LEWIS–BURKE
ASSOCIATES LLC

Analysis of the FY 2023 Omnibus Spending Package: Implications for Research, Higher Education, and Academic Medicine

Prepared by Lewis-Burke Associates LLC
December 22, 2022

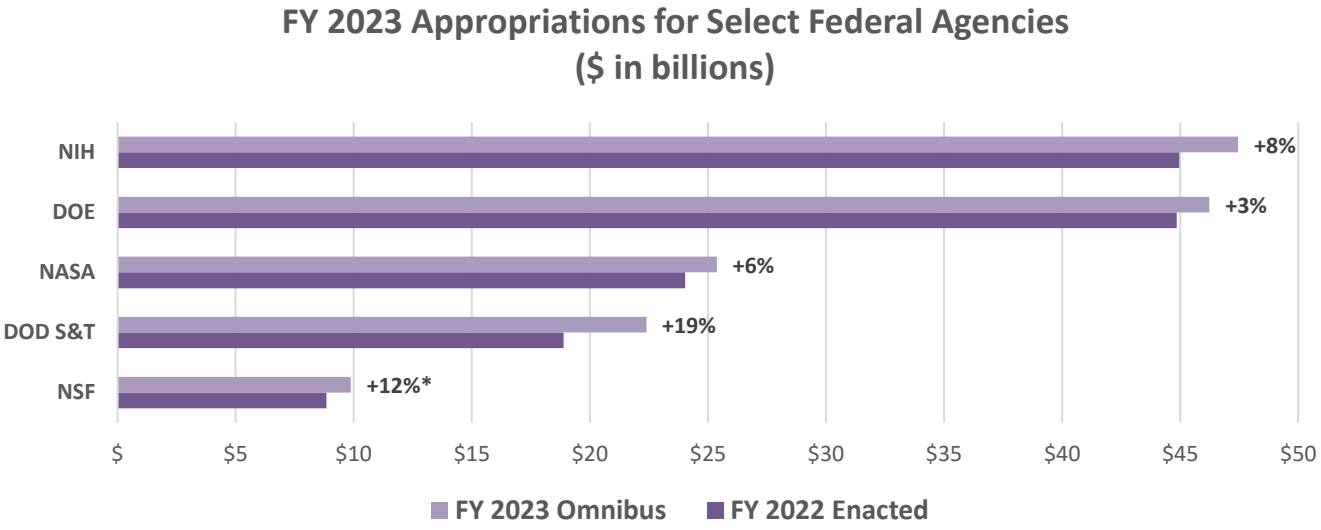
Government Relations for Research & Education

Table of Contents

Executive Summary 3
Department of Commerce 6
Economic Development Administration (EDA) 6
National Institute of Standards and Technology (NIST) 8
National Oceanic and Atmospheric Administration (NOAA) 10
Department of Defense (DOD) 13
Department of Education (ED) 18
Department of Energy (DOE) 22
Department of Health and Human Services (HHS) 27
National Institutes of Health (NIH) 27
Other Agencies Within HHS 32
Department of Homeland Security (DHS) 38
Department of Justice (DOJ) 40
Environmental Protection Agency (EPA) 44
Humanities, Arts, and Cultural Agencies 46
International Programs—State Department (DOS) and USAID 48
National Aeronautics and Space Administration (NASA) 51
National Science Foundation (NSF) 55
U.S. Department of Agriculture (USDA) 59
U.S. Geological Survey (USGS) 64

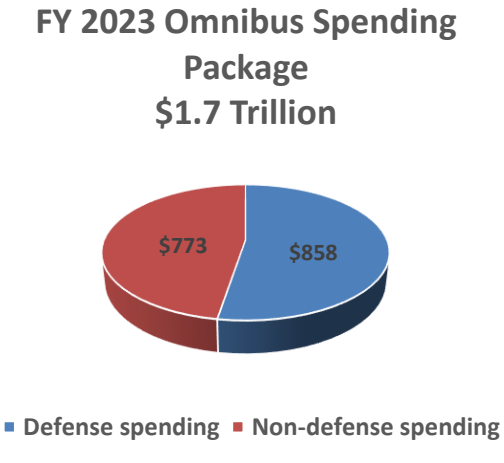
Executive Summary

On December 20, Congress released details of its agreement on a massive end-of-year spending package that includes $1.7 trillion in fiscal year (FY) 2023 appropriations, $45 billion in aid for Ukraine, $27 billion in natural disaster assistance, $1 billion in additional supplemental funding for science and technology investments related to the *CHIPS and Science Act*, pandemic preparedness legislation, telehealth medicine extensions, fixes to Medicare payment reductions for physicians, and various other healthcare provisions. The package passed the Senate on December 22 on a bipartisan 68-29 vote and is expected to pass the House on a mostly Democrat-only party line vote. President Biden is expected to sign it into law before current government funding expires on December 23. Overall, the final spending package would increase funding for almost all federal programs of interest to the research, education, and academic medicine communities (see graphic below). This document provides an in-depth analysis of final FY 2023 appropriations and other relevant funding and legislative provisions in the spending package.



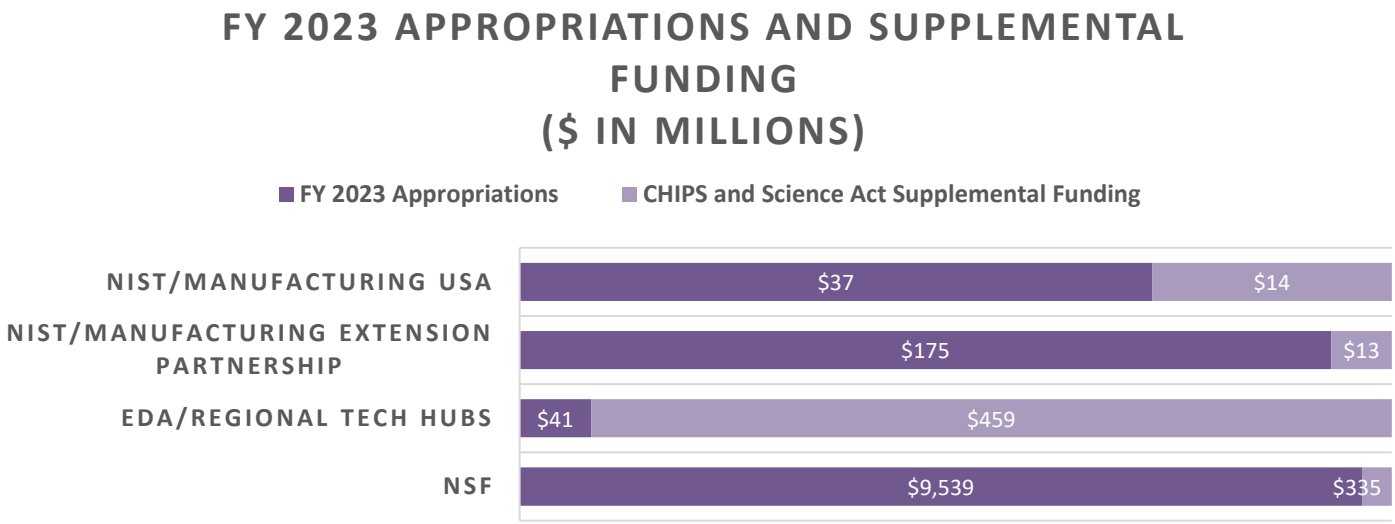
*NSF amount includes both regular appropriations and *CHIPS and Science Act* supplemental funding.

Three months into FY 2023 and after two Continuing Resolutions that extended government operations to avoid shutdowns, Congress finally reached agreement on a $1.7 trillion spending package that includes all 12 annual appropriations bills, known as an omnibus. The biggest disagreement between Republicans and Democrats was the funding split between defense and non-defense programs. In the end, both received significant increases—a $76 billion or 10 percent increase for defense and a $43 billion or six percent increase for non-defense.



Another important negotiation was supplemental funding in addition to regular appropriations for science agencies and U.S. competitiveness programs authorized but not funded in the *CHIPS and Science Act.* As much as $10 billion was originally proposed as a downpayment on those investments. The final bill includes $1 billion with the National Science Foundation (NSF) and the

Economic Development Administration (EDA) as the biggest beneficiaries. Nearly all of NSF's funding growth would be funded by the supplemental, with $335 million provided specifically to fund implentation of the science side of *CHIPS and Science*. With all supplemental funding included, the agreement grows NSF's budget by $1.04 billion or 12 percent above the FY 2022 enacted level. EDA receives $500 million to launch Regional Tech Hubs, with $41 million in regular appropriations and $459 million in supplemental funding. The National Institute of Standards and Technology (NIST) receives additional funding for manufacturing programs (see graphic below).



Outside of the supplemental funding, the spending package includes modest increases for science, research and development, climate and environment, and STEM education. A few key highlights include:

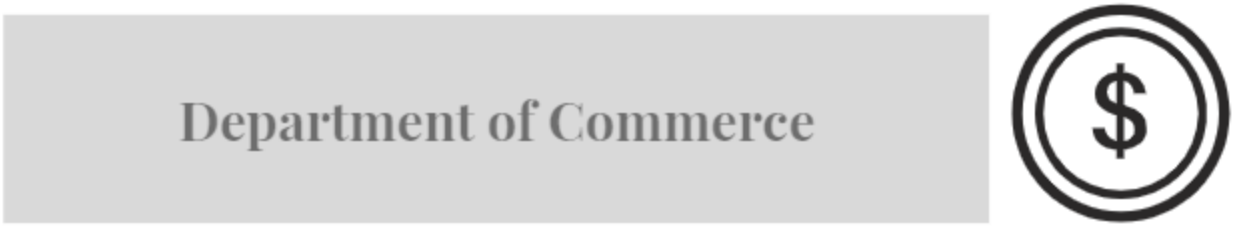
- $1.5 billion for the Advanced Research Projects Agency for Health (ARPA-H), in addition to the $1 billion appropriated in FY 2022;
- Increased investments in emerging technology areas, such as quantum information science, microelectronics, artificial intelligence and machine learning, biotechnology, and advanced computing;
- Increased funding for climate science across all federal agencies, including NSF, the Department of Energy (DOE), and the National Oceanic Atmospheric Administration (NOAA);
- Increased funding for clean energy research and development programs at DOE, including new funding to launch Energy Earthshot Research Centers and emerging technology centers;
- $20 million to launch a new NIST Manufacturing Institute; and
- Increased funding for STEM education programs at Minority Serving Institutions and other underserved or underrepresented institutions.

For higher education and workforce development, the spending package prioritizes investments in the Pell Grant program for low-income students by providing $7,395 for the maximum individual Pell Grant award for the 2023-2024 school year, a $500 increase over the current maximum award level. The bill also increases funding of capacity-building programs for Historically Black Colleges and Universities and Minority-Serving Institutions and Department of Labor apprenticeship efforts.

For health care and academic medicine, the spending package includes a number of new policies to strengthen the nation's public health infrastructure, prevent future pandemics, and provide the Food and Drug Administration (FDA) greater oversight authority. The omnibus increase funding for mental and behavioral health services, substance use disorder treatment, and combat maternal and infant mortality. For physicians and health systems, the bill alleviates some of the anticipated cuts in Medicare payments to doctors, authorizes funding for the Children's Health Insurance Program (CHIP) through FY 2029, and extends COVID-19 telehealth flexibilities through FY 2024. The bill also boosts research by increasing funding for ARPA-H in FY 2023, as noted above, and extends the authorization and use of ARPA-H FY 2022 and FY 2023 funds through FY 2025.

While the year ended with a positive outlook for federal spending on research and development, education, healthcare, and workforce programs, next year brings a fresh new set of challenges to advance appropriations and other major legislation. Notably absent from the spending deal is raising the debt ceiling. House Republicans, who will be in the majority next year, plan to use the debt ceiling, which needs to be raised by Summer 2023, as a bargaining chip to cut spending. With a narrow four seat majority in the House, it will also be a challenge for Republicans to advance and pass appropriations bills, especially ones that can garner bipartisan support in the Senate, which will still be controlled by Democrats. While the Biden Administration plans to release a FY 2024 budget request in February 2023, it will likely be a slow start to appropriations next year. A new Congress starts in January and many leadership positions, especially Subcommittee Chair and Ranking Member positions on the Appropriations Committee, still need to be decided. In the meantime, federal agencies will be focused on spending FY 2023 appropriations and issuing funding solicitations as well as continuing to execute programs and release funding from the Bipartisan Infrastructure Law, the Inflation Reduction Act, and microelectronics-focused activities from the *CHIPS and Science Act*.

Below is more detailed information on FY 2023 appropriations, supplemental funding, and major legislative provisions for each major federal agency.



Department of Commerce

Economic Development Administration (EDA)

The Economic Development Administration (EDA) would receive $498 million, a $124.5 million or 33.3 percent increase over the FY 2022 level. In addition, EDA would receive $1.18 billion as a part of the disaster supplemental section that accompanied the omnibus bill to support disaster relief activities, as well as the launch of two key initiatives that were authorized but not funded under the *CHIPS and Science Act*: Regional Technology Innovation Hubs (Regional Tech Hubs) and the Recompete program.

The omnibus would provide $41 million for **Regional Tech Hubs** and the supplemental funding would provide an additional $459 million, which would be significant funding for a new EDA program, but nearly $1 billion short of the amount authorized in the *CHIPS and Science Act*. Regional Tech Hubs would position communities to be global centers for research development, workforce training, entrepreneurship, commercialization, and manufacturing around technology areas that are key for domestic and global competitiveness. Under the authorizing legislation, the program would support three different components: the *Designation* of at least 20 hubs, smaller *Strategy* grants, and larger *Implementation* grants. It will now be up to the Secretary of Commerce to determine the scale and number of hubs for FY 2023 based on the appropriated funds.

The omnibus would also provide $41 million for the proposed **Recompete Pilot Program** and an additional $159 million would be provided through the supplemental funding. The program would provide grants to communities experiencing persistently high employment gaps among prime-age workers (ages 25-54) to develop 10-year comprehensive economic development plans ("Recompete Plans") and invest in the implementation of those plans. Plans would be locally tailored to address multifaceted needs of communities to engage those not participating in the labor force and could include workforce training, infrastructure improvements, entrepreneurial guidance, and more. The $200 million for the program would match the annual authorized amount in the *CHIPS and Science Act*.

The supplemental funding would also provide $500 million for "infrastructure and other long-term economic recovery efforts for **areas impacted by natural disasters** in 2021 and 2022." It remains to be seen how EDA will manage this allocation, but in past years, support has only applied to disasters that have been declared by the Federal Emergency Management Agency (FEMA). Funding through this program has been very flexible as it has historically supported a wide range of projects, from wastewater systems to workforce training programs and new incubator facilities.

The core bill would fund the Regional Innovation Program (RIP), rebranded by EDA as **Build to Scale**, at $50 million. This would be a $5 million increase over FY 2022 and support the program at its most recent authorization level. RIP provides universities and research institutes support to develop and scale commercialization efforts and cultivate funding for promising start-ups. The omnibus calls on EDA

to ensure that RIP awards prioritize geographic diversity, increase distribution of grants to organizations and states that have not been previously funded by RIP, and award at least 40 percent of program funds to rural areas. The omnibus report specifies that, of the $50 million provided for RIP, $40 million is to be spent on the i6 challenge (now called the "Venture Challenge" by EDA) and $8 million is for Seed Fund Support (currently called the "Capital Challenge").

The **Public Works Program** would receive $121.5 million, a $1 million increase over FY 2022. The **Economic Adjustment Assistance** (EAA) would be funded at $39.5 million, a $2 million increase over FY 2022, and the **STEM Apprenticeship program** would receive $2.5 million, a $500,000 increase over FY 2022. EDA's **Research and Evaluation program** would be flat funded at $2 million. Finally, the omnibus would provide $69 million for **Assistance to Energy Transition Communities**, $6.5 million above the FY 2022 enacted level. Within this program, $48 million for communities dealing with the transition away from coal, $16.5 million for nuclear power plant closure communities, and $4.5 million to biomass power plant closure communities.

In addition to providing funding, the omnibus report directs EDA to take several actions, including coordinating with regional development organizations to support rural economic development; considering geographic equity when making grants and ensuring rural projects are adequately represented; increasing the share of investments in persistent poverty and high-poverty communities; and ensuring that its grant programs are not duplicative of other federal initiatives.

Furthermore, the omnibus encourages EDA to invest in a number of areas that demonstrate some of the priorities of Congress, including public-private partnerships to promote geographic diversity; economic development projects that support outdoor recreation if it is consistent with a region's Comprehensive Economic Development Strategy (CEDS); innovation in communities adversely affected by changes to the timber and pulp economy; technical assistance; support to communities looking to expand aeronautics-related industries; and collaborations with the Department of Agriculture and the Department of Housing and Urban Development to help communities maximize federal investments.

Economic Development Administration

(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	Omnibus vs. FY 2022 Enacted
Economic Development Administration (EDA)	**373,500**	510,000	450,018	**498,000**	**124,500 (33.3%)**
Supplemental Funding	**--**	--	--	**1,180,000**	
Regional Innovation Program	45,000	50,000	50,000	50,000	5,000 (11.1%)
Public Works Program	120,500	120,500	125,000	121,500	1,000 (0.8%)
Economic Adjustment Assistance Program	37,500	42,000	43,000	39,500	2,000 (5.3%)
Research and Evaluation Program	2,000	2,000	3,500	2,000	--
STEM Apprenticeship Program	2,000	4,5000	10,000	2,500	500 (25%)

Recompete Pilot Program	0	70,000	20,000	41,000	41,000
Supplemental Funding	--	--	--	159,000	
Regional Technology Innovation Hubs	0	0	0	41,000	41,000
Supplemental Funding	--	--	--	459,000	

Sources:

- The explanatory statement of Division B, COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES is available at https://www.appropriations.senate.gov/imo/media/doc/Division B - CJS Statement FY23.pdf.
- The Summary of Division N, DISASTER RELIEF SUPPLEMENTAL is available at Disaster Relief Summary FY23.pdf (house.gov).

