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Energy and Water Development: FY2025 Appropriations

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Energy and Water Development: FY2025 Appropriations

The Energy and Water Development and Related Agencies appropriations (E&W) bill funds civil works activities of the U.S. Army Corps of Engineers (USACE) in the Department of Defense; the Department of the Interior’s Bureau of Reclamation (Reclamation) and Central Utah Project (CUP); the Department of Energy (DOE); the Nuclear Regulatory Commission (NRC); the Appalachian Regional Commission (ARC); and several other independent agencies. DOE typically accounts for about 80% of the bill’s funding.

Overall Funding Totals

President Biden submitted his FY2025 budget request on March 11, 2024. The Administration request includes \$61.265 billion for energy and water development agencies, a decrease of \$110 million (less than 1%) below the FY2024 enacted amount, excluding emergency appropriations, offsets, and adjustments. FY2024 energy and water development appropriations were included in Division D of the Consolidated Appropriations Act, 2024, signed into law March 9, 2024 (P.L. 118-42).

Energy and Water Development Appropriations, FY2024 and FY2025
dollars in millions (and % change from FY2024 enacted)

Agency	FY2024 Enacted	FY2025 Request (% Change)
Corps of Engineers	8,703	7,220 (-17%)
Bureau of Reclamation/CUP	1,923	1,619 (-16%)
Department of Energy	50,247	51,906 (+3%)
Independent Agencies	502	519 (+3%)
Total appropriations	61,375	61,265 (-0%)
Rescissions and other adjustments	-22	-491
Adjusted total	61,353	60,774 (-1%)

Sources: Administration FY2025 budget request; explanatory statement for Consolidated Appropriations Act, 2024.

Notes: CUP = Central Utah Project Completion Account. Enacted amounts do not include emergency supplemental appropriations.

Major Issues

Congressionally Directed Funding (Earmarks). For FY2025, the House Appropriations Committee allows earmark requests within the major USACE and Reclamation accounts, while the Senate Appropriations Committee allows earmark requests for major USACE, Reclamation, and DOE energy-related accounts. The explanatory statement for FY2024 included 273 energy and water development earmarks under USACE, Reclamation, and DOE accounts totaling \$1.613 billion.

Recent Supplemental Funding. From FY2018 through FY2025, Congress provided supplemental and emergency appropriations for E&W agencies. These appropriations were noted in the Administration’s FY2025 budget justifications and may factor into the congressional debate on FY2025 E&W appropriations. This debate could include considerations over the amount of regular appropriations that the FY2025 E&W bill should provide, and whether to rescind or redirect supplemental appropriations.

Energy Efficiency Standards. DOE energy efficiency standards have drawn congressional scrutiny in the 118th Congress. House amendments were adopted during debate on the FY2024 E&W bill that would have blocked funds for DOE efficiency rules on furnaces, water heaters, manufactured housing, commercial icemakers, and room air conditioners, and any regulation with an annual economic impact of more than \$100 million. They were not included in the enacted measure.

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Introduction and Overview

Energy and Water Development and Related Agencies appropriations (E&W) bills typically include funding for civil works activities of the U.S. Army Corps of Engineers (USACE) in the Department of Defense, in Title I; the Department of the Interior's Bureau of Reclamation (Reclamation) and Central Utah Project (CUP), in Title II; the Department of Energy (DOE), in Title III; and a number of independent agencies, including the Nuclear Regulatory Commission (NRC) and the Appalachian Regional Commission (ARC), in Title IV. **Figure 1** compares the major components of the E&W appropriations acts from FY2022 through FY2024 and the FY2024 and FY2025 funding requests. FY2024 E&W appropriations were included in the Consolidated Appropriations Act, 2024, signed into law March 9, 2024 (P.L. 118-42).

President Biden submitted his FY2025 budget request on March 11, 2024. The Administration request includes \$61.265 billion for energy and water development agencies, a decrease of \$110 million (less than 1%) below the FY2024 enacted amount, excluding emergency appropriations, offsets, and adjustments. DOE funding would rise by \$1.659 billion (3%), to \$51.906 billion, and independent agencies by \$17 million (3%), to \$519 million. USACE would be reduced by \$1.483 billion (-17%), to \$7.220 billion, and Reclamation and CUP would decline by \$304 million (-16%), to \$1.619 billion, excluding adjustments and offsets.¹

DOE's major program areas include energy, science, defense, and environmental management. The Administration is again proposing to shift some funding in the Energy Efficiency and Renewable Energy (EERE) appropriations account into several new accounts: the Federal Energy Management Program (FEMP), the Office of Manufacturing and Energy Supply Chains (MESCC), and the Office of State and Community Energy Programs (SCEP), which provides low-income weatherization and state planning grants. The total FY2025 request for EERE and the proposed new accounts is \$3.869 billion, an increase of \$409 million (12%) over the combined EERE enacted amount for FY2024. DOE has established separate offices for FEMP, MESCC, and SCEP, but Congress has not approved previous requests to create separate appropriations accounts for them.

Other energy programs with large proposed percentage increases are the Office of Technology Transitions, which facilitates the commercialization of new energy technologies, proposed to increase by 35% in FY2025 to \$27 million, and the Office of Clean Energy Demonstrations, which would rise by 260% to \$130 million. The Office of Indian Energy Policy and Programs would increase by 36% to \$95 million, and the Grid Deployment Office would increase by 70% to \$102 million.

