAC	33,000	28,100	28,100	-4,900	---
18-SC-10 Advanced Photon Source Upgrade (APS-U), ANL	160,000	101,000	101,000	-59,000	---
18-SC-11 Spallation Neutron Source Proton Power Upgrade (PPU), ORNL	52,000	17,000	17,000	-35,000	---
18-SC-12 Advanced Light Source Upgrade (ALS-U), LBNL	62,000	75,100	75,100	+13,100	---
18-SC-13 Linac Coherent Light Source-II-High Energy (LCLS-II-HE), SLAC	52,000	50,000	50,000	-2,000	---
19-SC-14 Second Target Station (STS), ORNL	29,000	32,000	32,000	+3,000	---
21-SC-10 Cryomodule Repair and Maintenance Facility	1,000	1,000	1,000	---	---
Subtotal, Construction	389,000	304,200	304,200	-84,800	---
Subtotal, Basic Energy Sciences	2,245,000	2,300,000	2,308,000	+63,000	+8,000

DEPARTMENT OF ENERGY

(Amounts in thousands)

	FY 2021 Enacted	FY 2022 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
Biological and Environmental Research	753,000	828,000	815,000	+62,000	-13,000
Fusion Energy Sciences					
Research	415,000	449,000	460,000	+45,000	+11,000
Construction:					
14-SC-60 U.S. Contributions to ITER (U.S. ITER)	242,000	221,000	242,000	---	+21,000
20-SC-61 Matter in Extreme Conditions (MEC) Petawatt Upgrade, SLAC	15,000	5,000	11,000	-4,000	+6,000
Subtotal, Construction	257,000	226,000	253,000	-4,000	+27,000
Subtotal, Fusion Energy Sciences	672,000	675,000	713,000	+41,000	+38,000
High Energy Physics					
Research	777,065	782,000	810,000	+32,935	+28,000
Construction:					
11-SC-40 Long Baseline Neutrino Facility / Deep Underground Neutrino Experiment (LBNF/DUNE), FNAL	171,000	176,000	176,000	+5,000	---
11-SC-41 Muon to electron conversion experiment, FNAL	2,000	13,000	2,000	---	-11,000
18-SC-42 Proton Improvement Plan II (PIP-II), FNAL	79,000	90,000	90,000	+11,000	---
Subtotal, Construction	252,000	279,000	268,000	+16,000	-11,000
Subtotal, High Energy Physics	1,029,065	1,061,000	1,078,000	+48,935	+17,000

DEPARTMENT OF ENERGY

(Amounts in thousands)

	FY 2021 Enacted	FY 2022 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
Nuclear Physics:					
Research	624,700	700,000	708,000	+83,300	+8,000
Construction:					
14-SC-50 Facility for Rare Isotope Beams, MSU	5,300	---	---	-5,300	---
20-SC-52 Electron Ion Collider, BNL	5,000	20,000	20,000	+15,000	---
Subtotal, Construction	10,300	20,000	20,000	+9,700	---
Subtotal, Nuclear Physics	635,000	720,000	728,000	+93,000	+8,000
Isotope R&D and Production:					
Research:	66,000	78,000	70,000	+4,000	-8,000
Construction:					
20-SC-51 US Stable Isotope Production and Research Center, ORNL	12,000	12,000	12,000	---	---
Subtotal, Construction	12,000	12,000	12,000	---	---
Subtotal, Isotope R&D and Production	78,000	90,000	82,000	+4,000	-8,000
Accelerator R&D and Production	16,935	24,000	18,000	+1,065	-6,000
Workforce Development for Teachers and Scientists	29,000	35,000	35,000	+6,000	---
Science Laboratories Infrastructure:					
Infrastructure Support:					
Payment in Lieu of Taxes	4,650	4,820	4,820	+170	---
Oak Ridge Landlord	5,860	6,430	6,430	+570	---

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(Amounts in thousands)

	FY 2021 Enacted	FY 2022 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
Facilities and Infrastructure	29,790	17,200	14,450	-15,340	-2,750
Oak Ridge Nuclear Operations	26,000	20,000	26,000	---	+6,000
Subtotal, Infrastructure Support	66,300	48,450	51,700	-14,600	+3,250
Construction:					
17-SC-71 Integrated Engineering Research Center, FNAL	10,250	10,250	10,250	---	---
18-SC-71 Energy Sciences Capability, PNNL	23,000	---	---	-23,000	---
19-SC-71 Science User Support Center, BNL	20,000	38,000	38,000	+18,000	---
19-SC-73 Translational Research Capability, ORNL	22,000	21,500	21,500	-500	---
19-SC-74 BioEPIC, LBNL	20,000	35,000	35,000	+15,000	---
20-SC-71 Critical Utilities Rehabilitation Project, BNL	20,000	26,000	26,000	+6,000	---
20-SC-72 Seismic and Safety Modernization, LBNL	5,000	27,500	18,000	+13,000	-9,500
20-SC-73 CEBAF Renovation and Expansion, TJNAF	2,000	10,000	10,000	+8,000	---
20-SC-74 Craft Resources Support Facility, ORNL	25,000	---	---	-25,000	---
20-SC-75 Large Scale Collaboration Center, SLAC	11,000	12,000	21,000	+10,000	+9,000

DEPARTMENT OF ENERGY

(Amounts in thousands)

	FY 2021 Enacted	FY 2022 Request	Final Bill	Final Bill vs Enacted	Final Bill vs Request
20-SC-76 Tritium System Demolition and Disposal, PPPL	13,000	6,400	6,400	-6,600	---
20-SC-77 Argonne Utilities Upgrade, ANL	500	10,000	10,000	+9,500	---
20-SC-78 Linear Assets Modernization Project, LBNL	500	12,850	10,400	+9,900	-2,450
20-SC-79 Critical Utilities Infrastructure Revitalization, SLAC	500	10,000	8,500	+8,000	-1,500
20-SC-80 Utilities Infrastructure Project, FNAL	500	13,300	10,500	+10,000	-2,800
21-SC-71 Princeton Plasma Innovation Center, PPPL	150	7,750	7,750	+7,600	---
21-SC-72 Critical Infrastructure Recovery & Renewal, PPPL	150	2,000	2,000	+1,850	---
21-SC-73 Ames Infrastructure Modernization	150	2,000	2,000	+1,850	---
22-SC-71, Critical Infrastructure Modernization Project (CIMP), ORNL	---	1,000	1,000	+1,000	---
22-SC-72, Thomas Jefferson Infrastructure Improvements (TJII), TJNAF	---	1,000	1,000	+1,000	---
Subtotal, Construction:	173,700	246,550	239,300	+65,600	-7,250
Subtotal, Science Laboratories Infrastructure	240,000	295,000	291,000	+51,000	-4,000
Safeguards and Security	121,000	170,000	170,000	+49,000	---
Program Direction	192,000	202,000	202,000	+10,000	---
TOTAL, SCIENCE	7,026,000	7,440,000	7,475,000	+449,000	+35,000