National Institute of Standards and Technology (NIST)

The National Institute of Standards and Technology (NIST) would be funded at $1.63 billion, an increase of $397.2 million (32.3%) compared to the FY 2022 enacted level. NIST's Scientific and Technical Research and Services (STRS) would be funded at $953 million, an increase of $103 million (12.1%) compared to the FY 2022 enacted level.

Overall, the bill would continue support for many of NIST's long-standing priorities in critical and emerging technologies, including an $8 million increase for standards of such technologies. The bill would provide:

- $54 million for quantum information science research.
- $7.5 million increase for cybersecurity, including support for the National Cybersecurity Center of Excellence (NCCoE) and the National Initiative for Cybersecurity Education (NICE) Regional Alliances and Multi-stakeholder Partnerships to Stimulate (RAMPS) Cybersecurity and Workforce Development program.
- $4 million increase for NIST AI research and measurement science, including the development of "resources for government, corporate, and academic uses of AI to train and test systems, model AI behavior, and compare systems."
- $2 million increase to support the American bioeconomy.
- $11.5 million increase for climate and energy measurement, tools, and testbeds, including a $1.5 million increase to expand NIST's research on "direct air capture and carbon dioxide removal and sequestration."
- $4 million for the establishment of a NIST Center of Excellence in climate change measurement.
- $1.5 million increase for forensic science research, providing $22 million total.
- Up to $2 million for NIST to establish a robotic training center with an academic institution.

Additional research areas supported by the Committee include forward-looking building standards; the greenhouse gas program and urban dome initiative; wildfires and the wildland-urban interface; regenerative medicine standards; continued development of a framework to manage AI risk; circular economy (including plastics); pyrrhotite testing and mitigation; graphene research and commercialization; UAV research challenges and credentialing; disaster resilience research grants; the iEdison system; the NIST Center for Neutron Research Controls and Corrective Actions; and the Malcom

Baldridge Performance Excellence Program. The bill would also include a $2.5 million increase for NIST's Diversity, Equity, and Inclusion initiatives.

The bill would provide $175 million for the **Manufacturing Extension Partnership (MEP)** program, an increase of $17 million (10.8%) over FY 2022 enacted level. The bill would include $37 million for **Manufacturing USA**, which would more than double the FY 2022 funding ($16.5 million) for the program but falls short of President Biden's request to nearly quadruple the program. Of note, the bill would provide supplemental funding in addition to the appropriations levels mentioned above, which would include $13 million for the MEP program and $14 million for the Manufacturing USA program.

Within the $37 million appropriations increase for Manufacturing USA, the bill would include $20 million to support a new NIST-funded institute, $10 million for NIST's existing institute (NIIMBL), and $1.5 million to support the FDA's participation in biomanufacturing innovation institutes. The bill also underscores the importance of the nation's biomanufacturing capacity, requiring NIST to submit a report to the Congress on various domestic biomanufacturing efforts, gaps, and facilities.

National Institutes of Standards and Technology
(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	Omnibus vs. FY 2023 Enacted
NIST, total	**1,230,063**	**1,474,181**	**1,696,339**	**1,627,285**	**397,222 (32.3%)**
Scientific and Technical Research and Services	**850,000**	**953,000**	**974,946**	**953,000**	**103,000 (12.1%)**
Industrial Technology Services	**174,500**	**230,000**	**270,000**	**212,000**	**37,500 (21.5%)**
Manufacturing USA	16,500	18,000	70,000	37,000	20,500 (124.2%)
Manufacturing Extension Program (MEP)	158,000	212,000	200,000	175,000	17,000 (10.8%)

Source:

- The explanatory statement of Division B, COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES is available at https://www.appropriations.senate.gov/imo/media/doc/Division B - CJS Statement FY23.pdf.

National Oceanic and Atmospheric Administration (NOAA)

The FY 2023 omnibus would provide NOAA with $6.69 billion, an increase of $809 million or 13.8 percent over the FY 2022 enacted level but slightly below the President's budget request of $6.82 billion. This would continue the trend of historic increases for the agency via regular appropriations, supplemental funds, and reconciliation packages. Importantly, this total includes $656.7 million in supplemental funds which are directed toward disaster relief, recovery, and preparedness. The **Operations, Research, and Facilities** account would receive $4.9 billion including supplemental funds, an increase of $753 million or 18.2 percent above the FY 2022 enacted level and above the budget request level of $4.48 billion. Consistent with both the House and Senate proposals, all NOAA research offices and programs of interest would receive an overall increase from FY 2022 enacted levels.

The bill would provide $661.3 million for the **Office of Oceanic and Atmospheric Research (OAR)**, a $61.8 million or 10.3 percent increase over the FY 2022 enacted level and very close to the budget request of $666 million. This level is below the proposed House and Senate levels, but still indicates significant congressional intent to invest in climate research. The **Climate Research Program** would receive $224.1 million, $24.1 million or 12.1 percent more than FY 2022, and would include $104.1 million for the climate laboratories and cooperative institutes (CIs), an increase of $15.1 million from FY 2022. The competitive climate research account would receive $72.1 million, an increase of $6.1 million from FY 2022, but a significant drop from the House and budget request levels, likely due to investments in this program from the *Inflation Reduction Act.* Ocean labs and CIs would receive $39.5 million, an increase of $2.4 million or about 6.5 percent over the FY 2022 enacted level. The agreement would also provide $16.3 million for OAR's Climate Adaptation Partnerships, previously known as the **Regional Integrated Sciences and Assessments Program (RISA)**. The **Sea Grant College Program** would receive $80 million, a $4 million increase over the FY 2022 enacted level and the Sea Grant Aquaculture Program would receive a $500,000 increase, bringing it to $14 million. Sea Grant programs are encouraged to increase work to enhance coastal resilience. Lastly, the bill would provide $46 million for **Ocean Exploration and Research**, an increase of 6 percent over the FY 2022 level.

The **National Ocean Service (NOS)** would receive $679.42 million, an increase of $41.7 million or 6.5 percent over the FY 2022 enacted level, and just slightly below both the House bill and the budget request. The agreement includes $81.5 million, an increase of $2.5 million over FY 2022, for **Coastal Zone Management Grants** and a flat $34 million for the **National Oceans and Coastal Security Fund**; however, the Fund received an additional $492 million over five years in the *Infrastructure Investment and Jobs Act* bringing total funds for FY 2023 to $132.4 million.

The **National Marine Fisheries Service (NMFS)** would receive $1.1 billion, an increase of $94 million or 9.3 percent over the FY 2022 enacted level, just slightly above the House and requested amounts. The bill directs NOAA to assist in transitioning to and supporting the growth of climate ready fisheries. The bill would fund offshore wind energy initiatives at $13 million, double the FY 2022 enacted level. Of this amount "$1,500,000 is within Marine Mammals, Sea Turtles, and Other Species; $3,000,000 in Fisheries and Ecosystem Science Programs and Services; $5,500,000 is within Fisheries Data Collections, Surveys, and Assessments; and $3,000,000 in Fisheries Management Programs and Services."

The **National Weather Service (NWS)** would be funded at $1.25 billion, an increase of $77.4 million or 6.6 percent over the FY 2022 enacted level, a very slight decrease from the House proposal and 2.7

percent above the budget request. This would include $179 million for the Office of Science and Technology Integration, an increase of $17.4 million or 10.8 percent over the FY 2022 enacted level. The **Office of Space Commerce (OSC)** would be funded at $70 million, a large increase of $54 million over FY 2022 levels and just slightly less than the House proposal and the request. This level of funding would allow OSC to develop operations space situational awareness capabilities by FY 2025. The bill would also approve the request to transfer OSC out of NOAA to DOC's office of Mission Support.

National Oceanic and Atmospheric Administration

(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	Senate vs. FY 2022 Enacted	FY 2023 Omnibus plus Supp. vs 2022 Enacted
NOAA, total*	**5,877,349**	**6,785,881**	**6,510,833**	**6,686,366**	**155,951 (2.6%)**	**809,017 (13.8%)**
Operations, Research, and Facilities (ORF)*	**4,157,311**	**4,608,232**	**4,589,855**	**4,910,898**	**662,587 (15.9%)**	**753,587 (18.1%)**
Oceanic and Atmospheric Research (OAR)	599,448	699,132	687,767	661,297	61,849 (10.3%)	--
Climate Research	200,000	254,216	233,000	224,150	24,150 (12.1%)	--
Climate Competitive Research	66,000	102,216	70,000	72,116	6,116 (9.3%)	--
Ocean, Coastal and Great Lakes Research	237,020	260,000	272,500	251,500	14,480 (6.1%)	--
Sea Grant and Marine Aquaculture Program	89,000	96,500	105,000	94,000	5,000 (5.6%)	--
Ocean Exploration and Research (OER)	43,410	47,500	46,500	46,000	2,590 (6.0%)	--
National Weather Service (NWS)	**1,174,470**	**1,258,860**	**1,251,874**	**1,247,393**	**72,923 (6.2%)**	**--**
National Ocean Service (NOS)	**637,700**	**689,193**	**700,986**	**679,422**	**41,722 (6.5%)**	**--**
Coastal Science and Assessment: Competitive Research	21,500	25,500	30,000	22,500	1,000 (4.7%)	--
National Oceans and Coastal Security Fund	34,000	34,000*	34,000	34,000	--	--

National Marine Fisheries Service (NMFS)	**1,015,955**	**1,099,964**	**1,110,076**	**1,093,347**	**77,392 (7.6%)**	**--**
Procurement, Acquisition, and Construction (PAC)*	**1,672,689**	**2,131,000**	**1,874,329**	**1,775,468**	102,779 (6.1%)	--

* Accounts include additional funds included in the disaster supplemental package

Source:

- The explanatory statement of Division B, COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES is available at https://www.appropriations.senate.gov/imo/media/doc/Division B - CJS Statement FY23.pdf

Department of Defense (DOD)

The FY 2023 omnibus would provide $858 billion in national security funding, consistent with spending levels authorized through the FY 2023 *James M. Inhofe National Defense Authorization Act for Fiscal Year 2023* (NDAA) passed by Congress earlier this month. Of this amount, the Department of Defense would receive $797.7 billion, roughly $45 billion above the Biden Administration's FY 2023 budget request (PBR) and $76 billion above the FY 2022 enacted level.

Similar to the FY 2022 defense appropriations bill, the FY 2023 bill would provide supplemental assistance for Ukraine, worth $44.9 billion in emergency aid, supplying vehicles, incidentals, food, medical supplies and weapons to the war-fraught nation. This figure nearly doubles the amount of aid the U.S. has provided to Ukraine since Russia's invasion in February.

Within the bill, $139.7 billion is allocated for the Department's **Research, Development, Test, and Evaluation** (RDT&E) accounts, nearly $10 billion more than requested in the FY 2023 PBR and $20.5 billion more than the FY 2022 enacted level. The **science and technology (S&T) portion of the RDT&E accounts,** which includes basic research (6.1), applied research (6.2), and advanced technology development (6.3), would increase by nearly $3.5 billion, bringing S&T funding to $22.4 billion and rejecting cuts proposed by both the Biden Administration and House appropriators. The basic research (6.1) accounts across the Services and Defense-wide would receive an average boost of 5.7 percent compared to FY 2022 and nearly 23 percent above the FY 2023 PBR. Additional figures detailing funding levels and trends can be found in the chart below.

Relevant highlights related to academic research and development include:

- **$358 million** for the Rapid Defense Experimentation Reserve (RDER). RDER is Undersecretary for Research and Engineering (R&E) Heidi Shyu's signature experimentation program to transition cross-DOD prototyping efforts to technology validation and production, with the goal to accelerate joint warfighting capabilities.
- **$4.1 billion for** DARPA, a $54.4 million reduction compared to the President's budget request. Compared to the PBR, the bill would decrease funding for tactical technologies, materials and biological technologies, and advanced aerospace and space systems but provide an increase of **$20 million** for biomedical technologies research.
- **$174.3 million** for the National Defense Education Program (NDEP), including a **$2 million** increase for SMART diversification activities; **$15 million** increase for manufacturing engineering education program (MEEP); **$15 million** for the civil society program; and **$10 million** for world language advancement and readiness programs.
- **$100.5 million** for Historically Black Colleges and Universities (HBCUs), which includes nearly $67 million in overall program increases and $500,000 for ROTC research and training in AI/ML.
- **$120 million** increase for the Defense University Research Instrumentation Programs (DURIP), spread evenly ($30 million) across all Service Branches, including Space Force for the first time.

- **$57.2 million** funding increase for the National Security Innovation Network (NSIN), of which $50 million is directed for DOD mission acceleration centers and $5 million for the "hacking for defense" program.
- **$20 million** for the Defense Established Programs to Stimulate Competitive Research (DEPSCoR) program, which provides opportunities for institutions in states that do not receive significant research funding from DOD.
- Not less than **$1.56 billion** for the Congressionally Directed Medical Research Program (CDMRP), including $370 million for the Peer Reviewed Medical Research Program (PRMRP) and $130 million for the Peer Reviewed Cancer Research Program.

In addition to the initiatives outlined above, this bill prioritizes funding for the Department's climate initiatives, missile defense, and modernization efforts detailed below:

Climate/Environment

The Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technical Certification Program (ESTCP) would be funded at **$88.4 million** and **$122.6 million,** respectively. Overall, DOD's climate/environment initiatives would receive **$452.8 million,** which is $81 million more than the President's request.

Quantum

The bill would provide the Air Force with **$271 million** for dominant information sciences and methods, including funding increases for university-based quantum materials applied research, secure quantum computing facilities, and quantum network testbeds. The Army's University and Industry Research Centers would see a **$1.4 million** increase for quantum computing technologies.

Microelectronics

The bill would provide **$207.3 million** for defense-wide microelectronics technology development and support. Of this amount, the bill would provide **$10 million** for advanced node semiconductors, **$10 million** for secure advanced on-shore test capability, and **$25 million** for enhance radio frequency (RF) microelectronics production. The bill would also include the following across defense agencies:

- **$5 million** for the heterogeneous integration of microelectronics for aerospace sensors.
- **$3 million** for advanced analog microelectronics for space technology.
- **$40 million** for industrial base analysis and sustainment support to on-shore advanced microelectronics.

Manufacturing

The bill prioritizes manufacturing research—primarily additive manufacturing-- and workforce development across the Department and Military Services. The bill would provide an **$85 million** increase for DOD's Office of Local Defense Community Cooperation, including a $50 million increase for the Defense Community Infrastructure Program and **$30 million** for the Defense Manufacturing Community Support Program. The bill would also include **$6 million** for academic-industry partnerships for advanced materials and manufacturing processes.

Hypersonics

The Air Force would receive an increase of **$126.6 million** to enhance hypersonic testing capacity and capabilities. The bill would also include **$25 million** for hypersonic testbed acceleration and **$60.2**

million for Joint Hypersonics Technology Development and Transition, which includes a $5 million increase for university research.

Directed Energy

The bill would provide **$21.3 million** for High Energy Laser Research Initiatives, $5 million above the PBR, as well as **$18.8 million** for a directed energy airborne high-power testbed. Additionally, the Air Force would receive an increase of $11.6 million for technology related to directed energy, including **$5 million** for directed energy research.

Workforce

The bill aims to expand the U.S. defense workforce, including **$20 million** for industrial base analysis and sustainment support. The bill would also provide **$111 million** in Defense Acquisition Workforce Development, a $58 million increase from FY 2022. Additionally, the Services would receive:

- **$1 million** increase to support Navy future workforce innovation
- **$10 million** to the Army Research Lab to invest in regional workforce programs.

Space Force

The bill would provide almost **$1 billion** above the PBR for Space Force (USSF) RDT&E while noting concerns that Space Force's internal budget projection appears to remain flat despite ambitious plans. Noting this discrepancy in the service's long-term planning, the Committees direct the Secretary of the Air Force to provide a briefing on the status of the full portfolio of activities funded in Space Force accounts.

The Space Force would be provided funding for 6.1 accounts for the first time in its 3-year history, which will be split between a **$25 million** for a dedicated basic research line and **$30 million** for Space Force's part of DURIP. The Explanatory Statement also carries over language from the Senate bill, noting that capabilities and programs unique to space, including programs in the Air Force Research Lab's Space Vehicles Directorate, are better managed directly by Space Force and directs the Secretary of the Air Force to include space research programs in the Space Force basic research account in the FY 2024 PBR. Additionally, the bill also provides an additional **$20 million** for cislunar activities and encourages USSF to develop a report on acquisition strategies for cislunar and lunar space.

Next Gen Wireless and Cyber

The bill would provide an additional **$25 million** for defense-wide cybersecurity research over the PBR, including **$10 million** for academic cyber institutes, **$10 million** for the university cyber consortium, and **$5 million** for the pacific intelligence and innovation initiative. Other notable provisions include:

- **$250 million** to support 5G and next generation wireless investments.
- **$20 million** to the Office of the Secretary of Defense to ramp up small business and academia cybersecurity maturity model certification.