Funding for DOE's Office of Science is proposed to increase by \$343 million (4%), to \$8.583 billion, under the Administration budget request, with the largest amounts going for Basic Energy Sciences (\$2.582 billion) and High Energy Physics (\$1.231 billion). Funding for the National Nuclear Security Administration (NNSA), which is responsible for nuclear warheads, nuclear weapons nonproliferation, and naval reactor research and development (R&D), is proposed to increase by \$862 million (4%), to \$24.997 billion. Environmental Management (waste management and cleanup) would decrease by \$253 million (-3%), to \$8.229 billion.

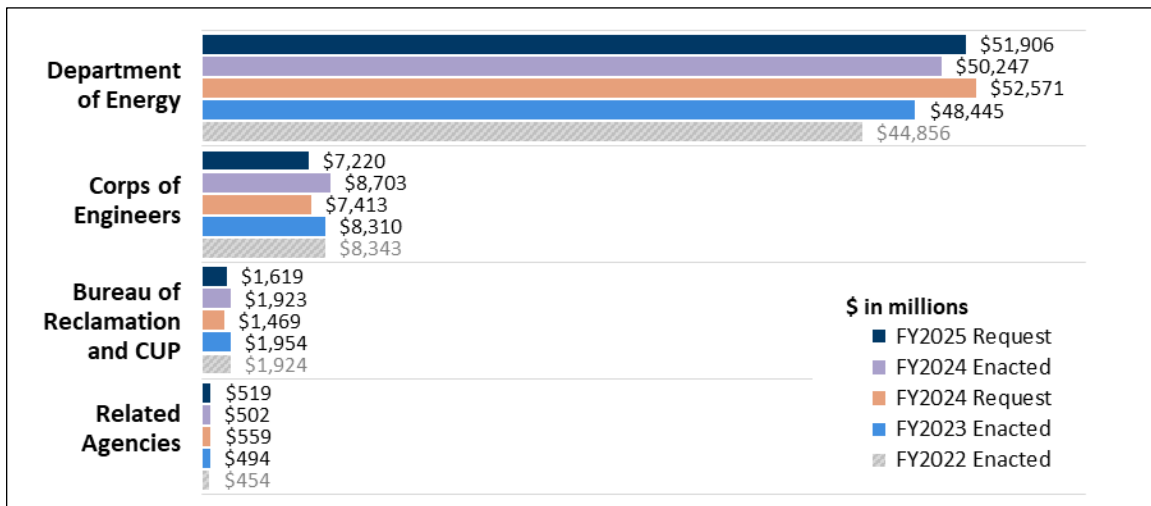
¹ Unless otherwise noted, appropriations numbers in this report for FY2024 and FY2025 are taken from agency budget justifications for FY2025 and the explanatory statement for the Consolidated Appropriations Act, 2024, Division D, in House Appropriations Committee Print 55-007, <https://www.govinfo.gov/content/pkg/CPRT-118HPRT55007/pdf/CPRT-118HPRT55007.pdf>. Some appropriations totals for FY2024 have changed from previously calculated amounts because of re-estimates of revenue offsets and other adjustments.

The water agencies in the Energy and Water Development appropriations bill are proposed for funding reductions under the FY2025 budget request. Discretionary E&W appropriations for USACE would decline from their FY2024 enacted level by \$1.483 billion (-17%), to \$7.220 billion. Reclamation (separately from CUP) would be reduced by \$301 million (-16%), to \$1.599 billion.

Among the independent agencies funded by the bill, NRC would receive an increase in total appropriations from \$944 million in FY2024 to \$975 million in FY2025 (up \$31 million, or 3%). NRC’s budget is mostly offset by nuclear industry fees, which may vary from year to year; the Administration proposed an increase in the agency’s net appropriation from \$137 million in FY2024 to \$151 million in FY2025 (up \$14 million, or 10%). The funding request for the Appalachian Regional Commission and other regional authorities in the bill is largely unchanged from the FY2024 enacted levels.

Additional FY2025 funding for E&W agencies has been appropriated in advance by the Infrastructure Investment and Jobs Act (IIJA; P.L. 117-58) and the budget reconciliation measure commonly referred to as the Inflation Reduction Act of 2022 (IRA; P.L. 117-169). For details, see the section on “Recent Supplemental Funding.”

Figure I. Major Components of Energy and Water Development Appropriations Bills, FY2022 Through FY2025
(excluding supplementals)



Sources: FY2025 Administration budget request, explanatory statement for Consolidated Appropriations Act, 2024; S.Rept. 118-72; H.Rept. 118-126; H.R. 4394; FY2024 agency budget justifications; explanatory statement for Consolidated Appropriations Act, 2023.

Notes: Enacted amounts do not include supplemental appropriations or adjustments and rescissions. CUP = Central Utah Project Completion Account.

FY2024 Enacted Funding

President Biden signed the Consolidated Appropriations Act, 2024 (P.L. 118-42), including FY2024 energy and water development appropriations as Division D, on March 9, 2024. Excluding adjustments, the enacted measure totaled \$61.375 billion for energy and water

development agencies, an increase of \$2.171 billion (4%) above the enacted FY2023 amount and \$638 billion (-1%) below the request.