Department of Defense

(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	Omnibus vs. FY 2022 Enacted
RDT&E, total	**119,211,192**	**131,667,180**	**134,625,494**	**139,760,526**	**20,549,334 (17.2%)**
S&T, Total	**18,892,284**	**18,323,986**	**20,531,821**	**22,391,509**	**3,499,225 (18.5%)**
6.1, Total	2,763,498	2,598,784	3,361,372	2,920,684	157,186 (5.7%)
6.2, Total	6,908,213	6,566,681	7,001,133	7,796,357	888,144 (12.9%)
6.3, Total	9,220,573	9,158,521	10,169,316	11,674,468	2,453,895 (26.6%)
Army RDT&E	**14,539,417**	**15,004,405**	**15,496,166**	**17,150,141**	**2,610,724 (18.0%)**
Army 6.1	609,725	536,123	695,223	637,023	27,298 (4.5%)
Army 6.2	1,531,255	1,252,091	1,419,925	1,812,257	281,002 (18.4%)
Army 6.3	2,191,638	1,828,313	2,033,515	2,500,263	308,625 (14.1%)
Navy RDT&E	**22,139,080**	**25,142,077**	**24,445,418**	**26,017,309**	**3,878,229 (17.5%)**
Navy 6.1	698,319	636,492	806,792	688,992	-9,327 (1.3%)
Navy 6.2	1,283,233	1,181,814	1,335,714	1,487,214	203,981 (15.9%)
Navy 6.3	972,196	1,040,787	1,122,490	1,304,873	332,677 (34.2%)
Air Force RDT&E	**41,592,913**	**43,173,883**	**43,717,011**	**44,946,927**	**3,354,014 (8.1%)**
Air Force 6.1	540,706	552,317	751,517	612,317	71,611 (13.2%)
Air Force 6.2	1,585,571	1,480,911	1,573,542	1,744,411	158,840 (10.0%)
Air Force 6.3	968,538	912,753	877,638	1,096,168	127,630 (13.2%)
Space Force RDT&E	**11,597,405**	**15,461,468**	**16,528,488**	**16,631,377**	**5,033,972 (43.4%)**
Space Force 6.1	--	--	200,000	55,000	200,000
Space Force 6.2	286,505	286,492	340,201	360,601	74,096 (25.9%)

Space Force 6.3	288,584	580,988	606,040	615,040	326,456 (113.1%)
Defense Wide RDT&E	**29,065,786**	**32,608,153**	**33,836,217**	**34,565,478**	**5,499,692 (18.9%)**
Defense Wide 6.1	914,748	873,852	907,840	927,352	12,604 (1.4%)
Defense Wide 6.2	2,221,649	2,365,373	2,331,751	2,391,874	170,225 (7.7%)
Defense Wide 6.3	4,799,617	4,795,680	5,529,633	6,158,124	1,358,507 (28.3%)
Defense Health R&D	**2,633,488**	**2,341,015**	**2,001,650**	**3,041,610**	**408,122 (15.5%)**

**FY 2023 President's budget request, as reported by DOD in April 2022.*

Source:

- The House Appropriations Committee summary of the FY 2023 Defense Appropriations bill can be found here.
- The joint explanatory statement for Division C, DEPARTMENT OF DEFENSE, is available here.

Department of Education (ED)

The Department of Education (ED) would receive $83.5 billion in discretionary appropriations, $3.4 billion more than FY 2022 levels but $8.7 billion less than the amount requested by the President. For the **Pell Grant** program, the FY 2023 omnibus would provide $7,395 for the maximum individual Pell Grant award for the 2023-2024 school year, a $500 increase over the current maximum award level. The accompanying language directs ED to continue the Second Chance Pell Experiment while the agency begins to implement the Pell Grants for Prison Education Programs (PEP). The spending agreement rescinds $360 million of the unobligated Pell funds. The omnibus would also provide modest increases for the **Supplemental Education Opportunity Grants (SEOG)** program and the **Federal Work-Study (FWS)** program, which would be provided $910 million and $1.23 billion, respectively.

Similarly, the **TRIO Programs** would be provided an increase of $54 million over current levels, up to $1.19 billion, to support increased awards for high-performing current grantees and fund down the slate of recent high-quality applicants. The omnibus would provide a $4 million increase the **Title VI International Education and Foreign Language Studies** programs, totaling $85.7 million for those programs. The omnibus would also increase funding for the **Child Care Access Means Parents in School (CCAMPIS)** program to $75 million, an increase of $10 million above current levels. The spending package would once again flat fund the **Graduate Assistance in Areas of National Need (GAANN)** program at $23.5 million.

The FY 2023 omnibus would provide notable increases for the Title V **Developing Hispanic Serving Institutions (Developing HSIs)** program and the **Promoting Post-Baccalaureate Opportunities for Hispanic Americans (PPOHA)** program, providing $227.8 million for Developing HSIs, a 25 percent increase above the enacted level, and over $27 million for PPHOA, a nearly 40 percent increase. The explanatory statement encourages ED to prioritize PPOHA awards "for projects that support consortia of Hispanic-Serving Institutions that award PhDs to develop and test new models of cross-institutional intellectual, research, and resource-sharing communities, create mentorship programs for PhD students, support graduate research experiences, and other uses associated with the pursuit of PhDs by Hispanic students." Additionally, the Strengthening Asian **American and Native American Pacific-Islander-Serving Institutions (AANAPISI)** program would receive $18.6 million, nearly doubling from the current level. The omnibus would also continue support for the **Augustus F. Hawkins Centers of Excellence** program for HBCU/MSI teacher preparation programs, first funded under FY2022 appropriations, at $15 million for FY 2023, a $7 million increase. The **Teacher Quality Partnerships** program would receive an over $10 million increase under the package for a total of $70 million in FY 2023. These investments show continuing support from Congress for the Biden Administration's priorities of funding teacher preparation programs and providing increased funds for Minority Serving Institutions (MSIs).

Under the **Fund for the Improvement of Postsecondary Education (FIPSE)** account, ED would be provided $184 million for the various FIPSE grant programs and $430 million for congressional directed

spending. The omnibus would provide initial funding for two Biden Administration proposals, although well below the President's request. This includes a new **Research and Development Infrastructure** grant program for four-year HBCUs, Tribal Colleges, and MSIs is funded at $50 million, as well as a new **Postsecondary Student Success Grant** program to support student outcome, student retention and completion efforts at $45 million. The FY 2023 omnibus would also fund: the **Basic Needs Grant** program at $10 million; the **Centers of Excellence for Veterans Student Success** program at $9 million; the **Open Textbook Pilot** program at $12 million; the **Modeling and Simulation** education program at $8 million; the **Transitioning Gang-Involved Youth to Higher Education** program at $5 million; and the **Rural Postsecondary and Economic Development Grant Program** at $45 million.

The omnibus would boost funding for the **Institute of Education Sciences (IES)**, the Department's primary education research entity, to $807.6 million, a $70.6 million or nearly 10 percent increase over FY 2022 levels. Within IES, the explanatory report directs IES to use a portion of the $40 million increase for IES Research, Development and Demonstration activities to support "a new funding opportunity for quick turnaround, high-reward scalable solutions intended to significantly improve outcomes for students, which may include suggested research activities" described in the House report that outlined a new advanced education R&D entity. The agreement also recognizes and encourages IES to pursue additional collaboration with NSF including possible support for the *CHIPS and Science Act* recently authorized **Centers for Transformative Education Research and Translation**. In other research areas, the omnibus would fund the **Education and Innovation Research (EIR)** program at $284 million for FY 2023, a $50 million increase from current levels. Of the EIR total, $87 million would be directed toward grants for social and emotional learning (SEL) and $87 million for STEM education and computer science focused awards, with noted congressional interest in ensuring the EIR awards meet rural requirements and serve geographically diverse areas.

Career and Technical Education (CTE) would receive $1.46 billion in FY 2023, an increase of $75 million when compared to FY 2022, and directs $25 million within the CTE National Programs for Innovation and Modernization grants.

$18.4 billion is provided for Title I Grants to Local Educational Agencies, an increase of $850 million above the fiscal year 2022 enacted level. Other ED programs receiving increases include funding for new awards under the Native American Language Immersion competition, the American History and Civics National Activities grants, and the Promise Neighborhoods program.

Along with millions in congressionally directed spending in the higher education account of FIPSE, the omnibus also includes $200 million in congressionally directed spending as part of the elementary and secondary education focused innovation account. In addition to appropriations, the omnibus details congressional concern over ED staffing decisions, including overuse of non-career staff, and urges ED to offer greater emphasis on "timely and effective expenditure of Elementary and Secondary School Emergency Relief (ESSER) funds" to address student learning.

Department of Education
(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	Omnibus vs. Enacted
Elementary and Secondary Education*					
Promise Neighborhoods	85,000	96,000	91,000	91,000	6,000 (7.1%)
Education Innovation and Research	234,000	384,000	360,000	284,000	50,000 (21.4%)
IDEA Personnel Preparation	95,000	250,000	190,000	115,000	20,000 (21.1%)
CTE National Programs	7,421	57,421	67,421	32,421	25,000 (336.9%)
Student Financial Assistance*					
Pell Grant†	6,895	7,395	7,395	7,395	500 (7.2%)
SEOG	895,000	920,000	915,000	910,000	15,000 (1.7%)
Federal Work-Study	1,210,000	1,243,882	1,235,000	1,230,000	20,000 (1.7%)
Higher Education*					
Title V Aid for Developing HSIs	182,854	246,732	236,732	227,751	44,897 (24.6%)
Promoting Post-Baccalaureate Opportunities for Hispanic Americans	19,661	28,845	28,845	27,314	7,653 (38.9%)
Strengthening Institutions	110,070	175,070	179,007	122,070	12,000 (10.9%)
Strengthening Historically Black Colleges (HBCUs)	362,823	402,619	402,619	395,986	33,163 (9.1%)
Strengthening Asian American- and Native American Pacific Islander-serving Institutions (AANAPISI)	10,936	20,120	20,120	18,589	7,653 (69.9%)
Strengthening Native American-Serving Nontribal Institutions	7,834	12,120	12,210	11,405	3,571 (45.5%)
Title VI International Education and Foreign Language Studies	81,664	88,664	86,644	85,664	4,000 (4.9%)

TRIO Programs	1,137,000	1,297,761	1,297,761	1,191,000	54,000 (4.7%)
GEAR UP	378,000	408,000	400,000	388,000	10,000 (2.7%)
GAANN	23,547	25,547	25,547	23,547	--
Teacher Quality Partnerships	59,092	132,092	75,000	70,000	10,908 (18.5%)
Child Care Access Means Parents in Schools	65,000	95,000	95,000	75,000	10,000 (2.7%)
Hawkins Centers of Excellence	8,000	30,000	12,000	15,000	7,000 (87.5%)
Institute of Education Sciences	737,021	844,075	831,395	807,605	70,584 (9.6%)
Research, Development and Dissemination	204,877	289,877	245,000	245,000	40,123 (19.5%)
Research in Special Education	60,255	64,255	72,000	64,255	4,000 (6.6%)
Regional Education Laboratories	58,733	63,733	63,733	58,733	--
Statewide Data Systems	33,500	35,500	50,000	38,500	5,000 (14.9%)

*Categories included for ease of reading the chart.
† The Pell Grant is listed as the total maximum grant award an individual could receive, including mandatory and discretionary funding. It is *not* listed in thousands of dollars.

Sources:

- Text of Consolidated Appropriations Act of 2023 at https://www.appropriations.senate.gov/imo/media/doc/JRQ121922.PDF
- Joint Explanatory Statement of Division H, DEPARTMENTS OF LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION, AND RELATED AGENCIES at https://www.appropriations.senate.gov/imo/media/doc/Division%20H%20-%20LHHS%20Statement%20FY23.pdf

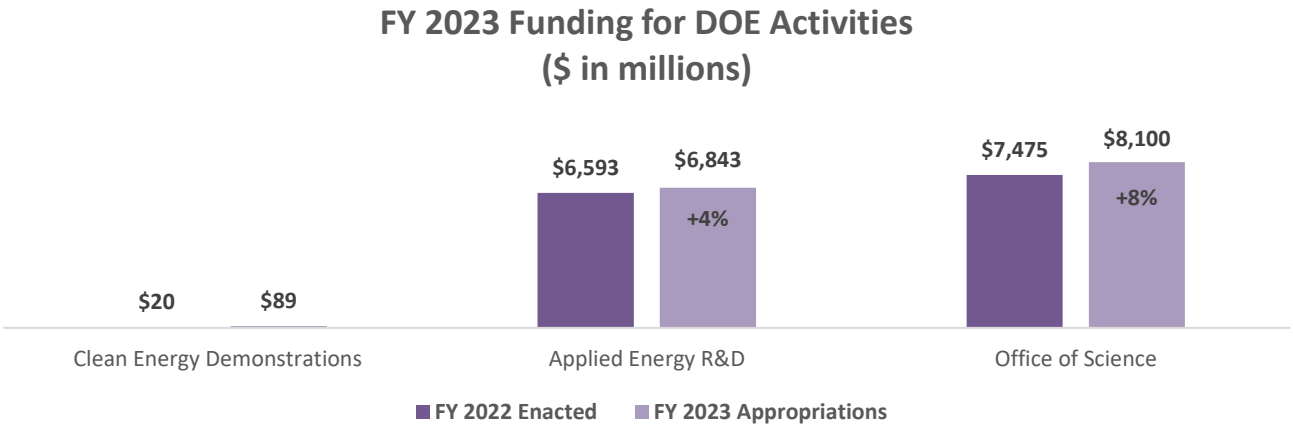
Department of Energy

Department of Energy (DOE)

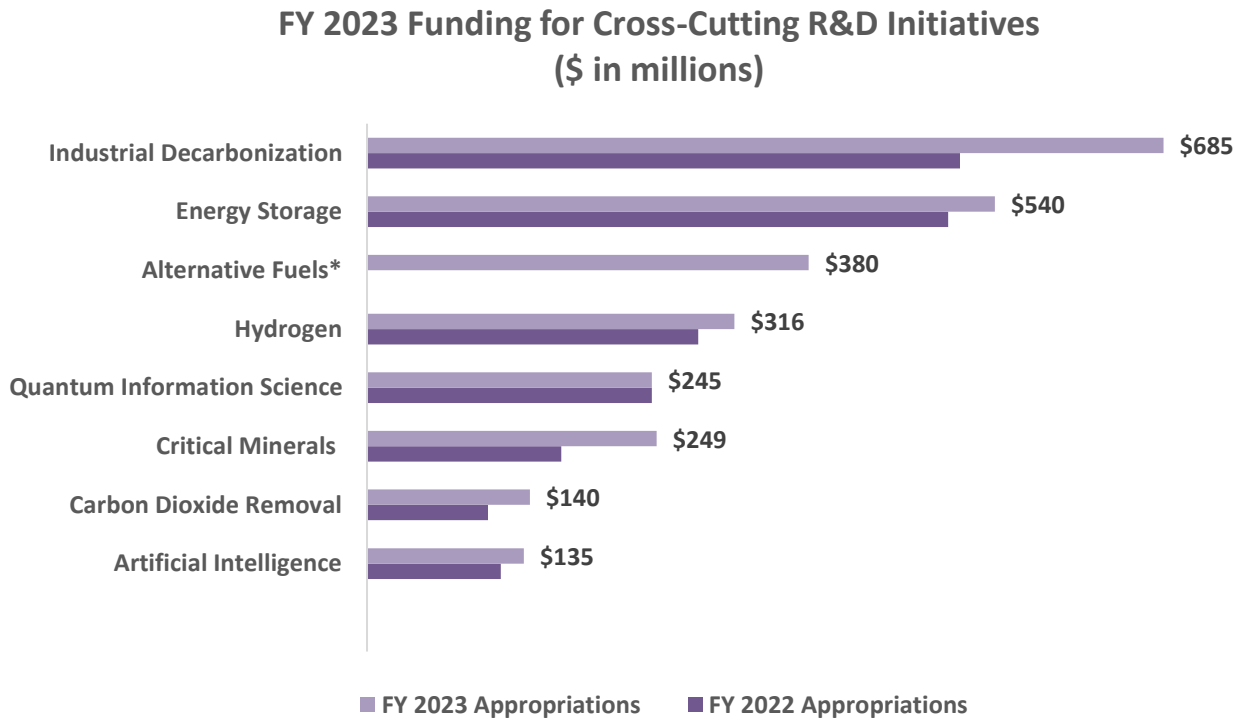
The FY 2023 omnibus would provide $46.2 billion for the Department of Energy (DOE), which is $1.4 billion or 3 percent above the FY 2022 enacted level. Consistent with the Biden Administration's priorities of accelerating the development and deployment of clean energy technologies to meet ambitious net zero carbon goals, the omnibus increases investments in all fundamental and applied energy programs, except for nuclear energy. Overall, the omnibus would advance all research and development programs and initiatives of interest to universities, National Laboratories, and the broader research community, including energy storage, industrial decarbonization, carbon dioxide removal, and emerging technology areas such as quantum information science and artificial intelligence/machine learning. Since DOE still has to execute most of the $62 billion it received from the Bipartisan Infrastructure Law, the omnibus provides no new funding DOE requested for clean energy demonstration activities in grid deployment, manufacturing, and energy supply chains.

The top three funding priorities include:

- The National Nuclear Security Administration's (NNSA) nuclear weapons modernization and science-based stockpile stewardship activities, with an increase of $1.2 billion, or 8 percent, above the FY 2022 enacted level;
- Fundamental research in the physical sciences, construction of world-class science facilities, and investments in emerging technology areas supported by the Office of Science, with an increase of $625 million, or 8 percent, above the FY 2022 enacted level; and
- Clean energy research and development, including renewables, carbon management, energy efficiency, and grid modernization, to address climate change and accelerate deployment of energy technologies to maintain U.S. competitiveness, with an increase of $250 million, or 4 percent, above the FY 2022 enacted level.



The omnibus prioritizes investments in eight cross-cutting science and technology areas (see graphic below). Congressional guidance only sets minimum spending limits, which would allow DOE to spend more in each of those areas.



*****Alternative fuels initiative is a new priority in FY 2023 and includes research and development of low-or no-emission alternative fuels for shipping, aviation, agricultural, and long-distance transportation sectors.

Below is a summary of funding levels for relevant programs highlighted in the omnibus:

- The bill would provide $130 million for **Energy Frontier Research Centers** (EFRCs), the same as FY 2022, to support the existing 41 centers.
- The bill supports the new **Energy Earthshot Initiative**. While the final bill does not provide specific guidance, prior House guidance still controls and would include $100 million spread out across the Office of Science, with about $50 million for Basic Energy Sciences, and $25 million each for Advanced Scientific Computing Research and Biological and Environmental Research. This funding could be used to support new **Energy Earthshot Research Centers (EERCs)** included in the request and single-investigator and small group awards.
- The four **Bioenergy Research Centers** would see an increase of $10 million for a total of $110 million to help accelerate commercialization of biofuels and bioproducts.
- The three existing **Energy Innovation Hubs—**Batteries and Energy Storage, Fuels from Sunlight, and Energy-Water Desalination— will be fully funded.
- **Mathematical, computational, and computer science research** would be funded at $300 million, an increase of $40 million above FY 2022 enacted levels, and $20 million to fully support the **Computational Science Graduate Fellowship program**.
- The bill would provide at least $245 million for **Quantum Information Science** within the Office of Science, including $120 million to support core research activities across all six Office of

Science programs and $125 million to fully fund the five **National Quantum Information Science Research Centers**.

- The bill would provide at least $135 million for **Artificial Intelligence and machine learning** research and development activities.
- The **Established Program to Stimulate Competitive Research (EPSCoR)** program will be funded at $35 million, a $10 million increase from the FY 2022 enacted level and the first significant program increase in over a decade.
- The bill supports growing **collaborations between DOE and NIH** and would provide at least $2 million, the same as FY 2022 enacted levels, to help NIH with data and computational needs.
- The bill would provide $60 million, doubling funding from FY 2022, for programs that build research capacity and STEM education at Minority Serving Institutions and underrepresented institutions. This includes the **Reaching a New Energy Sciences Workforce (RENEW)** and **Funding for Accelerated, Inclusive Research (FAIR)** programs.
- The bill would provide $20 million to establish and support a new **University Research Consortium on Grid Resilience**, which was competed in Fall 2022.
- For **applied energy**, the final bill would increase funding for all renewable energy, energy efficiency, fossil energy and carbon management, grid modernization, and cybersecurity programs, except for nuclear energy. Consistent with DOE's priorities, the bill would expand research, development, and demonstration efforts in cross-cutting research and technology development areas, such as industrial decarbonization, energy storage, and carbon dioxide removal.
- The bill would include $40 million for a new cross-cutting **aquatic decarbonization** research and development program focused on ocean-and water-based energy technologies.
- The bill would provide at least $50 million to support the **Nuclear Energy University Program (NEUP)**. The bill would support creating a separate funding line for NEUP to increase transparency and visibility, and also consolidating nuclear energy Small Business Innovation Research (SBIR), Small Business Technology Transfer (STTR), and Technology Commercialization Fund (TCF) activities within that funding line. Overall, the bill would provide an increase of $30 million above FY 2022 for a total of $130 million to support all of these activities. The omnibus provides no funding to start construction of new university-based nuclear reactors or the Versatile Fast Reactor.
- $470 million for **Advanced Research Projects Agency – Energy (ARPA-E)**, $20 million above the FY 2022 enacted level. This includes funding for climate adaption and resilience programs.
- The bill would increase funding for the **Office of Clean Energy Demonstrations** for project management and other administrative needs to help execute $21.5 billion in projects from the bipartisan infrastructure bill but provides no funding for the newly created **Office of Grid Deployment** and **Office of Manufacturing and Energy Supply Chains**.
- The provides at least $5 million to the Office of Technology Transitions (OTT) to advance the **Energy Program for Innovation Clusters (EPIC)** program.
- The bill does not provide any guidance on **Clean Energy Manufacturing Innovation Institutes**.
- NNSA's **Research, Technology, and Engineering** program would see an increase of $219 million above the FY 2022 enacted level. This would include $112 million for **Academic Programs**, the same as the FY 2022 enacted level. The largest single program increase would be an additional $50 million for the **Inertial Confinement Fusion** program, which benefited from the most recent fusion ignition scientific milestone.
- The bill would provide $20 million to fully fund the four **University Consortia for Nuclear Nonproliferation Research**.

Department of Energy

(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	Omnibus vs. FY 2022 Enacted
DOE, Total	**44,855,624**	**48,190,405**	**49,345,050**	**46,243,359**	**1,387,735 (3.1%)**
Science	**7,475,000**	**8,000,000**	**8,100,000**	**8,100,000**	**625,000 (8.4%)**
Advanced Scientific Computing Research	1,035,000	1,050,000	1,077,000	1,068,000	33,000 (3.2%)
Basic Energy Sciences	2,308,000	2,495,000	2,540,439	2,534,000	226,000 (9.8%)
Biological and Environmental Research	810,000	905,000	913,685	908,685	98,685 (12.2%)
Fusion Energy Sciences	713,000	768,222	743,222	763,222	50,222 (7.0%)
High Energy Physics	1,078,000	1,158,000	1,168,000	1,166,000	88,000 (8.2%)
Nuclear Physics	728,000	780,000	805,196	805,196	77,196 (10.6%)
Isotope R&D and Production	82,000	97,451	115,451	109,451	27,451 (33.5%)
Accelerator R&D and Production	18,000	27,436	27,436	27,436	9,436 (52.4%)
Workforce Development for Teachers and Scientists	35,000	42,000	41,300	42,000	7,000 (20.0%)
Science Laboratories Infrastructure	291,000	276,170	268,000	280,700	-10,300 (3.5%)
ARPA-E	**450,000**	**550,000**	**570,364**	**470,000**	**20,000 (4.4%)**
EERE	**3,200,000**	**4,000,000**	**3,799,000**	**3,460,000**	**260,000 (8.1%)**
Advanced Manufacturing Technologies	416,000	500,000	582,500	450,000	34,000 (8.2%)
Vehicle Technologies	420,000	500,000	520,000	455,000	35,000 (8.3%)
Building Technologies	307,500	345,000	364,770	332,000	24,500 (8.0%)
Solar Energy Technologies	290,000	370,000	310,000	318,000	28,000 (9.7%)
Bioenergy Technologies	262,000	310,000	288,500	280,000	18,000 (6.9%)
Wind Energy Technologies	114,000	250,000	210,000	132,000	18,000 (15.8%)

Water Power Technologies	162,000	185,000	196,000	179,000	17,000 (10.5%)
Hydrogen and Fuel Cell Technologies	157,000	185,000	180,000	170,000	13,000 (8.3%)
Geothermal Technologies	109,500	156,000	125,000	118,000	8,500 (7.8%)
Nuclear Energy	**1,654,800**	**1,779,800**	**1,765,600**	**1,473,000**	**-181,800 (11.0%)**
Fossil Energy and Carbon Management	**825,000**	**880,000**	**880,000**	**890,000**	**65,000 (7.9%)**
Electricity	**277,000**	**350,000**	**362,000**	**350,000**	**73,000 (26.4%)**
Cybersecurity, Energy Security, and Emergency Response	**185,804**	**205,000**	**202,143**	**200,000**	**14,196 (7.6%)**
Clean Energy Demonstrations	**20,000**	**189,000**	**150,000**	**89,000**	**69,000 (345.0%)**
Grid Deployment*	--	--	--	--	--
Manufacturing and Energy Supply Chains*	--	--	--	--	--
National Nuclear Security Administration	**20,656,000**	**21,232,065**	**22,102,143**	**22,162,564**	**1,506,564 (7.3%)**
Weapons Activities	15,920,000	16,333,065	16,986,298	17,116,119	1,196,119 (7.5%)
Defense Nuclear Non-proliferation	2,354,000	2,424,000	2,538,000	2,490,000	136,000 (5.8%)

*Grid Deployment, and Manufacturing and Energy Supply Chains are new programs proposed in the FY 2023 President's budget request.

Source:

- The joint explanatory statement is available at https://www.appropriations.senate.gov/imo/media/doc/Division%20D%20-%20Energy%20&%20Water%20Statement%20FY23.pdf .

Department of Health and Human Services (HHS)

The **Department of Health and Human Services (HHS)** would receive $1.2 trillion under the FY 2023 omnibus spending bill. This would be a $98.9 billion increase over the FY 2022 enacted level. Overall funding levels for the sub-agencies are detailed below. Overall, the bill would provide resources for the government's efforts to grow biomedical research, the nation's public health infrastructure, and address issues prioritized by the White House over the last year, including investments in behavioral and mental health treatment, substance use disorder (SUD) treatment, and improving maternal and infant health outcomes.

In addition to funding federal agencies through the end of FY 2023, the bill has health policy provisions dealing with behavioral and mental health, pandemic preparedness, Medicaid, the Medicare physician fee schedule, and telehealth among others.

National Institutes of Health (NIH)

The omnibus would provide $47.5 billion for NIH, an increase of $2.5 billion (5.6 percent) above the FY 2022 enacted level. This marks the eighth consecutive funding increase for NIH and reflects strong bipartisan support for the agency.

The omnibus would provide $1.5 billion in new funding for the Advanced Research Projects Agency for Health (ARPA-H) in FY 2023. The Biden Administration's signature health research initiative, ARPA-H was established in the FY 2022 omnibus appropriations bill with $1 billion in funding available through FY 2024. With this new funding, ARPA-H now has an operating budget of approximately $2.5 billion available through FY 2025. In addition, the FY 2023 omnibus package includes language that authorizes ARPA-H and provides direction regarding the agency's authorities, internal organization, functions, and personnel.

Since ARPA-H was first proposed by the Biden Administration nearly two years ago, various stakeholders have articulated the need for ARPA-H to have significant independence from NIH so that it could develop the unique culture and mission that it needs to be successful. The ARPA-H authorization language included in the omnibus addresses this issue by requiring that no part of the agency be located on any part of the existing NIH campus and that it must establish no less than three offices or facilities in three distinct geographic areas. In addition, like the current inaugural director, Renee Wegrzyn, future ARPA-H directors will be appointed by the President and will report to the HHS Secretary.

Within the total appropriation, the omnibus would provide $1.1 billion for specific initiatives in the NIH Innovation Account authorized in the *21st Century Cures Act* (Cures; P.L. 115-255), consistent with spending levels enacted in the legislation. Of this amount, $216 million is provided for the original

Cancer Moonshot effort; $450 million is provided for the BRAIN Initiative; and $419 million is provided for the *All of Us* precision medicine initiative.

The omnibus would provide an increase of $226 million in funding for research on Alzheimer's Disease and Related Dementias (ADRD), bringing the total investment in ADRD at the NIH to $3.6 billion. The omnibus would provide $355.3 million for research related to opioid addition, non-addictive opioid alternatives, pain management, and addiction treatment at the National Institute on Drug Abuse (NIDA) and $280.3 million at the National Institute of Neurological Disorders and Stroke (NINDS) as part of NIH's ongoing Helping to End Addiction Long-term (HEAL) Initiative.

Of note, the FY 2023 omnibus would provide $80 million for biomedical research facilities grants to expand, remodel, or renovate research infrastructure (awarded using NIH's C06 grant mechanism), a $10 million increase over the FY 2022 level.

Within the National Institute of General Medical Sciences (NIGMS), the omnibus would provide $426 million for the research capacity building Institutional Development Awards (IDeA) program, an increase of $15.5 million above the FY 2022 enacted level. In addition, the omnibus articulates Congress' opposition to changing eligibility for the IDeA program to be based on a state's population. The omnibus would also provide a targeted increase of $10 million for NIGMS programs designed to enhance diversity in the biomedical research workforce, including the Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) program and the Minority Access to Research Careers (MARC) program, among others.

Within the National Center for Advancing Translational Sciences (NCATS), the omnibus would provide $629.6 million for the Clinical and Translational Science Awards (CTSA) program, an increase of $22.9 million over the FY 2022 level. In report language accompanying the omnibus, Congress makes clear that it disapproves of NCATS efforts to disaggregate CTSA activities and directs NCATS to provide a briefing to the Appropriations Committees on options to "reverse disaggregation and preserve historic CTSA activities and institutional support."

Within the National Institute of Allergy and Infectious Diseases (NIAID), the omnibus would provide $270 million for research to develop a universal influenza vaccine. The omnibus also includes $565 million, an increase of $25 million, to support research to combat antimicrobial resistance (AMR) and training for new investigators to support AMR research capacity. In addition, the omnibus would provide $52 million to the 12 Regional Biocontainment Laboratories supported by NIAID to ensure that these facilities are prepared to assist during public health emergencies.

The omnibus would provide $135 million to support NIH activities in artificial intelligence (AI) and machine learning (ML). Of this amount, $85 million, an increase of $15 million over the FY 2022 enacted level, would be directed to the NIH Office of Data Science Strategy and $50 million would be directed to AI and ML focused investments to accelerate biomedical research innovation.

The omnibus would continue to fund several of the Biden Administration's health research priorities, including $12.5 million to support research on firearm injury and mortality prevention, $43.4 million for the Implementing a Maternal Health and Pregnancy Outcomes Vision for Everyone (IMPROVE) Initiative, and $30 million, an increase of $10 million above the FY 2022 level, for the Community Engagement Alliance Against COVID-19 Disparities (CEAL) Initiative to continue work with underrepresented communities hit hardest by the pandemic.

Of note, the omnibus would provide the National Institute of Environmental Health Sciences (NIEHS) with $40 million to support "additional research" on a range of health conditions, including infectious disease and chronic conditions like asthma, mental health, and health disparities. This funding may be used to support the NIH's Climate Change and Health Initiative that was launched in 2022.

Research on identifying and reducing health disparities is highlighted as a focus across nearly all NIH Institutes and Centers, and the omnibus would provide $45 million in targeted funding for this research at the National Institute on Minority Health and Health Disparities (NIMHD; $25 million), the National Institute of Nursing Research (NINR; $10 million), the National Institute of General Medical Sciences (NIGMS; $5 million), and the Fogarty International Center (FIC; $5 million).

Of note, the omnibus would retain the investigator salary cap at Executive Level II and once again includes legislative language prohibiting the Administration or HHS from making any changes to facilities and administrative (F&A) cost policies.

National Institutes of Health

(In thousands of $)

	FY 2022 Enacted	FY 2023 Request	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	Omnibus vs. FY 2022 Enacted
NIH, Total	**44,959,000**	**49,039,748**	**47,459,000**	**46,959,000**	**47,459,000**	**2,500,000 (5.56%)**
National Cancer Institute (NCI)	**6,912,522**	**6,713,851**	**7,378,579**	**7,203,064**	**7,320,159**	**407,637 (5.90%)**
National Heart, Lung, and Blood Institute (NHLBI)	**3,808,494**	**3,822,961**	**3,943,702**	**3,946,557**	**3,982,345**	**173,851 (4.56%)**
National Institute of Dental and Craniofacial Research (NIDCR)	**501,231**	**513,191**	**526,051**	**526,769**	**520,163**	**18,932 (3.78%)**
National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)	**2,353,926**	**2,347,530**	**2,283,489**	**2,290,798**	**2,442,171**	**88,245 (3.75%)**
National Institute of Neurological Disorders and Stroke (NINDS)	**2,611,370**	**2,768,043**	**2,833,590**	**2,765,918**	**2,813,925**	**202,555 (7.76%)**
National Institute of Allergy and	**6,322,728**	**6,268,313**	**6,642,608**	**6,449,804**	**6,562,279**	**239,551 (3.79%)**

Infectious Diseases (NIAID)						
National Institute of General Medical Sciences (NIGMS)	**3,092,373**	**3,097,557**	**3,200,157**	**3,218,237**	**3,239,679**	**147,306 (4.76%)**
Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)	**1,683,009**	**1,674,941**	**1,756,630**	**1,745,682**	**1,749,078**	**66,069 (3.93%)**
National Eye Institute (NEI)	**863,918**	**853,355**	**891,186**	**890,700**	**896,549**	**32,631 (3.78%)**
National Institute of Environmental Health Sciences (NIEHS)	**842,169**	**932,056**	**878,750**	**918,276**	**913,979**	**71,810 (8.53%)**
National Institute on Aging (NIA)	**4,219,936**	**4,011,413**	**4,443,196**	**4,343,005**	**4,407,623**	**187,687 (4.45%)**
National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)	**655,699**	**676,254**	**676,395**	**686,025**	**685,465**	**29,766 (4.54%)**
National Institute on Deafness and Other Communications Disorders (NIDCD)	**514,885**	**508,704**	**531,136**	**530,847**	**534,333**	**19,448 (3.78%)**
National Institute of Mental Health (NIMH)	**2,216,976**	**2,210,828**	**2,428,775**	**2,332,672**	**2,337,843**	**120,867 (5.45%)**
National Institute on Drug Abuse (NIDA)	**1,595,474**	**1,843,326**	**1,712,832**	**1,684,230**	**1,662,695**	**67,221 (4.21%)**
National Institute on Alcohol Abuse and Alcoholism (NIAAA)	**573,651**	**566,725**	**591,757**	**591,434**	**595,318**	**21,667 (3.78%)**

National Institute on Nursing Research (NINR)	180,862	198,670	208,571	196,468	197,693	16,831 (9.31%)
National Human Genome Research Institute (NHGRI)	639,062	629,154	659,233	658,873	663,200	24,138 (3.78%)
National Institute of Biomedical Imaging and Bioengineering (NIBIB)	424,590	419,493	437,991	437,752	440,627	16,037 (3.78%)
National Institute on Minority Health and Health Disparities (NIMHD)	459,056	659,817	505,292	534,287	524,395	65,339 (14.23%)
National Center for Complementary and Integrative Health (NCCIH)	159,365	183,368	164,395	174,305	170,384	11,019 (6.91%)
National Center for Advancing Translational Sciences (NCATS)	882,265	873,654	901,678	907,756	923,323	41,058 (4.65%)
John E. Fogarty International Center (FIC)	86,880	95,801	99,622	89,574	95,162	8,282 (9.53%)
National Library of Medicine (NLM)	479,439	471,998	494,572	494,302	497,548	18,109 (3.78%)
Office of the Director (OD)	2,616,520	2,302,065	2,549,813	2,560,065	2,642,914	26,394 (1.01%)
Building Facilities	250,000	300,000	300,000	350,000	350,000	100,000 (40.00%)
Common Fund	657,401	645,939	678,151	707,401	722,401	65,000 (9.89%)
Advanced Research Projects Agency for Health (ARPA-H)	1,000,000	5,000,000	2,750,000	1,000,000	1,500,000	500,000 (50.00%)

Other Agencies Within HHS

The **Health Resources and Services Administration (HRSA)** would receive $9.5 billion, a $908.5 million increase above the FY 2022 level. Within HRSA, the Bureau of Health Workforce (BHW) would receive $1.4 billion, $95 million over the FY 2022 level but $230 million short of the Biden Administration's request. The omnibus agreement would provide a $60.6 million (11.7 percent) increase for Title VII Health Professions workforce programs and a $20 million (7.1 percent) increase for Title VIII Nursing workforce programs. More specifically, the final bill would provide increased funding amounts for the following Title VII and Title VIII programs:

- $153 million for the Behavioral Health Workforce Education and Training (BHWET) programs, a $30 million increase over the FY 2022 level, which includes $25 million for the Addiction Medicine Fellowship and $40 million for the STAR Loan Repayment program but does not include funding for the Behavioral Health Integration into Community Based Settings, the Community Improvement Program, or the Crisis Workforce Development programs as proposed in the FY2023 House bill.
- $47 million for the Area Health Education Centers (AHEC), a $2 million increase, including $3 million to continue simulation education grants and support purchase of simulation equipment.
- $89.6 million for the Advanced Education Nursing Program, a $10 million increase, including $8 million to train Certified Nurse Midwives.
- $59.4 million for the Nurse Education, Practice, and Retention program, a $5 million increase, with awards able to support purchase of simulation equipment.
- $24.3 million for the Nursing Workforce Diversity program, a $1 million increase.
- $55 million for the Scholarships for Disadvantaged Students program, a $2 million increase, including $5 million for midwife training efforts.
- $47 Million for the Geriatrics Programs, which includes the Geriatrics Workforce Enhancement Program (GWEP) and the Geriatrics Academic Career Award (GACA) program, a $2 million increase across both programs.
- $28.5 million for the Nursing Faculty Loan Repayment Program, level with the FY 2022 amount.