DOE received \$50.247 billion, an increase of \$1.801 billion (4%) over FY2023 and \$2.324 billion (-4%) below the request. EERE, including programs that the Administration proposed to fund under separate accounts, received \$3.460 billion, the same as the FY2023 amount and a decrease of \$1.332 billion (-28%) from the equivalent request. Science received \$8.240 billion, an increase of \$140 million (2%) over the FY2023 enacted level and \$560 million (-6%) below the request. NNSA received \$24.135 billion, an increase of \$1.972 billion (9%) over FY2023 and \$290 million (1%) above the request.

USACE received \$8.703 billion,² excluding rescissions and adjustments, which is \$393 million (5%) more than in FY2023 and \$1.290 billion (17%) higher than the request. Reclamation and CUP received \$1.923 billion, a reduction of \$31 million (-2%) from FY2023 and \$454 million (31%) above the request.

NRC received \$944 million, an increase of \$17 million (2%) over the FY2023 level and a decrease of \$35 million (-4%) from the request, although the net appropriation was almost the same as in FY2023. ARC received \$200 million, the same as in FY2023 and \$35 million (-15%) below the request. The Great Lakes Authority received first-time funding of \$5 million, the requested amount, while the other regional authorities and commissions received all or slightly more than the amounts requested. The Northern Border Regional Commission and Delta Regional Authority each received \$1 million more than their FY2024 requested amounts (\$41 million and \$31.1 million, respectively).

For more Energy and Water Development appropriations details, see

- CRS Report R47553, *Energy and Water Development: FY2024 Appropriations*, by Mark Holt and Anna E. Normand
- CRS In Focus IF12370, *U.S. Army Corps of Engineers: FY2024 Appropriations*, by Anna E. Normand and Nicole T. Carter.
- CRS In Focus IF12369, *Bureau of Reclamation: FY2024 Budget and Appropriations*, by Charles V. Stern.

FY2025 Budgetary Limits

Congressional consideration of the annual Energy and Water Development appropriations bill is affected by certain procedural and statutory budget enforcement requirements. These consist primarily of procedural limits on discretionary spending (spending provided in annual appropriations acts) established in a budget resolution or through some other means, and allocations of this amount that apply to spending under the jurisdiction of each appropriations subcommittee.

The Fiscal Responsibility Act (FRA, P.L. 118-5), enacted in June 2023, establishes enforceable discretionary spending limits (caps) for FY2024 and FY2025. For FY2025, the limits are \$895.212 billion for defense and \$710.688 billion for nondefense. Spending designated as an emergency requirement would be exempt up to any amount, while funding for certain purposes—such as program integrity initiatives, disaster funding, and reemployment services—would be exempt up to specified amounts.

² Not including \$22 million in recessions.

The House Appropriations Committee approved interim FY2025 allocations on May 23, 2024, for each of the 12 appropriations subcommittees under Section 302(b) of the Congressional Budget and Impoundment Control Act of 1974 (P.L. 93-344).³ For the Energy and Water Development Subcommittee, the interim allocations provide \$34.193 billion for defense functions and \$24.997 billion for non-defense functions, totaling \$59.190 billion. The interim allocation is \$1.584 billion below the Administration’s total request for agencies in the Energy and Water Development bill, including offsets.

For more information on funding ceilings, see CRS Report R46468, *A Brief Overview of the Congressional Budget Process*, by James V. Saturno, and CRS Insight IN12168, *Discretionary Spending Caps in the Fiscal Responsibility Act of 2023*, by Grant A. Driessen and Megan S. Lynch.

Funding Issues and Initiatives

Several issues have drawn particular attention during congressional consideration of Energy and Water Development appropriations for FY2025. The issues described in this section—listed approximately in the order the affected agencies appear in the Energy and Water Development bill—were selected based on total funding involved, percentage of proposed increases or decreases, amount of congressional debate engendered, and potential impact on broader public policy considerations.

Congressionally Directed Funding

The 118th Congress, largely continuing the policies of the 117th Congress, allowed earmarks for site-specific projects and other activities in the FY2024 appropriations process. These are referred to as “community project funding” (CPF) in the House and “congressionally directed spending” (CDS) in the Senate. From the 112th through the 116th Congresses, moratorium policies largely prohibited earmarks for such projects. Funding for specific water projects constitutes the majority of the annual budget request for USACE and Reclamation.⁴ For FY2025, the House and Senate Appropriations committees invited Members of Congress to request CPF/CDS items, respectively. The House Appropriations Committee allowed CPF requests within the major USACE and Reclamation accounts, while the Senate Appropriations Committee allowed CDS requests for major USACE, Reclamation, and DOE energy-related accounts.⁵