Of note, the agreement would not include any funding for healthcare provider burnout prevention programs as authorized in the *Dr. Lorna Breen Health Care Provider Protection Act*. The agreement would fund HRSA's Rural Communities Opioid Response Program (RCORP) at $145 million, a $10 million increase over the FY 2022 level. The bill would also provide a $127 million increase for maternal and child health programs above FY 2022 levels, including $10 million to establish a research network of minority-serving institutions (MSI) to study health disparities in maternal health outcomes. The bill would support HRSA's request to transfer the Office for the Advancement of Telehealth (OAT) from the Federal Office of Rural Health Policy (FORHP) to an independent, HRSA-wide office and provide a $3 million increase for Telehealth programs. The agreement would include $8 million for the Rural Maternity and Obstetrics Management Strategies, a $2 million increase, and $125.6 million for the National Health Service Corps, a $4 million increase. The agreement also would include $165 million to support the Ending the HIV Epidemic Initiative, a $40 million increase over FY 2022 levels. Finally, the bill includes over $1.5 billion for congressionally directed spending projects.

The **Centers for Disease Control and Prevention (CDC)** would receive $9.2 billion, an increase of $760 million over the FY 2022 enacted level. Part of the increase is $350 million in funding for public health infrastructure and capacity. The agency would also receive $1.4 billion for chronic disease prevention

and health promotion, $246.9 million for environmental health programs, $362.8 million for the National Institute for Occupational Safety and Health (NIOSH), and $692.8 million for global health activities.

With regard to the public health preparedness and response, the omnibus would provide $883.2 million, with $735 million going to the Public Health Emergency Preparedness (PHEP) cooperative agreement, $9.2 million for academic centers for public health preparedness, and $139 million would be allocated for CDC preparedness and response. In the aftermath of the COVID-19 pandemic, CDC Director Dr. Rochelle Walensky called for an overhaul of how the agency responds to a public health crisis. In public statements, Walensky has pushed the agency to become more timely, collaborative, and accountable.

In total, the bill would provide:

- $500 million for Immunization and Respiratory Diseases Prevention and $419 million for the Public Health Fund, a total of $919 million or an increase of $51.1 million over FY 2022 enacted levels;
- $1.4 billion for HIV/AIDS, viral hepatitis, sexually transmitted diseases, and tuberculosis prevention, an increase of $46 million over FY 2022 enacted levels;
- $26 million for Lyme Disease and $62.6 million for vector-borne diseases;
- $754 million for Public Health Scientific Services, including $175 million for CDC's Data Modernization Initiative and $71 million for public health workforce programs;
- $883.2 million for public health preparedness and response, an increase of $21 million over FY 2022 enacted levels;
- $761 million for Injury Prevention and Control, including $12.5 million for firearm injury and mortality prevention research;
- $751 million for emerging and zoonotic infectious diseases, an increase of $58 million over FY 2022 enacted levels, which includes $197 million for CDC's Antibiotic Resistance Initiative; and
- $50 million for the Center for Forecasting and Outbreak Analysis, all of which would be new funding.

The bill would provide $7.5 billion for the **Substance Abuse and Mental Health Services Administration (SAMHSA)**, an increase of $970 million over the FY 2022 enacted level. The bill would provide $2.8 billion in total funding for the Center for Mental Health Services (CMHS), an increase of nearly $707 million above FY 2022 enacted levels. The bill would also provide $4.2 billion in total funding to the Center for Substance Abuse Treatment (CSAT), an increase of $202 million over FY 2022 enacted levels, and $237 in total funding to the Center for Substance Abuse Prevention (CSAP), a $19 million increase above FY 2022 enacted levels.

Within SAMHSA, the bill would provide approximately $2 billion for the **Substance Abuse and Prevention Treatment Block Grant**, $100 million above FY 2022 enacted levels; $385 million for the Certified Community Behavioral Health Clinics, an increase of $70 million over FY 2022 enacted levels; and $1.6 billion for State Opioid Response Grants, an increase of $50 million over the FY 2022 enacted level. The bill would also provide:

- $19.4 million for Minority Fellowship Programs (MFP) across SAMHSA;
- An increase for SAMHSA's Project Advancing Wellness and Resiliency in Education (AWARE) program, which provides grants for improvement of mental health literacy among teachers and

other youth-facing professionals. This includes $17.5 million for grants to high-crime, high-poverty areas to address root causes of civil unrest and community violence and $12 million to increase student access to evidence-based, culturally relevant trauma support services and mental health care through established partnerships with community organizations;
- $28.2 million for the National Strategy for Suicide Prevention, a $5 million increase over FY 2022 enacted levels;
- $6 million for the Comprehensive Opioid Recovery Centers program, a $1 million increase over FY 2022 enacted levels;
- $8 million to hospitals and emergency departments under the Emergency Department Alternatives to Opioids program, a $2 million increase above FY 2022 enacted levels; and
- Encouragement to SAMHSA to support rural communities by standing up initiatives to advance opioid abuse prevention, treatment, and recovery objectives, including by improving access through telehealth.

The omnibus would provide $373.5 million to the **Agency for Healthcare Research and Quality (AHRQ)**, an increase of $23.1 million over the FY 2022 enacted level. This would include continued funding of $2 million for a Center for Primary Care Research within AHRQ and an additional $10 million for health systems research on how to best deliver care to those living with Long COVID, including the development and implementation of new models of care. The bill would include $20 million to fund research related to diagnostic errors, supporting eight Centers of Excellence. The bill would additionally direct AHRQ to increase research efforts on maternal health, grief and bereavement care, organ availability, people with disabilities, and sepsis.

The **Office of the National Coordinator for Health IT (ONC)** would be funded at $66.2 million, a $2 million increase above the FY 2022 enacted level. The omnibus would provide $5 million to support interoperability and information sharing efforts related to the implementation of Fast Healthcare Interoperability (FHIR) standards or associated implementation standards. In addition, while the legislation would limit funds for action related to the promulgation or adoption of a standard providing for the assignment of a unique health identifier, it does not prohibit ONC from examining the issues around patient matching and urges ONC to work with industry to develop better patient matching standards.

The **Office of Minority Health (OMH)** would be funded at $74.8 million, a $10 million increase above the FY 2022 enacted level. The legislation would include $7 million for the Achieving Equitable Maternal Health Outcomes program which would issue awards to community based and other organizations in areas with rates of adverse maternal health outcomes, particularly among racial and ethnic minority families. The legislation would continue to fund OMH initiatives including Language Access Services, the Lupus Initiative, and the Minority Leaders Development Program.

The **Assistant Secretary for Preparedness and Response (ASPR)** would receive $3.3 billion under the Omnibus, an increase of $481 million over the FY 2022 enacted level. Earlier this year, the White House announced it was elevating ASPR into a separate division and placing it in charge of leading the nation's response to health emergencies. The new agency will be named the Administration of Strategic Preparedness and Response and will be phased in over a two-year period.

For FY 2023, ASPR would receive an additional $120 million over the FY 2022 level for the National Stockpile, to $965 million, and an additional $40 million for Project BioShield, for a total funding level at

$820 million. Congress would direct the agency to continue working with other agencies and pharmaceutical and device supply chain experts to prepare for the next public health emergency.

The omnibus would provide $950 million for the **Biomedical Advanced Research and Development Authority (BARDA)**, a significant increase of $204.9 million over the FY 2022 enacted level. This would include continued support for advanced research and development of broad-spectrum antimicrobials and next-generation therapeutics that address antimicrobial resistance. In addition, the legislation would urge BARDA to accelerate clinical trial opportunities to achieve FDA approval for a nasal COVID-19 vaccine; collaborate with U.S. industry to expand domestic manufacturing of key biological starting materials (KSM); and establish public-private partnerships to advance the research and development of innovative platform technologies and medical countermeasure programs focused on vaccines, therapeutics, and other countermeasures for emerging diseases and novel pathogens. In addition to other HHS agencies, the bill would call on BARDA to consider investments in Long-COVID with an emphasis on therapies.

The **Administration for Community Living (ACL)** would receive $2.6 billion, a $220 million increase, for aging and disability services programs. The bill includes $2 million for a direct care workforce demonstration project to reduce barriers and improve recruitment and retention of direct care workers and $5 million for a Research, Demonstration, and Evaluation Center for the Aging Network. Additionally, the National Institute on Disability, Independent Living, and Rehabilitation Research (NIHILRR) would receive $119 million, an increase of $2.53 million over the FY 2022 enacted level. The bill would provide $46 billion for the **Administration for Children and Families (ACF)** in FY 2023, an increase of $1.75 billion over the FY 2022 enacted level.

The **Centers for Medicare and Medicaid Services (CMS)** would receive $4.3 billion in discretionary program management funding, and a total of $5.2 billion in total discretionary funding under the omnibus. Both funding amounts match the amounts requested by the administration for FY 2023.

Key Policy Health Care Provisions

In addition to funding the department through FY 2023, the omnibus includes new policy provisions for HHS. Below are key policies that would be enacted:

- The spending package would mitigate Medicare physician fee cuts starting January 1. Physicians would have seen a 4.5 percent cut to their pay, however, under the omnibus, the cut will be 2 percent in calendar year (CY) 2023 and increase by another 1.25 percent in CY 2024. Cuts triggered by the *Statutory Pay-As-You-Go Act of 2010* (PAYGO) which were tied to the cost of the *American Rescue Plan*, are delayed from going into effect for two years. To help offset parts of the relief for physicians and other health policies, sequestration was extended to the first six months of 2032.
- COVID-19 telehealth flexibilities are extended for an additional two years.
- The spending package would end Medicaid and the Children's Health Insurance Program (CHIP) maintenance of effort requirements for states as of April 1, by lifting continuous coverage requirements. However, the bill includes a new policy of requiring all states to cover children for 12 months in Medicaid and CHIP regardless of changes in circumstances and makes permanent one year of post-partum coverage enacted under the *American Rescue Plan* as a state option.
- Under current law, the 6.2 percentage point increase in the Medicaid federal medical assistance percentage (FMAP) sunsets after the end of the quarter in which the public health emergency

(PHE) ends. Under the omnibus, the 6.2 percent FMAP increase remains through the first three months of CY 2023 and then ramps down through CY 2023.

- The omnibus spending bill extends funding for CHIP through FY 2029.
- The omnibus spending bill would authorize several programs that support mental health care and substance use disorder prevention, care, and treatment. For instance, the bill would reauthorize the National Suicide Prevention Lifeline Program, Community Mental Health Service Block Grants, Substance Use and Prevention, Treatment, and Recovery Block Grants, and the Garrett Lee Smith Memorial Program. The bill would also authorize funding for maternal mental health programs and establishes a maternal mental health hotline. The bill also calls on the HHS Secretary to support research on the effects of smartphones and social media use among adolescents as well as research on the health and development effects of media and related technology on infants, children, and adolescents.

The omnibus would authorize programs that were part of the Senate Health, Education, Labor, and Pensions (HELP) Committee's PREVENT Pandemics Act. The bill would provide improvements to the Strategic National Stockpile as well as data collection and public health communication. Under the bill, the CDC Director position would become a Senate confirmed position after the next election.

Department of Health and Human Services

(In millions of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	FY 2023 Omnibus vs. FY 2022 Enacted
Health Resources and Services Administration (HRSA)	**8,892**	**9,575**	**9,672**	**9,744**	**852 (9.58%)**
Title VII	519	678	677	765	246 (47.40%)
Title VIII	280	324	318	295	15 (5.36%)
Substance Abuse and Mental Health Services Administration (SAMHSA)	**6,400**	**9,025**	**9,003**	**7,370**	**970 (15.16%)**
Mental Health	2,081	3,807	3,623	2,789	708 (34.02%)
Substance Use Services	3,955	4,826	5,045	4,157	202 (5.11%)
Substance Use Prevention	218	248	248	237	19 (8.72%)
Agency for Healthcare Research and Quality (AHRQ)	**350**	**385**	**385**	**374**	**24 (6.86%)**
Centers for Disease Control and Prevention (CDC)	**8,457**	**10,499**	**10,501**	**9,218**	**761 (9.00%)**

Chronic Disease Prevention and Health Promotion	1,339	1,602	1,595	1,430	91 (6.80%)
National Institute for Occupational Safety and Health (NIOSH)	352	363	367	363	11 (3.13%)
Environmental Health	228	329	394	247	19 (8.33%)
Administration on Community Living (ACL)	**2,318**	**2,918**	**2,515**	**2,538**	**220 (9.49%)**
National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR)	116	117	119	119	3 (2.59%)
Administration for Children and Families (ACF)	**48,715**	**51,429**	**52,430**	**50,463**	**1,748 (3.59%)**
Office of the National Coordinator for Health IT (ONC)	**64**	**87**	**74**	**66**	**2 (3.13%)**
Assistant Secretary for Preparedness and Response (ASPR)	**2,820**	**3,145**	**3,077**	**3,302**	**482 (17.09%)**
Biomedical Advanced Research and Development Authority (BARDA)	745	845	819	950	205 (27.52%)

Sources:

- Bill text: https://www.appropriations.senate.gov/imo/media/doc/JRQ121922.PDF
- Joint Explanatory Statement of Division H, Departments of Labor, Health and Human Services, and Education, and Related Agencies at https://www.appropriations.senate.gov/imo/media/doc/Division%20H%20-%20LHHS%20Statement%20FY23.pdf.

Department of Homeland Security (DHS)

The Department of Homeland Security (DHS) would receive $86.5 billion in the FY 2023 omnibus bill. The legislation proposes $60.7 billion in discretionary funds to the DHS, reflecting a $3.2 billion increase over FY 2022 enacted levels and a $4 billion increase over the FY 2023 budget request. The bill would help the agency prepare for a wide range of missions, including responding to natural disasters, securing the nation's air, land, and seaports of entry, and bolstering critical infrastructure resiliency and cybersecurity capabilities.

For the DHS **Science and Technology Directorate (S&T)**, the omnibus would provide $900.5 million, representing a slight decline compared to the budget request, while offering a $14.1 million increase compared to the FY 2022 enacted level. Of this amount, $461.2 million would be directed to S&T's research and development (R&D) activities, representing a $2.5 million increase over the budget request, but fall $81.7 million below the FY 2022 enacted level.

The package would also provide $53.5 million in funding for **the Office of University Programs** (OUP), a $12 million decrease compared to the FY 2022 enacted levels. This figure represents an increase of $2.5 million over the requested amount and matches the funding proposed by both House and Senate Committees for the Department's Minority-Serving Institutions Program (*as defined in section 371(a) of the Higher Education Act of 1965 (20 U.S.C. 1067q(a)*). Within the OUP account, appropriators matched the request for the DHS Centers of Excellence (COE) program, funding the program at $45.9 million. This will evenly fund seven existing COEs and two centers still to be determined. The Committee also notes the importance of Emeritus COEs, requiring S&T to brief Congress on how DHS is "leveraging" these centers to address mission challenges.

Additionally, the bill directed the following research-related policy provisions at S&T:

- **Increased Collaboration with Stakeholders** – Appropriators requested a briefing from S&T on efforts to expand outreach to research stakeholders. Notably, S&T released the *DHS Partnership Guide* in September 2022, a new approach taken by the Department to open lines of communication to a broader pool of potential R&D partners.
- **Increased Accountability** – The Omnibus package includes a requirement for S&T to develop and brief the Committee on performance measures that capture the operational impact of R&D investments to components, an issue S&T has been grappling with since the Department's creation.

The omnibus also includes the following research priorities and investments for S&T consideration:

- **$4 million** for Unmanned Aerial Systems (UAS) research
- **$2 million** above the request for Low-Cost Team Awareness Kits (TAK)

- **$4.7 million** above the request for ports of entry data analytics research
- **$5 million** above the request for active neutron interrogation for cargo screening
- **$3 million** above the request for research into threats to port and maritime critical infrastructure
- **$5 million** above the request for voting technologies and election data security
- **$6 million** to support *U.S. Israel Cybersecurity Cooperation* grant program
- **$9 million** above the request for research exploring mesonet exploitation
- **$1.5 million** for FEMA to explore 3D simulation technologies for disaster resilience
- **$5 million** above the request for *Research and Prototyping for Improvised Explosive Device Defeat* (RAPID) program
- **$2 million** above the request for the *Binational Industrial Research and Development Homeland Security* (BIRD HLS) program
- **$10 million** above the request for secure composite shipping containers demonstrations
- **$5 million** above the request for work to be performed at the Artificial Intelligence (AI) Technology Center
- **$615 million** in federal assistance for the Urban Area Security Initiative, representing a $96.2 million cut compared to the President's budget request.

Department of Homeland Security

(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	Omnibus vs. FY 2022 Enacted
DHS, total	**81,258,456**	**85,875,325**	**81,905,414**	**86,469,996**	**5,211,540 (6.4%)**
Science and Technology Directorate	**886,403**	**963,777**	**941,856**	**900,541**	14,138 (1.6%)
University Programs	65,537	53,537	53,537	53,537	-12,000 (18.3%)

**Total discretionary appropriations not including disaster response allocations and other fees from page 3 of the explanatory report.*

Sources:

- The joint explanatory statement for DIVISION F - Homeland Security is available at: https://appropriations.house.gov/sites/democrats.appropriations.house.gov/files/documents/Division-F-Homeland-Statement-FY23.pdf

Department of Justice (DOJ)

The U.S. Department of Justice (DOJ) would receive $38.7 billion in FY 2023, which would be an increase of $3.5 billion above the FY 2022 enacted level but $716.5 million below the president's budget request. In contrast to FY 2022, when key research accounts at DOJ saw funding cuts, both the Research, Evaluation, and Statistics account topline number and the **National Institute of Justice (NIJ)** would see increases in the FY 2023 bill. The Research, Evaluation, and Statistics account would be funded at $77 million dollars, an increase of $7 million over FY 2022, and NIJ would be funded at $35 million, an increase of $5 million over FY 2022 funding levels.

The bill would set aside funding for several specific topics within the NIJ budget, including: $1.2 million for a study on hate crimes in K-12 education; $1 million for research on law enforcement's responses to opioid overdoses and the practices utilized to ensure the well-being of children in those situations; $1 million for research on domestic violence radicalization; $1 million for research on violence against Native Americans, Alaska Natives, and other Indigenous communities at extraction sites; $7.5 million for research on domestic radicalization; $1 million for research on gun violence prevention; $1 million for a campus sexual assault climate survey; and $1 million for research on school safety. NIJ is also encouraged to undertake additional research on domestic violence homicide protection. Finally, the omnibus calls for consideration of research provisions that were outlined in the FY 2023 House bill; however, most of these provisions are also reflected in the omnibus text.

Other research studies supported by the bill include $3 million to continue the National Center on Restorative Justice; $4 million to establish a national drug data research center at an institution of higher education to combat opioid abuse; $5 million for the Office of Justice Programs to partner with at least two institutions of higher education to develop training with artificial intelligence and virtual reality; and $2 million for a competitive grant program with at least four awards to institutions of higher education to develop an Internet of Things device capabilities database to build training modules for law enforcement.

The bill would again provide support for the re-establishment of the DOJ Science Advisory Board, which worked to provide extra-agency review of, and recommendations for, the department's research, statistics, and grants programs.

Department of Justice

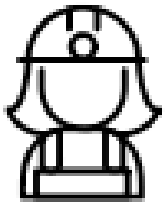
(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	Omnibus vs. FY 22 Enacted
DOJ, total	**35,207,110**	**38,502,776**	**38,552,249**	**38,551,214**	**3,344,104 (9.5%)**
Research, Evaluation, and Statistics	**70,000**	**80,000**	**88,000**	**77,000**	**7,000 (10%)**
National Institute of Justice	30,000	35,000	43,000	35,000	5,000 (16.67%)

Source:

- The joint explanatory statement for Division B, COMMERCE, JUSTICE, SCIENCE, AND RELATED AGENCIES is available at https://www.appropriations.senate.gov/imo/media/doc/Division%20B%20-%20CJS%20Statement%20FY23.pdf.

Department of Labor



Department of Labor (DOL)

The Department of Labor (DOL) would receive $13.8 billion in discretionary funding, which is $652 million more than in fiscal year (FY) 2022.

Programs that would see increased investments include:

- Workforce Innovation and Opportunity Act (WIOA) programs, including $885.6 million for Adults, $948.1 million for Youth, and $1.1 billion for Dislocated Workers;
- $325.8 million for the Dislocated Workers National Reserve, which is $25 million more than FY 2022 funding. This includes:
    - $20 million for **Career Pathways for Youth Grants**;
    - $65 million for the **Strengthening Community College Training Grants** program, an increase of $15 million above FY 2022; and
    - $50 million for the **Workforce Opportunity for Rural Communities** program.
- $115 million for **Reentry Employment Opportunities** programs, an increase of $12.9 million compared to FY 2022;
    - $30 million for national and regional intermediaries.
- $6 million for the **Workforce Data Quality Initiative**, which is level with the FY 2022 funding amount; and
- $285 million for **Registered Apprenticeships** (RA) grants, which is $50 million more than the FY 2022 level.

Policy directives included in the report accompanying the bill include encouraging DOL to consider supporting workforce training and certificate programs targeting collaborative robotics and additive manufacturing, and to continue investments in the development of the wireless infrastructure workforce. DOL is also encouraged to partner with HHS "to support the expansion of the skilled care workforce to care for a rapidly aging U.S. population."

The bill would also include $217,324,000 in Congressionally Directed Spending/Community Project Funding requests from Members of Congress.

Department of Labor

(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	Omnibus vs. FY 2022 Enacted
Training and Employment Services					
Adult Employment and Training Activities	870,649	940,649	885,649	885,649	15,000 (1.72%)
Youth Training and Dislocated Worker Assistance	1,075,553	1,161,553	1,115,553	1,095,553	20,000 (1.8%)
National Dislocated Workers Grants	300,859	457,386	330,859	325,859	25,000 (8.3%)
Apprenticeship Program	235,000	303,000	300,000	285,000	30,000 (12.7%)
Workforce Data Quality Initiative	6,000	6,000	6,000	--	--

Sources:

- Text of Consolidated Appropriations Act of 2023 at https://www.appropriations.senate.gov/imo/media/doc/JRQ121922.PDF
- Joint Explanatory Statement of Division H, DEPARTMENTS OF LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION, AND RELATED AGENCIES at https://www.appropriations.senate.gov/imo/media/doc/Division%20H%20-%20LHHS%20Statement%20FY23.pdf

Environmental Protection Agency (EPA)

The omnibus would provide the U.S. Environmental Protection Agency (EPA) with a total of $10.13 billion for fiscal year (FY) 2023, an increase of $576 million or 6.02 percent relative to the FY 2022 enacted level. Consistent with priorities outlined in the FY 2023 President's budget request and with the House and Senate bills, the omnibus would increase investments to empower Tribes, states, and localities to address climate change, promote environmental justice (EJ), and improve air and water quality for communities, though at a significantly reduced scale than the proposed levels. In addition to regular appropriations, EPA was also allocated an additional $1.67 billion from the Disaster Relief Supplemental, though those funds would support community needs due to recent natural disasters and other crises, rather than to support research-related activities. While the omnibus and its joint explanatory statement provide guidance and reiterate specific priorities, the Committee indicated that unless otherwise noted, the language set forth in House Report 117-400 is adopted.

EPA's **Science and Technology (S&T)** account would receive $802.28 million, an increase of $52.10 million or 6.9 percent above the FY 2022 enacted level. All intramural S&T research accounts would increase relative to FY 2022 enacted levels. **The Science to Achieve Results (STAR) Program,** EPA's primary mechanism for funding external research grants, would be flat funded at a level of $28.6 million, marking the seventh year in a row that funding for this program has not increased. Under this funding envelope, the Committee directs continued funding for Children's Environmental Health and Disease Prevention, focusing specifically on early life stage vulnerabilities to environmental stressors. The Committee also reiterates its direction to the EPA to continue to expand its efforts for "wildfire smoke monitoring, including improving instrumentation, technical assistance, and outreach" and provides a $3 million increase to support these efforts. In addition, the omnibus adopts the House report language directing the EPA to explore the feasibility to reestablish the **STAR Graduate Fellowship** program, which was eliminated in 2015 following a consolidation of federal student support programs during the Obama Administration. It also adopts directive language requesting that the EPA also explore establishing a modality that would enable investigators to introduce research topics to the EPA to bring innovation to the agency's ability to meet its mission.

In addition to the STAR Program, other areas of interests to the academic community that would be supported by the omnibus include:

- $30.8 million for the **National Priorities Program**, $19.4 million more than enacted in FY 2022. Of these funds:
    - $9.5 million would be for extramural research grants on **water quality**.
    - $8 million for research on **per- and polyfluoroalkyl substances (PFAS)**, including $5 million to support work in collaboration with the U.S. Department of Agriculture (USDA) to understand PFAS uptake into plants and animals to help reduce PFAS exposure in the food supply and to promote farm viability.

    - $13.3 to support **congressionally directed spending requests.**
- $108 million **for environmental justice (EJ) programs in disadvantaged communities**, an $8 million or 8 percent increase in funding relative to FY 2022. Although the total funding is reduced relative to levels proposed in the Administration's request and both the House and Senate proposed bills for FY 2023, EJ is expected to be incorporated across EPA's work based on policy directives from Congress and Administration guidance. In addition, funding to EJ-impacted communities will increase by multiple orders of magnitude due to significant one-time funding to the EPA through the *Inflation Reduction Act* as well as through the *Infrastructure Investment and Jobs Act, which may involve partnerships with universities*.
- $3 million for a new grant program to support the creation of between three and five **centers of excellence for new and emerging stormwater control infrastructure technologies**, as authorized in the *Infrastructure Investment and Jobs Act*;
- $4 million for a new **Enhanced Aquifer Use and Recharge program**;
- Guidance to establish a **National Native Environmental Science Training and Research Center** to provide education and research opportunities for Native American and Alaska Natives in collaboration with the EPA and Tribal communities.

Environmental Protection Agency

(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	FY 2023 Omnibus vs. FY 2022 Enacted
EPA, Total	**9,559,485**	**11,493,123**	**10,641,162**	**10,135,433**	**575,948 (6.0%)**
Science and Technology	**750,174**	**872,743**	**853,388**	**802,276**	**52,102 (6.9%)**
National Priorities Program	11,430	10,000	22,571	30,751	19,321 (168.6%)
Science to Achieve Results (STAR) Program	28,600	30,000	28,600	28,600	--

Sources:

- The Joint Explanatory Statement of Division G, DEPARTMENTS OF THE INTERIOR, ENVIRONMENT, AND RELATED AGENCIES to the FY 2023 Omnibus is available at https://www.appropriations.senate.gov/imo/media/doc/Division%20G%20-%20Interior%20Statement%20FY23.pdf.
- The House Report 117-400, which is adopted unless otherwise noted, is available athttps://docs.house.gov/meetings/AP/AP00/20220629/114967/HMKP-117-AP00-20220629-SD003.PDF.

Humanities, Arts, and Cultural Agencies

The omnibus would provide $207 million each to the **National Endowment for the Arts (NEA)** and the **National Endowment for the Humanities (NEH)**, an increase of $27 million or 15 percent for each agency over FY 2022 enacted levels. At NEA, this increase would include an additional $9.16 million for direct grant programs and an additional $2 million for the Challenge America grant program. At NEH, the increase would include an additional $3 million for Preservation and Access programs; $1.8 million for Public Programs; $2.5 million for Research programs; $1.9 million for Education programs; and $750,000 for Digital Humanities initiatives; as well as an additional $2.15 million for Challenge Grants programs, such as the Capacity Building and Infrastructure grants. Congress notes support for NEH's work with the National Science Foundation (NSF) on the Documenting Endangered Languages initiative and encourages reporting on how the program is supporting languages of minorities in Central and East Asia. The omnibus also directs NEH to support projects focused on the role of women in American history, particularly in fields such as aviation, computing, and other STEM disciplines.

The omnibus would provide the **Institute of Museum and Library Sciences (IMLS)** with $294.8 million in FY 2022, an increase of $26.8 million or 10 percent over FY 2022 enacted levels. This increase would include $4 million for the continuation and expansion of the information literacy taskforce established in FY 2022, including $2 million for development of pilot programs to evaluate the toolkits and interventions disseminated by the taskforce and to promote information literacy among seniors. The funding for IMLS also includes $1 million for activities related to the 250th anniversary of the founding of the United States.

The omnibus would also provide the **Corporation for National and Community Service (CNCS)** with $1.3 billion, an increase of $162 million or 14.1 percent over FY 2022 levels. This funding level includes an increase of $90.4 million for AmeriCorps State and National Grants and an increase of $4.8 million for Innovation, Assistance, and Other Activities, which includes the National Days of Service programs.

The **National Archives and Records Administration (NARA)** would receive $490.3 million, an increase of $13.8 million or 2.9 percent over FY 2022 enacted levels. This would include a $5 million or 71.4 percent increase for the National Historical Publications and Records Commission grants programs, for a total of $12 million in FY 2022. This amount includes $2 million for a competitive grant program to support preservation of and research on congressional papers of former members of the House and Senate. The bill would also include $23.8 million in congressionally directed spending projects. The **Smithsonian Institution** would receive $1.14 billion, an increase of $82.3 million or 7.7 percent over FY 2022 enacted levels.

Humanities, Arts, and Cultural Agencies

(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	Omnibus vs. FY 2022 Enacted
NEH, total	180,000	207,000	195,000	**207,000**	**27,000 (15%)**
Research Programs	15,000	17,500	16,250	17,500	2,500 (16.7%)
Education Programs	13,500	15,400	14,600	15,400	1,900 (14.1%)
Federal/State Partnerships	54,348	65,000	59,770	65,000	10,652 (19.6%)
NEA, total	180,000	207,000	195,000	**207,000**	**27,000 (15%)**
Grants	86,310	97,470	90,270	97,470	11,160 (12.9%)
State and Regional Partnerships	57,540	64,980	60,180	64,980	7,440 (12.9%)
IMLS, total	**268,000**	**280,000**	**301,800**	**294,800**	**26,800 (10%)**
NARA, total	**476,543**	**451,832**	**478,457**	**490,297**	**13,754 (2.9%)**
National Historical Public Records Commission	7,000	9,500	8,350	12,000	5,000 (71.4%)
CNCS, total	**1,150,636**	**1,300,636**	**1,225,322**	**1,312,806**	**162,170 (14%)**
Smithsonian Institution	**1,062,215**	**1,174,500**	**1,174,500**	**1,144,500**	**82,285 (7.7%)**

Sources:

- Text of Consolidated Appropriations Act, 2023 is available at https://www.appropriations.senate.gov/imo/media/doc/JRQ121922.PDF.
- Joint Explanatory Statement of Division G, DEPARTMENTS OF INTERIOR, ENVIRONMENT, AND RELATED AGENCIES, is available at https://www.appropriations.senate.gov/imo/media/doc/Division%20G%20-%20Interior%20Statement%20FY23.pdf.
- Joint Explanatory Statement of Division E, FINANCIAL SERVICES AND GENERAL GOVERNMENT APPROPRIATIONS is available at https://www.appropriations.senate.gov/imo/media/doc/Division%20E%20-%20FSGG%20Statement%20FY23.pdf.
- Joint Explanatory Statement of Division H, DEPARTMENTS OF LABOR, HEALTH AND HUMAN SERVICES, AND EDUCATION, AND RELATED AGENCIES, is available at https://www.appropriations.senate.gov/imo/media/doc/Division%20H%20-%20LHHS%20Statement%20FY23.pdf.

International Programs—State Department (DOS) and USAID

The *Department of State, Foreign Operations, and Related Programs* (SFOPS) bill in the omnibus package would provide $60.1 billion in appropriations, which includes funds for the **U.S. Agency for International Development (USAID)** and the **U.S. Department of State (DOS),** a 2.9 percent increase relative to the FY 2022 enacted levels. In addition, the omnibus also includes an additional $16.6 billion to DOS and USAID to support emergency humanitarian, economic, and security assistance in response to the situation in Ukraine and other countries with individuals who have been impacted. While the omnibus and its joint explanatory statement provide guidance to DOS and other agencies, the Committee indicated that unless otherwise noted, the language set forth in House Report 117-401 is adopted.

Overall, the SFOPS bill reaffirms congressional commitment for the U.S. to serve as a leading global influence in promoting democracy to counter authoritarian influence and to advance global health security, including through both bilateral and multilateral investments to prevent future pandemics. The bill also provides funding to address elevated levels of humanitarian need and vulnerability among populations in response to the impacts of the COVID-19 pandemic; climate change and natural disasters; displacement, supply chain perturbations, and economic strain due to Russia's war in Ukraine. The bill also directs significant investments towards countering the influence of malign actors and helping to position the U.S. to better compete with adversaries –including through enhanced bilateral support in the Indo Pacific, as well as through increased investments to support U.S. contributions to international organizations such as the United Nations Educational, Scientific, and Cultural Organization. The bill includes provisions to promote diversity, equity, and inclusion, by stipulating an increase in funding, authority, and guidance to equip the Secretary of State and USAID Administrator to increase diversity and inclusion in the nation's diplomatic and development workforce.

Of interest to the research and higher education community, the bill would provide:

- $777.5 million for **educational and cultural exchange programs**, an increase of $24.5 million (3 percent) relative to the FY 2022 enacted level and $36.2 million above the President's budget request. **The Fulbright Program** would be funded at $287.5 million, $2.5 million above the FY 2022 level. Within this program, the bill includes $4 million to continue to raise and expand awareness of Fulbright opportunities among students and faculty from Historically Black Colleges and Universities (HBCUs) and Hispanic Serving Institutions (HSIs), which was held flat relative to FY 2022 funding.
- $20 million for **internships**, including $2 million to support the new **Nancy Pelosi Fellowship Program** to support U.S. undergraduate students to take advantage of internship opportunities at think tanks, foundations, or other non-education institutions dedicated to global service and engagement as they pursue a career in the Foreign Service and $18,000,000 for **paid internships at the Department of State**.

- $10.6 billion for **global health programs**, an increase of $731 million (7.4 percent) above the FY 2022 enacted level. This funding includes increases across most global health program areas, with flat funding provided to Family Planning/Reproductive Health programming. The Committee directs USAID to support global health related research and development that would create best practices for nutrition intervention programs; address antibiotic resistance through research to develop new drugs and to enhance access to effective antibiotics in developing countries; vaccine development for malaria and HIV/AIDS; new global health technologies with a focus on tuberculosis treatment tools; and research on neglected tropical diseases.
- $160 million to support **agricultural research initiatives** in USAID's Bureau of Resilience and Food Security, $10 million above the FY 2022 enacted level. Of this amount, the Committee recommends $62 million for the **Feed the Future (FtF) Innovation Labs**, a $4 million increase or 6.8 percent relative to the FY 2022 enacted level. Additionally, in the House explanatory statement, the Committee urged USAID to, "support partners working in the agriculture-biotechnology research field that focus on durable resistance to climate change, plant disease, and pests, and would benefit smallholder farmers."
- $40 million for USAID's **Development Innovation Ventures Program**, a $10 million or 33 percent increase from FY 2022 enacted levels, which is run out of the Bureau for Democracy, Development, and Innovation (DDI). The bill does not specify DDI's FY 2023 funding for **the Higher Education Solutions Network** (HESN), the program that supports research, testing, translation, and convening to develop solutions to development challenges involving universities and other scientific institutions.
- $2 billion for multilateral and bilateral **climate and environment programs** at DOS and USAID including:
    - $385 million for **biodiversity programs**, equivalent to the FY 2022 enacted level.
    - $185 million for **sustainable landscapes**, equivalent to the FY 2022 enacted level.
    - $270 million for **adaptation programs**, equivalent to the FY 2022 enacted level.
    - $260 million for **clean energy programs**, equivalent to FY 2022 enacted level.