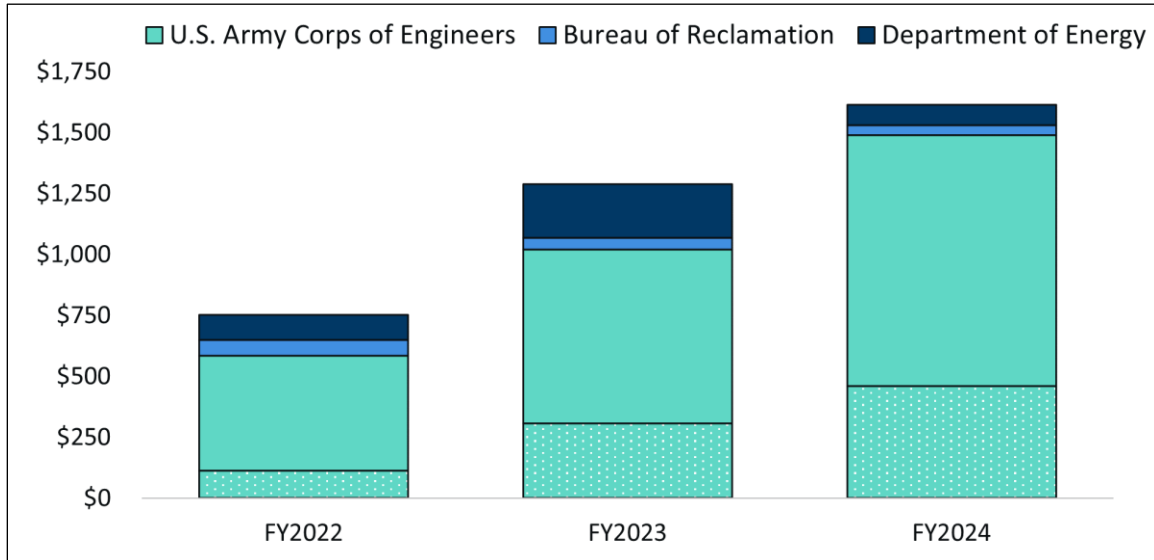
Figure 2 shows enacted CPF/CDS amounts per agency for FY2022 through FY2024. The patterned area of the stacked columns distinguishes the sum of the top three CPF/CDS items (all under USACE appropriations).

³ House Appropriations Committee, “Committee Approves FY25 Subcommittee Allocations, Prioritizing Defense, Homeland Security, and Veterans Affairs,” May 23, 2024, press release, <https://appropriations.house.gov/news/press-releases/committee-approves-fy25-subcommittee-allocations-prioritizing-defense-homeland>; and House Appropriations Committee, “Cole Previews Interim Fiscal Year 2025 Subcommittee Allocations,” new release, May 16, 2024, <https://appropriations.house.gov/news/press-releases/cole-previews-interim-fiscal-year-2025-subcommittee-allocations>.

⁴ During the moratorium, Congress appropriated funding above the requested amounts for categories of work, called *additional funding*, without identifying specific projects. In the 117th and 118th Congresses, enacted appropriations have included additional funding for USACE and Reclamation, along with CPF/CDS items.

⁵ For House CPF details, see “Subcommittee on Energy and Water Development Fiscal Year 2025 Guidance on All Member Requests,” <https://appropriations.house.gov/sites/evo-subsites/republicans-appropriations.house.gov/files/evo-media-document/fy25-energy-and-water-development-and-related-agencies-guidance.pdf>; for the Senate, see “Energy and Water Development FY 2025 Congressionally Directed Spending – Eligible Agencies and Accounts,” https://www.appropriations.senate.gov/imo/media/doc/fy2025_cds_appropriations_accounts_ew_final_051024.pdf.

Figure 2. E&W CPF/CDS Total Enacted Funding from FY2022 Through FY2024
(nominal \$, in millions)



Sources: Community Project Funding (CPF)/Congressionally Directed Spending (CDS) tables in explanatory statements accompanying enacted annual appropriations for FY2022 through FY2024.

Notes: The patterned area of the stacked columns distinguishes the sum of the top three CPF/CDS items (all under USACE appropriations).

Recent Supplemental Funding

Congress provided supplemental appropriations for USACE and Reclamation from FY2018 through FY2023 for disaster response and mitigation (e.g., drought, flood); study, construction, maintenance, and repair of projects; new authorities that expand the agencies’ activities; and COVID-19 precautions, among other purposes.⁶ Congress also has provided supplemental appropriations to DOE for clean energy demonstration projects, science facilities and infrastructure, hydrogen production and distribution infrastructure, nuclear weapons nonproliferation, and renewable energy R&D, among other purposes. In addition, in some years, other agencies funded under Energy and Water Appropriations Acts received supplemental funding. **Table 1** details in nominal dollars supplemental appropriations based on the fiscal year when funds are first available (in some cases, FY2024-FY2026). All of these funds are available until expended except for funds from the IRA, which are available through various years from FY2026 to FY2031, and Defense Nuclear Nonproliferation and Salaries and Expenses in P.L. 118-50, which are available through FY2025.⁷

⁶ For CRS water resource products on these acts, see CRS In Focus IF11945, *U.S. Army Corps of Engineers: Supplemental Appropriations*, by Nicole T. Carter and Anna E. Normand; CRS Insight IN11723, *Infrastructure Investment and Jobs Act Funding for U.S. Army Corps of Engineers (USACE) Civil Works*, by Anna E. Normand and Nicole T. Carter; CRS Report R47032, *Bureau of Reclamation Provisions in the Infrastructure Investment and Jobs Act (P.L. 117-58)*, by Charles V. Stern and Anna E. Normand; and CRS In Focus IF12437, *Bureau of Reclamation Funding in the Inflation Reduction Act (P.L. 117-169)*, by Charles V. Stern and Anna E. Normand.

⁷ §§50233 and 80004 of P.L. 117-169 appropriations are to remain available through FY2026. §§50231 and 50232 of P.L. 117-169 appropriations are to remain available through FY2031.