Selected Programs in Department of State, Foreign Operations, and Related Programs
(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	FY 2023 Omnibus vs. FY 2022 Enacted
Total	**58,397,679**	**64,575,000**	**64,560,000**	**60,093,900**	**1,696,221 (2.9%)**
Education and Cultural Exchange Programs	753,000	773,000	781,539	775,500	22,500 (2.9%)
Global Health Programs	9,830,000	10,976,500	10,509,500	10,560,950	730,950 (7.4%)
Feed the Future Innovation Labs	58,000	65,000	65,000	62,000	4,000 (6.8%)

Sources:

- The joint Explanatory Statement of the *Consolidated Appropriations Act, 2023*, Division K Department of State, Foreign Operations, and Related Programs is available at https://docs.house.gov/billsthisweek/20220307/BILLS-117RCP35-JES-DIVISION-K.pdf.
- The House Explanatory Statement 117-401, accompanying H.R. 8282 is available at https://docs.house.gov/meetings/AP/AP00/20220629/114967/HMKP-117-AP00-20220629-SD002.pdf.

National Aeronautics and Space Administration

National Aeronautics and Space Administration (NASA)

The National Aeronautics and Space Administration (NASA) would receive $25.384 billion in FY 2023, an increase of $1.342 billion or 5.6 percent above the FY 2022 enacted level. This includes $367 million provided in disaster supplemental funds for the Construction and Environment Compliance and Restoration account. However, nearly every major directorate is funded at levels below the FY 2023 President's Budget Request - a rare occurrence in the last decade when even politically divided congresses have allocated spending at levels above White House proposals.

The **Science Mission Directorate (SMD)** would receive $7.8 billion, an increase of $180.6 million or 2.4 percent above the FY 2022, but $193.3 million or 2.5 percent below the request. Rather than provide a granular funding direction, the explanatory statement accompanying the omnibus outlines instances where funding for missions or programs are funded at the requested levels versus "up to" requested amounts. The latter is intended to give NASA some flexibility at the programmatic levels in determining how FY 2023 funding is ultimately allocated. This also has the effect of placing NASA in the position of making hard choices given lower than requested funding in FY 2023.

SMD's **Earth Science Division (ESD)** would receive $2.195 billion, an increase of $130.3 million above FY 2022 but well below the $2.4 billion proposed in the budget request and $2.3 billion proposed in draft House and Senate bills. Funding for major missions under development would be provided at the request level, while other key programs – including the Earth Explorers and Earth Venture programs – would be funded at "up to" their requested level. The bill would provide $20 million for close-out activities on the recently cancelled Geostationary Carbon Cycle Observatory (GeoCARB) mission. The bill also directs NASA to provide greater cost and schedule details of the "Designated Observables" missions within ESD's Earth Systems Observatory program while emphasizing the need for NASA to expand competitive mission opportunities in within the program.

The **Astrophysics Division (APD)** would receive $1.51 billion, $58.9 million less than FY 2022 and slightly less than the request, as well as the House and Senate draft levels. Part of the decrease from FY 2022 is due to a ramp-down in development of the Roman Space Telescope and recent termination of the SOFIA mission. The relatively flat funding for other programs would allow ongoing missions in development and operations to continue but would limit APD's ability to implement new initiatives, including recommendations from the Astronomy and Astrophysics 2020 Decadal Survey (Astro2020). While the omnibus does not provide specific guidance on the new line of Astrophysics Probe-class missions recommended by Astro2020, guidance from the House report still controls and would support this initiative which is expected in July of next year. The bill does not include specific funding for the Astro2020's highest priority of a technology maturation program as a precursor to the development of a "Great Observatories" flagship mission but directs NASA to include appropriate funding for the program in the FY 2024 budget request. The Committee also provides $245.6 million, equal to the request, for the Astrophysics Explorers and commends NASA's commitment to accelerate the cadence of missions.

The **Planetary Science Division (PSD)** would receive $3.2 billion in FY 2023, $80 million above FY 2022 and $39.8 million above the request. The bill would provide funding for NASA's request for the Mars Sample Return (MSR) and VIPER missions, and up to requested funding for the Mars Exploration Program, Lunar Discovery and Exploration Program, New Frontiers, and the Lunar Reconnaissance Orbiter. PSD's planetary defense activities would see a boost above the amount requested to ensure continued development of the NEO Surveyor mission. Dragonfly, the current New Frontiers mission under development, would receive $400.1 million (slightly higher than the request) to account for unanticipated cost growth in the mission.

The **Heliophysics Division (HPD)** would receive $805 million, an increase of $27.1 million or 3.5 percent above the FY 2022 enacted level. Additionally, the funding for HPD is $45 million above the request and House draft level, but $23 million below the Senate draft level. The increase in funds is spread across HPD's programs and funds each at slightly above the requested level, except Heliophysics Technology, which would receive $28.4 million, equal to the requested level but $1.5 million below the House proposal. The bill would provide $25 million for the Space Weather Science and Applications program, which includes $2 million to initiate new Space Weather Centers of Excellence. The bill would also provide $73 million for the Geospace Dynamics Constellation and $5 million for the DYNAMIC mission. The bill does not include language from the Senate draft bill that noted concern for HPD's failure to obligate funds from FY 2022, but it does direct HPD to brief Congress quarterly on its execution, including the status of all projects in development, any solicitations expected in the next quarter, and any solicitations that will be delayed due to perceived lack of funding.

The bill would provide $935 million for the **Aeronautics Research Mission Directorate (ARMD)**, $54 million or 6.2 percent, above the FY 2022 enacted level, but $36.5 million or 3.8 percent below the request. $50 million would be provided for ARMD's hypersonics technology activity, including $15 million for collaborative work between academia and industry, the same as FY 2022. $7 million would be provided above the requested level for university-led aeronautics materials research and a further $10 million each for both aerial firefighting and emergency response as well as stitched composites for subsonic aircraft. The bill would also direct NASA to continue to work with industry to support research into improving fuel efficiency of subsonic flight.

The **Space Technology Research Directorate (STMD)** would receive $1.2 billion, an increase of $100 million or 9.1 percent above FY 2022 but $237 million below the request and slightly below the House and Senate draft levels. The explanatory statement highlights Congress's perennial support for the cross-disciplinary nature of the Directorate and its ongoing development programs designed to enable robotic and human exploration. The agreement provides $5 million to advance early-stage technology for active debris remediation. The explanatory statement also expresses support for investment in a mix of technologies for space nuclear power, including nuclear fission and nuclear electric propulsion, in order to ensure deployment of nuclear power on the lunar surface in the mid-2020s ahead of human surface missions. The agreement provides $85 million for Tipping Point and Announcement of Collaborative Opportunities for STMD to support "Moon-to-Mars specific technologies".

The agreement would provide $7.5 billion for **Exploration**, an increase of $677 million, or 10 percent, above FY 2022 but $10 million below the request. The Space Launch System (SLS) would be flat funded at $2.6 billion, which includes $600 million for development of Block 1B. The Human Landing System (HLS) would receive the requested amount, $1.486 billion, an increase of $290.6 million from FY 2022, which provides funding for the "Sustaining Lunar Development" activities.

The bill would provide $143.5 million for **Science, Technology, Engineering, and Math (STEM) Engagement**, an increase of $6.5 million or 4.7 percent above FY 2022, but $6.6 million below the request, House, and Senate. The increase includes $58 million for the Space Grant program. Congress would require NASA to allocate no less than $900 thousand in base funding for each Space Grant state consortium to award competitive grants that address local, regional, and national STEM needs.

National Aeronautics and Space Administration

(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	Omnibus vs FY 2022 Enacted
NASA, total	**24,041,300**	**25,446,200**	**25,973,800**	**25,383,701**	**1,342,401 (5.6%)**
Science	**7,614,400**	**7,905,000**	**8,045,700**	**7,795,000**	**180,600 (2.4%)**
Earth Science	2,064,700	2,334,800	2,346,100	2,195,000	130,300 (6.3%)
Planetary Science	3,120,400	3,200,000	3,209,800	3,200,000	79,600 (2.6%)
Astrophysics	1,568,900	1,525,000	1,561,000	1,510,000	-58,900 (3.8%)
Heliophysics	777,900	760,200	828,400	805,000	27,100 (3.5%)
Biological and Physical Sciences	82,500	85,000	100,400	85,000	2,500 (3.0%)
Aeronautics	**880,700**	**950,000**	**971,500**	**935,000**	**54,300 (6.2%)**
Space Technology	**1,100,000**	**1,250,000**	**1,263,850**	**1,200,000**	**100,000 (9.1%)**
Exploration	**6,791,700**	**7,323,700**	**7,547,750**	**7,468,850**	**677,150 (10.0%)**
Space Operations	**4,041,300**	**4,256,000**	**4,293,500**	**4,250,000**	**208,700 (5.2%)**
STEM Engagement	**137,000**	**150,100**	**150,100**	**143,500**	**6,500 (4.7%)**
Space Grant	54,500	62,000	57,000	58,000	3,500 (6.4%)
EPSCoR	26,000	26,000	26,000	26,000	--
MUREP	43,000	48,000	48,100	45,500	2,500 (5.8%)
Safety, Security, & Mission Services	**3,020,600**	**3,138,700**	**3,228,700**	**3,129,451**	**108,851 (3.6%)**
Construction and Environmental Compliance and Restoration	**410,300**	**424,300**	**424,300**	**414,300**	**4,000 (1.0%)**

Office of Inspector General	**45,300**	**48,400**	**48,400**	**47,600**	**2,300 (5.1%)**

Source:

- The joint explanatory statement is available at https://www.appropriations.senate.gov/imo/media/doc/Division%20B%20-%20CJS%20Statement%20FY23.pdf

National Science Foundation (NSF)

The National Science Foundation (NSF) would be funded at $9.9 billion in the omnibus, including supplemental funding, an increase of $1 billion or 11.7 percent above the fiscal year (FY) 2022 enacted level. This significant growth to NSF would be supported by supplemental funding provided in the omnibus bill, including $700 million in general funding for the agency and $335 million specifically for implementation of the science provisions in *CHIPS and Science Act*. While the biggest increase to NSF in over a decade, the funding level is $464 million below the Senate proposed amount and $618 million below the President's Budget Request. Supplemental funding is available through FY 2024.

The **Research and Related Activities (R&RA) account**, which funds all of NSF's research directorates, would be funded at $7.8 billion, an increase of 9.5 percent or $680 million over the FY 2022 level. Of this growth, $210 million is specifically for implementation of the science provisions of the *CHIPS and Science Act*. The explanatory statement accompanying the omnibus supports the new Directorate for **Technology, Innovation, and Partnerships (TIP)** within R&RA and its "critical role in driving U.S. scientific and technological innovation," but does not specify a funding level. The agreement supports the new NSF **Regional Innovation Engines** program and encourages NSF to coordinate with the EDA Regional Technology Hubs program. NSF is directed to allocate no less than FY 2022 enacted levels to maintain core research programs unless specifically noted in the explanatory statement.

The explanatory statement discusses some, but not all of NSF's priority initiatives. It would direct NSF to spend no less than $970 million to support **Climate Science and Sustainability Research** through the U.S. Global Change Research Program (USGCRP) and Clean Energy Technology priority areas. This represents a 7.8 percent increase over the FY 2022 enacted level but $443 million below the budget request. At this funding level, it is not yet clear whether NSF will proceed with the Regional Climate Impact Innovation Hubs as proposed in the President's request. The explanatory statement would provide up to $686 million for research related to **Artificial intelligence (AI)**, 7.9 percent above the FY 2022 enacted level and similar to the requested level. Congress would encourage NSF to continue its workforce development efforts for AI and data literacy, including focused outreach to Minority Serving Institutions (MSIs) and community colleges, and would also encourage NSF to invest in ethical and safe development of AI, expand the National AI Research Institutes, examine the availability of computing infrastructure for AI research, and address issues related to bias in AI. **Quantum Information Science** would be funded at $235 million, 6.8 percent above the FY 2022 enacted level but $21 million below the request. This amount would include $180 million for activities related to the research areas authorized in the National Quantum Initiative Act and $50 million for National Quantum Information Science Research Centers. Other NSF priority areas, including advanced manufacturing, advanced wireless, biotechnology, and microelectronics, were not mentioned in the explanatory statement.

As aligned with the National Science Board's **Geography of Innovation** initiative, Congress would support the new **Growing Research Access for Nationally Transformative Equity and Diversity (GRANTED)** initiative that aims to support the competitiveness of underserved institutions but does not provide a specific funding level. The agreement provides $245 million for the **Established Program to Stimulate Competitive Research (EPSCoR)**, an increase of $30 million above the FY 2022 level but $2 million below the request. The explanatory statement would direct NSF to report to the Appropriations Committees on how the agency will support MSIs and institutions in EPSCoR states in leading large funding initiatives and centers. The agreement would also encourage NSF to support projects across all NSF programs and centers in EPSCoR states, including Regional Innovation Engines, Mid-Scale Research Infrastructure awards, and Science and Technology Centers. Elsewhere in the explanatory statement, the agreement notes that at least one of the larger Mid-Scale R2 awards should be in an EPSCoR jurisdiction. The agreement provides no less than $25 million for the **Historically Black Colleges and Universities Excellence in Research** (HBCU-EiR), an increase of 14 percent over the FY 2022 level.

The explanatory statement has several language items relating to **scientific infrastructure** and would direct NSF (unless otherwise noted) to allocate at least FY 2022 levels to infrastructure programs including "support for existing scientific research laboratories, observational networks, and other research infrastructure assets, such as the astronomy assets, the current academic research fleet, federally-funded research and development centers, and the national high performance computing centers." The smaller **Mid-Scale Infrastructure R1 program** would be supported up to the FY 2023 requested level of $50 million, a 54 percent increase over the FY 2021 level. The explanatory statement notes support for academic research infrastructure and encourages NSF to evaluate its facilities and platform requirements to ensure broad and diverse benefits to the scientific community, including encouragement for construction of local-class research vessels. The agreement would provide $30 million for NSF to support the design and development of next generation astronomy facilities recommended in the "Decadal Survey on Astronomy and Astrophysics 2020" (Astro2020). The explanatory statement also outlines continued support, at no less than FY 2022 levels, for **Scientific Facilities and Instrumentation** including operations at the Daniel K. Inouye Solar Telescope (DKI-ST), and the Very Long Baseline Array (VLBA) receivers. The agreement would also fully fund the Center for High Energy X-Ray Science (CHEXS). The omnibus would further provide the requested amount for the **Green Bank Observatory** and the **International Ocean Discovery Program (IODP)**. The explanatory statement also directs NSF to review its **biological infrastructure** investments and develop a plan to sustainably manage the resources going forward. Finally, the agreement would support the recommendations for **Seismology and Geodesy Facilities** as presented in the recent portfolio review.

The agreement directs NSF to brief the Committee on **fairness in merit review** to understand and address bias in the process. NSF is additionally encouraged to study issues around **power dynamics in the research community** and develop safe spaces for researchers to voice concerns without fear of repercussions. The agreement also notes the importance of **research security** and supports NSF implementing new provisions in 2023.

As in previous years, Congress would include language relating to **Understanding Rules of Life** (including plant genomics); **Navigating the New Arctic; Sustainable Chemistry Research**; **Verification of the Origins of Rotation in Tornadoes Experiment-Southeast (VORTEX-SE)**; and **Disaster Research**.

The omnibus would provide $187.2 million for the **Major Research Equipment and Facilities Construction Account (MREFC)**, $61.8 million below the FY 2022 level but equal to the budget request. The omnibus would include $76.3 million for **Mid-Scale Research Infrastructure**, level with FY 2022 funding and the request. As in previous years, the explanatory statement encourages NSF to award at least one Mid-Scale Research Infrastructure project to be led by an institution in an EPSCoR state. Congress would also provide requested funding for **all ongoing MREFC construction projects**: the Vera C. Rubin Observatory, the Antarctic Infrastructure Modernization for Science, the Antarctic Infrastructure Recapitalization, Regional Class Research Vessels, and the High Luminosity – Large Hadron Collider Upgrade.

When all supplemental funding is included, the omnibus would provide $1.4 billion for the **STEM Education (EDU)** account, $365 million or 36.3 percent above the FY 2022 level and $6 million below the request. Congress would accept NSF's proposal to rename the Directorate for Education and Human Resources (EHR) to the Directorate for STEM Education (EDU). Funding would include $125 million specifically for implementing the science side of the *CHIPS and Science Act* as well as $142 million that was previously provided under R&RA to fully fund the Graduate Research Fellowship Program (GRFP) under EDU as NSF proposed. If the GRFP transfer is not included, funding for EDU would be $223 million or 22 percent above the FY 2022 enacted level. The omnibus would provide up to $325 million for GRFP as requested, $29 million above the FY 2022 funding level to increase the stipend and fund additional fellows.

The explanatory statement would provide specific funding levels for several EDU programs. While there would be many increases across programs, these would mostly be below the increases proposed in the budget request or the House and Senate draft bills. Specific funding for broadening participation programs includes:

- $53.5 million for **Improving Undergraduate STEM Education at Hispanic Serving Institutions** (HSI) ($5 million above the FY 2022 level and $7 million below the request);
- No less than $43 million for the **HBCU Undergraduate Program** (HBCU-UP) ($5 million above the FY 2022 level and $5.5 million below the request);
- No less than $20 million for the **Tribal Colleges and Universities Program** (TCUP) ($2.5 million above the FY 2022 level and $3 million below the request);
- No less than $55.5 million for the **Louis Stokes Alliances for Minority Participation** (LSAMP) ($4 million above the FY 2022 level and $15 million below the request).
- No less than $9.5 million for the **Alliance for Graduate Education and the Professoriate** (AGEP) ($1 million above the FY 2022 level and $4.5 million below the request);
- No less than $27 million for the **Centers for Research Excellence in Science and Technology** (CREST) ($2 million above the FY 2022 level and $14 million below the request);
- No less than $19 million for the **Advancement of Women in Academic Science and Engineering Careers** (ADVANCE) ($500,000 above the FY 2022 level and $1.5 million below the request); and
- No less than $24 million for the recently renamed **Eddie Bernice Johnson Inclusion Across the Nation Communities of Learners of Underrepresented Discoverers in Engineering and Science** (INCLUDES) Initiative ($26.5 million below the request).