Table I. Enacted Supplemental Appropriations for Agencies Funded by Energy and Water Development Acts

(FY2018-FY2026 nominal dollars in millions)

FY Funds First Available	Act	Title I: U.S. Army Corps of Engineers	Title II: Bureau of Reclamation and CUP	Title III: Department of Energy	Title IV: Independent Agencies
FY2018	P.L. 115-123	17,398	—	22	—
FY2019	P.L. 116-20	3,258	16	—	—
FY2020	P.L. 116-136	70	21	128	3
FY2021	—	—	—	—	—
FY2022	P.L. 117-43	5,711	220	43	—
	P.L. 117-58	14,969	1,710	18,687	581
	P.L. 117-169	—	4,588	35,067	—
FY2023	P.L. 117-58	1,080	1,660	13,100	200
	P.L. 117-180	20	—	—	—
	P.L. 117-328	1,480	—	1,945	—
FY2024	P.L. 117-58	1,050	1,660	10,778	200
	P.L. 118-50	—	—	247	—
FY2025	P.L. 117-58	—	1,660	10,831	200
FY2026	P.L. 117-58	—	1,660	9,072	200

Source: CRS using public laws enacted in FY2018-FY2024.**Notes:** Fiscal year shown is when funds are first available. All funds are available until expended except for funds from P.L. 117-169, which are available through various fiscal years from FY2026 to FY2031, and Defense Nuclear Nonproliferation and Salaries and Expenses in P.L. 118-50, which are available through FY2025.

The relatively large amount of supplemental funding already available to Energy and Water Development agencies for FY2024 was a consideration in the congressional debate on FY2024 appropriations. This affected considerations about the amount of regular appropriations to be provided in the FY2024 E&W bill and the FY2025 Administration request, and whether to fund activities primarily with previously enacted supplemental appropriations. For example, DOE cited IJA funding for two advanced reactor demonstration projects as the reason that no funding for those projects was included in the FY2025 request.

For more details on selected supplemental funding, see

- CRS In Focus IF11945, *U.S. Army Corps of Engineers: Supplemental Appropriations*, by Nicole T. Carter and Anna E. Normand.
- CRS Insight IN11723, *Infrastructure Investment and Jobs Act Funding for U.S. Army Corps of Engineers (USACE) Civil Works*, by Anna E. Normand and Nicole T. Carter.
- CRS Report R47032, *Bureau of Reclamation Provisions in the Infrastructure Investment and Jobs Act (P.L. 117-58)*, by Charles V. Stern and Anna E. Normand.
- CRS In Focus IF12437, *Bureau of Reclamation Funding in the Inflation Reduction Act (P.L. 117-169)*, by Charles V. Stern and Anna E. Normand.

- CRS Report R47034, *Energy and Minerals Provisions in the Infrastructure Investment and Jobs Act (P.L. 117-58)*, coordinated by Brent D. Yacobucci.
- CRS Report R47262, *Inflation Reduction Act of 2022 (IRA): Provisions Related to Climate Change*, coordinated by Jane A. Leggett and Jonathan L. Ramseur.

Proposed Increases for EERE and New Accounts

The Administration's FY2025 request would increase DOE EERE funding by \$409 million (12%) over the FY2024 enacted amount. This includes separate appropriations accounts that the request would establish for several large offices currently under the EERE appropriations account—FEMP, Office of Manufacturing and Energy Supply Chains, and the Office of State and Community Programs. Congress did not approve moving these appropriations accounts out of EERE as proposed by the Administration in FY2023 and FY2024.

EERE programs with the largest requested percentage increases are Renewable Energy Grid Integration (up \$43 million, or 195%), Wind Energy Technologies (up \$62 million, or 45%), Geothermal Technologies (up \$38 million, or 32%), Industrial Efficiency and Decarbonization (up \$50 million, or 21%),⁸ and Vehicle Technologies (up \$52 million, or 12%).

These increases do not include the efficiency programs that the Administration proposes moving to separate DOE appropriations accounts. FEMP would receive \$64 million in FY2025 under the request (up \$21 million, or 49%), the Office of State and Community Energy Programs, which handles state energy planning grants and low-income home weatherization assistance, would receive \$574 million (up \$103 million, or 22%), and the Office of Manufacturing and Energy Supply Chains would receive \$113 million (up \$95 million or 528%).

IJA appropriated \$16.264 billion in FY2022 through FY2026 in additional emergency spending for programs in the EERE account, of which \$1.945 billion was for FY2025.⁹ EERE programs received \$12.150 billion in additional funding in IRA, available from FY2022 through FY2026, FY2027, FY2029, or FY2031, depending upon the provision.

For more details, see CRS In Focus IF12376, *DOE Office of Energy Efficiency and Renewable Energy FY2024 Appropriations*, by Martin C. Offutt and Corrie E. Clark.

Controversy over Energy Efficiency Standards

DOE revises most of the energy efficiency standards in its Appliance and Commercial Equipment Standards Program on a six-year cycle. Compliance with the revised standards, typically three years after publication, can lead to additional costs to industry as manufacturing costs increase, including up-front capital costs. The revisions generally are estimated to save consumers and firms money due to lower energy costs over the life of the appliance or equipment. Several amendments adopted to the House-passed FY2024 Energy and Water Development appropriations bill (H.R. 4394) would have prohibited or preserved DOE's ability to revise and/or implement and enforce these standards, particularly for gas stoves. DOE's energy efficiency

⁸ Industrial Efficiency and Decarbonization has been part of Advanced Manufacturing. In the FY2024 request, DOE proposes dividing Advanced Manufacturing into two programs: (1) Advanced Materials and Manufacturing Technologies and (2) Industrial Efficiency and Decarbonization.

⁹ DOE, *FY 2025 Congressional Justification*, Energy Efficiency and Renewable Energy, March 2024, p. 10, <https://www.energy.gov/sites/default/files/2024-03/doe-fy-2025-budget-vol-4-v5.pdf>. Includes all programs currently funded by the EERE appropriations account.

standards were a topic of discussion at the House Appropriations Committee’s FY2025 budget hearing with Energy Secretary Jennifer Granholm.¹⁰

For more information, see CRS Insight IN12115, *DOE’s Regulations on Gas Stoves*, by Martin C. Offutt, and CRS Insight IN12179, *DOE’s Proposed Regulation on Electricity Distribution Transformers*, by Martin C. Offutt.

Proposed Decreases for Advanced Nuclear Reactors and Fuel

DOE is requesting \$1.591 billion for Nuclear Energy, a reduction of \$94 million (-6%) from the FY2024 enacted amount. The largest reductions would be for Reactor Concepts (down \$21 million, or -19%) and the Advanced Reactor Demonstration Program (down \$98 million, or -31%). Nuclear Energy Enabling Concepts would increase by \$9 million (9%), Fuel Cycle Research and Development would decrease by \$1 million (less than 1%), and University and Competitive Research Programs would increase by \$3 million (2%).

The requested funding for FY2025 is supplemented by larger amounts previously appropriated by IJA and IRA. In a transfer from IJA, the enacted FY2024 E&W appropriations act (Section 311) provided \$950 million for DOE to support up to two small modular reactor demonstrations, through the Office of Clean Energy Demonstrations, and nuclear reactor safety training. Section 312 provided up to \$2.720 billion for DOE to support domestic uranium mining, conversion, and enrichment, and to support the acquisition of high-assay low-enriched uranium (HALEU) for advanced reactors. The funds come from the unobligated balance of \$6 billion appropriated by IJA for the DOE Civil Nuclear Credit program to prevent the closure of existing nuclear power plants. DOE has conditionally approved \$1.1 billion of Civil Nuclear Credits for one plant, Diablo Canyon in California.¹¹ The transferred IJA funds are in addition to \$700 million appropriated for establishing a HALEU supply chain by IRA.

Transfers for nuclear fuel supply under Section 312 were contingent on the imposition of sanctions on enriched uranium imports from Russia, which occurred with the signing of the Prohibiting Russian Uranium Imports Act on May 13, 2024 (P.L. 118-62, H.R. 1042, H.Rept. 118-296). The law prohibits Russian imports of enriched uranium beginning 90 days after enactment, although waivers for specified amounts are allowed through the end of 2027.

Many proposed designs for advanced nuclear reactors would require HALEU fuel, which has higher enrichment of the fissile isotope uranium 235 than that used by existing U.S. nuclear plants. HALEU is not available in commercial quantities, and the nuclear industry contends that government action is needed to prevent a “choke point” in advanced reactor development.¹² The latest appropriations in the FY2024 E&W act to support the establishment of a HALEU supply chain are in addition to \$700 million previously appropriated for that purpose by IRA.

Strategic Petroleum Reserve Modernization Program

DOE is currently executing a Strategic Petroleum Reserve (SPR) modernization program that invests in infrastructure and systems with the goal of extending SPR mission readiness (i.e., oil

¹⁰ Manufactured Housing Institute, “Chairman Fleishman to DOE Secretary Granholm: Change DOE’s Approach to Manufactured Housing,” March 28, 2024, <https://www.manufacturedhousing.org/news/chairman-fleishman-to-doe-secretary-granholm-change-does-approach-to-manufactured-housing>.

¹¹ DOE Grid Deployment Office, “Civil Nuclear Credit Program,” <https://www.energy.gov/gdo/civil-nuclear-credit-program>.

¹² Siri Hedreen and Andrea Jenetta, “Advanced Nuclear Developers Cite Fuel Supply as ‘Choke Point’ to Deployment,” *Platts Nuclear Fuel*, August 4, 2023.

drawdown and refill rates) for another 15 to 25 years. According to DOE’s FY2025 budget justification, the project is scheduled to be completed by the end of FY2026. Estimated program costs of approximately \$1.4 billion were funded through congressionally authorized SPR crude oil sales conducted between FY2017 and FY2021. Sale proceeds were deposited into the Energy Security and Infrastructure Modernization (ESIM) Fund, an account used to pay for modernization program costs.

Citing “pandemic and related supply chain issues, and delays related to” emergency sales that started in FY2022, estimated program costs are currently \$1.92 billion.¹³ The Biden Administration requested supplemental funding of \$500 million for ESIM in FY2023, but that request was not approved. DOE’s FY2025 budget justification highlights additional program costs, lists suspended and deferred projects, and indicates anticipation of nearly \$500 million of additional supplemental funding for FY2024. However, the SPR supplemental funding subsequently was not requested. Other congressional options for addressing the estimated SPR modernization funding shortfall could include directing DOE to sell \$500 million of crude oil and deposit sale proceeds into the ESIM fund, rescinding unobligated funds from the SPR Petroleum Account and transferring those funds to the ESIM account, directing DOE to re-scope the program to match available funding, or exploring other potential options.