The agreement would also fund the **Advancing Informal STEM Learning** (AISL) at no less than $70 million ($5 million above the FY 2022 level and $4.5 million below the request); the **Robert Noyce**

Scholarship Program at no less than $68 million ($1 million above the FY2022 level and $1 million above the request); **Advanced Technological Education** (ATE) at $76 million ($1 million above the FY 2022 level and the request); and the **Cybercorps Scholarship for Service** program at no less than $69 million ($6 million above the FY 2022 level and $6 million below the request). While the funding levels for these programs fall $89 million short of the requested levels in sum, overall funding for EDU is within $6 million of the requested level, leaving NSF with a substantial amount of unrestricted funding for EDU efforts and implementation of *CHIPS and Science* provisions. The report also directs NSF to support hands-on learning opportunities on transformational education innovation and translation.

In addition to items specified in the explanatory statement, the agreement carries forward House committee report language, including items related to the National Center for Science and Engineering Statistics; facilities divestment; algorithmic bias and trustworthy algorithmic research; Wildfire Research; SARS–CoV–2 wastewater research; Harmful Algal Blooms (HABs); carbon dioxide removal; critical minerals; high-performance computing; research to combat anti-Asian hate; the Arecibo Observatory; dyslexia; innovation corps; steel manufacturing; open source research; Social, Behavioral, and Economic (SBE) Sciences; Great Lakes research fleet; and transformational education innovation and translation collaboration with the Department of Education.

National Science Foundation

(In millions of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	FY 2023 Omnibus plus CHIPS + Science Supp.	FY 2023 Final vs. FY 2022 Enacted	FY 2023 Omnibus plus Supp. vs 2022 Enacted
NSF, total	**8,838.0**	**9,631.14**	**10,338.0**	**9,539.01**	**9,874.01**	**701.01 (7.9%)**	**1,036.01 (11.7 %)**
Research and Related Activities	7,159.4	7,705.53	8,321.91	7,629.29	7,839.30	469.90 (6.6%)	679.90 (9.5%)
STEM Education	1,006,0	1,250.0	1,327.18	1,246.0	1,371.00	240.00 (23.9%)	365.00 (36.3%)
Major Research Equipment and Facilities Construction	249.0	187.23	187,23	187.23	--	-61.77 (24.8%)	--
Agency Operation and Award Management	400.0	460.0	473.2	448.0	--	48.0 (12.0%)	--
National Science Board	4.60	5.09	5.09	5.09	--	0.49 (10.7%)	--
Office of Inspector General	19.0	23.29	23.39	23.39	--	4.39 (23.1%)	--

Source:

- The explanatory statement is available at https://www.appropriations.senate.gov/imo/media/doc/Division%20B%20-%20CJS%20Statement%20FY23.pdf.

U.S. Department of Agriculture (USDA)

The omnibus would provide USDA's intramural research arm, the **Agricultural Research Service (ARS)**, with $1.7 billion for its Salaries and Expenses account, nearly $111 million or 6.8 percent above the FY 2022 level. The explanatory statement singles out more than 60 priority areas within ARS. Some of these priorities are included to remind ARS of the Committee's ongoing interest in an area, and others would receive new or additional funding. Included in ARS programming are the USDA Climate Hubs, which are regionally focused centers focused on climate resilience and other related topics.

The **National Institute of Food and Agriculture (NIFA)** would receive $1.7 billion, $64 million or 3.92 percent over FY 2022 with modest growth across its programs. Specifically, the **Agriculture and Food Research Initiative (AFRI)** would receive $455 million, an increase of $10 million over the FY 2022 enacted level but $45 million less than the House proposed level. Although the Senate originally proposed flat funding for Evans-Allen (which provides research capacity support to 1890 institutions), research grants for 1994 institutions, and extension funds for 1890 and 1994 institutions, the omnibus took its cue from the House version and increased each of these programs by more than 10 percent.

The omnibus would double the Women and Minorities in STEM allocation to $2 million, and Education Grants for Hispanic Serving Institutions would be supported at $16 million, a $2 million increase over FY 2022. Each of these accounts, which aim to improve the standing of minority serving institutions and programming, have seen significant support from the Biden Administration and Congress relative to prior administrations. Lastly, Capacity Building for Non-Land Grant Colleges of Agriculture would be funded at $6 million, a $1 million increase over the FY 2022 enacted level.

As with ARS, the explanatory statement highlights twenty specific areas of interest within NIFA. Within this section, there is Congressional direction on NIFA's support for Sustainable Agricultural Systems, highlighting Congressional support for digital agriculture and the digitally augmented food supply chain. The omnibus also pointed out the decline in programs at land-grant universities supporting public plant and animal breeding and called on them to foster the next generation of breeders. Other focus areas mentioned in the NIFA section of the bill are intended to jump-start new technologies. Some additional examples include:

- **Genomes to Phenomes:** $2.5 million for the Agricultural Genome to Phenome Initiative (AG2PI), which is a $500,000 increase above the FY 2022 enacted level.
- **Sustainable Agriculture Research and Education (SARE):** The omnibus would fund SARE at $50 million, representing a $5 million increase over FY 2022, for this popular program.
- The matching requirement for the **Specialty Crop Research Initiative** may be waived by the Secretary of Agriculture.
- **Research Facilities Act:** The omnibus also includes $2 million to support a competitive grant program for agriculture research facilities authorized in the 2018 Farm Bill. Language is included

in the explanatory statement encouraging NIFA to prioritize facilities that are located at or primarily benefit minority serving institutions.

Of note, the omnibus includes $1 million for the **Agriculture Advanced Research and Development Authority (AGARDA)** through the USDA Office of the Chief Scientist. AGARDA was authorized in the 2018 Farm Bill at $50 million but received only $1 million in FY 2022. The continuation of this minimal level of funding is to spur USDA to continue planning for future funding by developing a management structure and hiring staff.

No funding was included for **Farm of the Future** which was supported in FY 2021 and FY 2022 and was included in the FY 2023 budget request.

Beyond REE, but important to research and extension activities, the bill would also provide $348 million for the **ReConnect Broadband Pilot** authorized in the 2018 Farm Bill, slightly less than the House or Senate's original proposals. Finally, approximately $440 million is designated for **Community Project Funding/Congressionally Directed Spending**, also known as earmarks, over $100 million more than in FY 2022.

Additionally, the spending package includes a number of supplemental funds and policy add-ons including support to USDA for disaster relief, recovery, and repairs of critical infrastructures. One policy provision that was included in the package is the *Growing Climate Solutions Act* which implements technical assistance programs which would assist farmers in implementing climate-smart agricultural practices which would allow them to capitalize on the environmental credit market.

With regard to human nutrition research, the omnibus would encourage ARS to expand research into life span nutrition, health promotion, and disease prevention and immune function in children. The spending bill would provide no less than the FY 2022 level for existing human nutrition centers and an increase of $2 million above the FY 2022 level to support human nutrition research goals.

Food and Drug Administration (FDA)

The Food and Drug Administration (FDA), housed within the Department of Health and Human Services (HHS) but traditionally funded through the Agriculture, Rural Development, Food and Drug Administration, and Related Agencies appropriations bill, would receive $3.5 billion in direct appropriations, an increase of $226 million above the FY 2022 enacted level. Earlier this year, Congress passed, and the President signed into law, legislation that reauthorized the FDA's user fee program. The main user fee allocations that the omnibus would fund are detailed below.

- $1.31 billion for prescription drugs;
- $324.77 million for medical devices;
- $582.50 million for human generic drugs;
- $41.60 million for biosimilar biologicals;
- $32.14 million for animal drugs;
- $29.30 million for animal generic drugs; and
- $712 million for tobacco products.

Following the onset of severe infant formula shortages earlier this year, the Committee expressed concern over formula supply chain issues and their impacts to public health. The omnibus notes that while the formula shortage has improved, there are still supply chain issues, particularly in rural communities. The bill would also direct the FDA to continue to monitor the supply of infant formula and notes requests for an investigation by the HHS Inspector General and the Government Accountability Office (GAO).

The omnibus also encourages the use of accelerated pathways for therapies for patients with cancer and rare diseases. Additionally, the legislation encourages the FDA to organize clinical trials, in collaboration with academic medical centers and other federal agencies, of marketed cancer drugs and biologics. The omnibus also urges the FDA to increase support for regulatory science to inform pathways, including collaborations with the National Institutes of Health (NIH), industry, and academia on the discovery and validation of biomarkers.

Congress expects the FDA to continue to support collaborative research with universities and industry on the toxicology of nanotechnology products and processes in accordance with the 2021 National Nanotechnology Initiative Strategic Plan.

The spending agreement would create new designated centers of excellence known as National Centers of Excellence in Advanced and Continuous Pharmaceutical Manufacturing. To meet the requirements for the designation, institutions of higher education or a consortium of institutions must show they have the capability to conduct advanced research on, and to develop and implement, advanced and continuous pharmaceutical manufacturing. The Centers must also work in partnership with non-profit organizations, drug manufacturers, and be able to train qualified individuals, among other requirements.

In addition to funding the Agency through FY 2023, the omnibus includes new policy provisions for the FDA. Below are key policies that would be enacted if the legislation is signed into law:

- Modernize clinical trials by requiring manufacturers of some trials to submit diversity action plans and to sponsor public workshops to increase clinical trial diversity.
- Require the HHS Secretary to issue guidance recommending how manufacturers can advance the use of flexible and novel clinical trial designs to help improve trial participant engagement, recruitment, enrollment, and retention of a diverse clinical population.
- Increase FDA regulation over cosmetics and require the reporting of serious adverse events.
- Urge the FDA to consider the results of tests conducted in vitro, in silico, in chemico, or a nonhuman in vivo test before or during the clinical trial phase of an investigation to determine the safety and efficacy of a drug.

Note: The accompanying explanatory statement states, *"The joint explanatory statement accompanying this division is approved and indicates congressional intent. Unless otherwise noted, the language set forth in House Report 117-392 carries the same weight as language included in this joint explanatory statement and should be complied with unless specifically addressed to the contrary in this joint explanatory statement. While some language is repeated for emphasis, it is not intended to negate the language referred to above unless expressly provided herein."*

U.S. Department of Agriculture

(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	FY 2022 Enacted vs. FY 2023 Omnibus
Agricultural Research Service, *Salaries & Expenses*	**1,633,496**	**1,736,129**	**1,755,667**	**1,744,279**	**110,783 (6.78%)**
National Institute of Food and Agriculture, *Discretionary*	**1,636,849**	**1,768, 023**	**1,691,004**	**1,701,031**	**64,182 (3.92%)**
Agriculture and Food Research Initiative (AFRI)	445,000	500,000	455,000	455,000	10,000 (2.25%)
Hatch Act	260,000	265,000	265,000	265,000	5,000 (1.92%)
Smith-Lever Act 3(b) and 3(c)	320,000	330,000	325,000	325,000	5,000 (1.56%)
McIntire-Stennis Cooperative Forestry Act	36,000	38,000	43,000	38,000	2,000 (5.56%)
Research at 1890 Institutions (Evans-Allen Program)	80,000	92,840	80,000	89,000	9,000 (11.25%)
Research Grants for 1994 Institutions	4,500	5,000	5,000	5,000	500 (11.11%)
Extension Services at 1890 Institutions	65,000	76,000	65,000	72,000	7,000 (10.77%)
Extension Services at 1994 Institutions	9,500	15,000	14,000	11,000	1,500 (15.79%)
Payments to the 1994 Institutions	5,500	10,000	7,000	7,000	1,500 (27.27%)
Education Grants for 1890 Institutions	28,500	30,000	28,500	30,000	1,500 (5.26%)
Women and Minorities in STEM Fields	1,000	2,305	2,000	2,000	2,000 (100%)
Capacity Building for Non-Land Grant Colleges of Agriculture	5,000	5,000	7,000	6,000	1,000 (20%)
Multicultural Scholars, Graduate Fellowship, and Institution Challenge Grants	10,000	10,000	10,000	10,000	--
Education Grants for Hispanic-Serving Institutions	14,000	20,000	15,000	16,000	2,000 (14.29%)
Food Safety and Inspection Service (FSIS)	**1,108,664**	**1,180,364**	**1,173,066**	**1,158,266**	**49,602 (4.47%)**

Animal and Plant Health Inspection Service (APHIS), *Salaries & Expenses*	**1,106,744**	**1,164,209**	**1,177,881**	**1,171,071**	**64,327 (5.81%)**

Sources:

- FY 2023 Omnibus Text: https://www.appropriations.senate.gov/imo/media/doc/JRQ121922.PDF
- FY 2023 Agriculture, Rural Development, Food and Drug Administration, and Related Agencies explanatory statement: https://www.appropriations.senate.gov/imo/media/doc/Division%20A%20-%20Agriculture%20Statement%20FY23.pdf
- House FY 2023 Agriculture, Rural Development, Food and Drug Administration, and Related Agencies Report: https://www.congress.gov/117/crpt/hrpt392/CRPT-117hrpt392.pdf

U.S. Geological Survey (USGS)

The omnibus would provide $1.5 billion to the **U.S. Geological Survey (USGS)**, $102.8 million and 7.4 percent above the fiscal year (FY) 2022 enacted level but $214 million below the request. USGS would receive an additional $41.04 million in supplemental disaster relief funding to cover expenses related to the consequences of wildfires, hurricanes, and other natural disasters. With this funding level, USGS would receive increases across all mission areas relative to the FY 2022 enacted levels. Although most programs would be funded at levels lower than proposed in the FY 2023 President's Budget Request or those initially proposed by either the House or the Senate, the omnibus funding nevertheless represents a historic level of investment that further contributes to USGS's growth under the Biden Administration.

The **Natural Hazards** mission area would receive a 7.7 percent increase over FY 2022 funding to $200.3 million, $20 million below the request. The agreement includes $28.6 million to continue the development and expansion of the **ShakeAlert West Coast Earthquake Early Warning (EEW)** program, enabling its completion by 2025. The **Global Seismographic Network** would receive $7.2 million, less than a 1 percent increase in funding relative to FY 2022 enacted levels but close to the FY 2023 request.

The **Ecosystems** mission area would receive $307.2 million, an increase of $29.3 million or 10.5 percent relative to the FY 2022 enacted level and $69 million below the request. The **National and Regional Climate Adaptation Science Centers** would receive $63.1 million, an increase of $11.2 million or 21.6 percent over FY 2022 funding level and $11 million below the request. Also, within the Ecosystems mission area, the bill would increase funding for the **Cooperative Research Units (CRU)** to $28.2 million. This $2.2 million increase above the FY 2022 levels is intended to support the establishment of a new CRU focused on the Lake Michigan and Ohio River ecosystems at a land-grant institution that does not already have one.

The **Water Resources Research Act Program** would be funded at $15.5 million, a $1.5 million or 10.7 percent increase over FY 2022 levels and $500,000 over the request. Of this increase, $1.5 million would be used for aquatic invasive species control in the Upper Mississippi River region and $500,000 for PFAS research. The agreement additionally provides $5 million to establish a new mountaintop to shoreline freshwater ecosystem water cycle center that would be located near and work in collaboration with a Water Resources Research Institute. The USGS **Core Science Systems** would receive a 7.9 percent increase to $284.6 million. Within this program, the **National Cooperative Geologic Mapping Program** would receive $44.6 million, a more than $2 million increase. The **3D Elevation Program (3DEP)** would receive $42.9 million, an increase of $6.8 million, or 13.6 percent.

The omnibus would fund the **Energy and Mineral Resources** mission area at $104.2 million, a $9.0 million or 9.5 percent increase over FY 2022 levels and $43 million below the request. This includes $10.8 million for the critical minerals **Earth Mapping Resources Initiative (Earth MRI)** and an increase of

$5.0 million for mine waste research. This also includes $33.4 million for **Energy Resources**, including $3.0 million for geologic carbon sequestration.

U.S. Geological Survey
(In thousands of $)

	FY 2022 Enacted	FY 2023 House	FY 2023 Senate	FY 2023 Omnibus	FY 2023 Omnibus vs. FY 2022 Enacted
USGS, Total	**1,394,360**	**1,644,232**	**1,519,289**	**1,497,178**	**102,818 (7.4%)**
Natural Hazards	**185,998**	**213,377**	**203,395**	**200,265**	**14,267 (7.7%)**
Earthquake Hazards	90,037	97,820	96,320	92,651	2,614 (2.9%)
Global Seismographic Network	7,212	7,280	7,280	7,273	61 (0.85%)
Ecosystems	**277,897**	**358,872**	**315,035**	**307,176**	**29,279 (10.54%)**
National and Regional Climate Adaptation Science Centers	51,903	85,241	67,048	63,115	11,212 (21.60%)
Energy and Mineral Resources	**95,223**	**133,010**	**101,260**	**104,220**	**8,997 (9.45%)**
Water Resources	**285,894**	**302,241**	**313,491**	**304,434**	**18,540 (6.48%)**
Water Resources Research Act	14,000	17,000	18,000	15,500	1,500 (10.71%)
Core Science Systems	**263,802**	**330,922**	**278,318**	**284,607**	**20,805 (7.89%)**
Science Support	**99,736**	**117,731**	**117,581**	**106,304**	**6,568 (6.59%)**
Facilities	**184,810**	**188,079**	**188,079**	**188,051**	**3,241 (1.75%)**

Sources:

- FY 2023 Interior, Environment, and Related Agencies explanatory statement is available at https://www.appropriations.senate.gov/imo/media/doc/Division%20G%20-%20Interior%20Statement%20FY23.pdf
- House FY 2023 Interior, Environment, and Related Agencies Report is available at https://www.congress.gov/117/crpt/hrpt400/CRPT-117hrpt400.pdf