Proposed Increase for the Office of Clean Energy Demonstrations

The Administration requested \$180 million in FY2025 for the DOE Office of Clean Energy Demonstrations (OCED). This would be a \$130 million (260%) increase from OCED’s FY2024 regular annual appropriation, but the program’s regular appropriations are overshadowed by \$21.456 billion appropriated for OCED through FY2026 by IIJA (see **Table 2**). In addition, IRA appropriated \$5.812 billion for an OCED program on Advanced Industrial Facilities Deployment for FY2022-FY2026.

OCED funds clean energy and industrial decarbonization demonstration projects for potential commercialization. OCED took over DOE support for two advanced nuclear reactor demonstration projects in Wyoming and Texas previously overseen by the DOE Office of Nuclear Energy (NE), but no funding was requested for those projects in FY2025, because “IIJA provided multi-year funding for these demonstrations,” according to the DOE budget justification.¹⁴ As noted above, the enacted FY2024 E&W measure transferred \$800 million from the DOE Civil Nuclear Credit program to OCED for up to two cost-shared advanced reactor projects with a non-federal cost share of at least 50%. (For more details, see CRS In Focus IF12636, *Nuclear Energy in a Climate Change Context: Current Appropriations for Nuclear Energy Development*, by Jonathan D. Haskett and Mark Holt.)

¹³ DOE, *FY2025 Congressional Justification*, vol. 3, March 2024, p. 56, <https://www.energy.gov/sites/default/files/2024-03/doe-fy-2025-budget-vol-3-v2.pdf>.

¹⁴ DOE, *FY 2025 Congressional Justification*, vol. 4, Office of Clean Energy Demonstrations, March 2024, p. 365, <https://www.energy.gov/sites/default/files/2024-03/doe-fy-2025-budget-vol-4-v5.pdf>.

Table 2. Additional Appropriations for Clean Energy Demonstrations in the Infrastructure Investment and Jobs Act (P.L. 117-58)

(budget authority in millions of current dollars)

Program	FY2022	FY2023	FY2024	FY2025	FY2026	Total
Energy Storage Demonstration Pilot Grants Program	88.8	88.8	88.8	88.8	—	355.0
Long-Duration Demonstration Initiative and Joint Program	37.5	37.5	37.5	37.5	—	150.0
Advanced Reactor Demonstration Program	677.0	600.0	600.0	600.0	—	2,477.0
Carbon Capture Large-scale Pilot Projects	387.0	200.0	200.0	150.0	—	937.0
Carbon Capture Demonstration Projects	937.0	500.0	500.0	600.0	—	2,537.0
Industrial Emission Demonstration Projects	100.0	100.0	150.0	150.0	—	500.0
Clean Energy Demonstration Program on Current and Former Mine Land	100.0	100.0	100.0	100.0	100.0	500.0
Regional Clean Hydrogen Hubs	1,600.0	1,600.0	1,600.0	1,600.0	1,600.0	8,000.0
Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency	1,000.0	1,000.0	1,000.0	1,000.0	1,000.0	5,000.0
Energy Improvement in Rural and Remote Areas	200.0	200.0	200.0	200.0	200.0	1,000.0
Total	5,127.3	4,426.3	4,476.3	4,526.3	2,900.0	21,456.0
3% Set-aside for Program Administration	153.8	132.8	134.3	135.8	87.0	643.7

Source: P.L. 117-58, Division J.**Notes:** Appropriations are in addition to other amounts made available for these purposes.

Reduction in Crosscutting Hydrogen Funding

The DOE crosscutting hydrogen activity includes several offices with responsibility for supporting hydrogen work based on different primary sources of energy (e.g., renewable, fossil, nuclear) and types of end-use (e.g., vehicles, portable power, thermal comfort). DOE's FY2025 request for crosscutting hydrogen appropriations totals \$377 million, a decrease of \$19 million, (-5%) below the FY2024 enacted level of \$396 million.¹⁵ Most of the hydrogen funding comes from EERE and Fossil Energy and Carbon Management (FECM), with smaller amounts from the Office of Nuclear Energy and the Office of Science.

In addition to funding in the Energy and Water Development appropriations bill, IJA appropriated \$9.500 billion for three hydrogen- and fuel cell-related DOE programs from FY2022 to FY2026 (\$1.900 billion in FY2025). The largest of these, the Regional Clean Hydrogen Hubs in the Office of Clean Energy Demonstrations, was appropriated \$8.000 billion to support

¹⁵ DOE, *FY 2025 Congressional Justification*, vol. 4, Crosscutting Activities, Hydrogen, p. 301, March 2024, <https://www.energy.gov/sites/default/files/2024-03/doe-fy-2025-budget-vol-2-v4.pdf>; and Explanatory Statement to Accompany Division D of the Consolidated Appropriations Act, 2024, P.L. 118-42.

demonstration projects involving networks of clean hydrogen producers and consumers, along with the connecting infrastructure.

DOE launched a “Hydrogen Shot” initiative in June 2021—one of its “Energy Earthshots” dedicated to the scale-up of emerging low-carbon energy technologies—with a goal of making hydrogen, produced through electrolysis, commercially available at a cost of \$1 for one kilogram in one decade, not including delivery and dispensing.

For more information, see CRS In Focus IF12163, *Department of Energy Funding for Hydrogen and Fuel Cell Technology Programs FY2022*, by Martin C. Offutt, and CRS In Focus IF12514, *DOE Appropriations for Its Hydrogen Program: FY2024*, by Martin C. Offutt.

Proposed Increase for Weapons Activities, Decrease for Nuclear Nonproliferation

The FY2025 budget request for DOE Weapons Activities is \$19.849 billion—\$741 million (4%) higher than the FY2024 enacted level, while the FY2025 request of \$2.119 billion for Naval Reactors is \$173 million (9%) above the FY2024 amount. The FY2025 request for nuclear Nonproliferation is \$2.465 billion, a decrease of \$116 million (-4%) from the FY2024 appropriation. All three programs are carried out by NNSA, a semiautonomous agency within DOE.

Requested FY2025 amounts for nuclear warhead modernization programs in Weapons Activities include the following:

- \$28 million for the B61-12 Life Extension Program (LEP), a decrease of \$422 million (-94%) from the FY2024 enacted amount. The B61-12 LEP is to combine four existing variants of the B61 gravity bomb.
- \$16 million for the B61-13 variant of the B61 gravity bomb, a 69% decrease from the \$52 million enacted in FY2024. The Biden Administration announced in 2023 that the United States would pursue this warhead variant utilizing B61-12 production capacities for use against “certain harder and large-area military targets” as the Department of Defense “works to retire legacy systems such as the B83-1 and the B61-7.”¹⁶
- \$79 million for the W88 Alteration, a decrease of \$100 million (-56%) from the FY2024 amount. The program is to upgrade the arming-fuzing-firing system on the warhead and refresh the warhead’s conventional high explosives. This warhead is carried on a portion of the D-5 (Trident) submarine-launched ballistic missiles (SLBMs).
- \$1.165 billion for the W80-4 warhead LEP, an increase of \$154.82 million (15%) over the FY2024 enacted amount intended for the warhead that will be mounted on the Long-Range Standoff (LRSO) cruise missile.
- \$1.096 billion for the W87-1 warhead modification program, an increase of \$27 million (3%) from FY2024. The Air Force plans to deploy the W87-1 on the new U.S. Sentinel land-based intercontinental ballistic missile (ICBM).¹⁷

¹⁶ Department of Defense, “Fact Sheet on B61 Variant Deployment,” October 27, 2023, <https://media.defense.gov/2023/Oct/27/2003329624/-1/-1/1/B61-13-FACT-SHEET.PDF>.

¹⁷ CRS In Focus IF11681, *Defense Primer: LGM-35A Sentinel Intercontinental Ballistic Missile*.

- \$456 million for the W93 warhead, an increase of \$66 million (17%) from the FY2024 enacted amount. The W93 is a new design intended for deployment on ballistic missile submarines.
- While the Biden Administration did not include funding for the nuclear sea-launched cruise missile (SLCM-N) warhead in NNSA's FY2025 budget request, NNSA Administrator Jill Hruby testified in a May 2024 hearing that NNSA's FY2025 unfunded priorities list includes \$70 million in funding for this warhead.¹⁸ The FY2024 enacted amount for this warhead was \$70 million.¹⁹

NNSA is implementing seven warhead programs while also engaging in intensive efforts to recapitalize its production infrastructure. In this regard, congressional concern has been raised about NNSA's schedule for developing production capacity for plutonium pits (warhead cores), central components of nuclear warheads. NNSA plans to develop pit production capacity at Los Alamos National Laboratory in New Mexico and the Savannah River Site (SRS) in South Carolina. Pit production is included in NNSA's FY2025 budget under Plutonium Modernization, for which NNSA requests \$2.891 billion for FY2025, a decrease of \$20 million (-1%) from the FY2024 enacted level.

Appropriations for NNSA nuclear weapons activities and other defense programs typically closely track the levels authorized in annual National Defense Authorization Acts (NDAA). An FY2025 NDAA (H.R. 8070) was ordered to be reported by the House Armed Services Committee on May 22, 2024.

For more information, see CRS Report R47657, *Energy and Water Development Appropriations for Nuclear Weapons Activities: In Brief*, by Anya L. Fink and Alexandra G. Neenan.

Startup of Surplus Plutonium Disposition

The FY2025 budget request provides for activities related to the disposition of surplus plutonium, a key material for nuclear weapons, in the Material Management and Minimization (MMM) and Nonproliferation Construction accounts. These activities are intended to dilute 34 metric tons of surplus plutonium, located primarily at SRS, for permanent disposal at the Waste Isolation Pilot Plant (WIPP), a deep underground repository in New Mexico. "A total of 13 shipments of downblended surplus plutonium were made to WIPP in FY 2023," according to DOE's FY2025 budget justification.²⁰

In the MMM account, DOE is requesting \$193 million for Plutonium Disposition and, under the Construction account, \$40 million for the Surplus Plutonium Disposition Project at SRS. The construction request would be a reduction of \$37 million (-48%) from the FY2024 enacted amount. The budget justification says the construction funding reduction results from "the use of prior year uncosted balances available due to delays in final design completion."²¹ The request

¹⁸ Senate Armed Services Committee, Hearing to Receive Testimony on the Department of Energy's Atomic Energy Defense Activities and Department of Defense Nuclear Weapons Programs in Review of the Defense Authorization Request for Fiscal Year 2025 and the Future Years Defense Program, May 22, 2024, <https://www.armed-services.senate.gov/hearings/to-receive-testimony-on-the-department-of-energys-atomic-energy-defense-activities-and-department-of-defense-nuclear-weapons-programs-in-review-of-the-defense-authorization-request-for-fiscal-year-2025-and-the-future-years-defense-program> (55 minutes into the video).

¹⁹ This warhead may or may not be the W80-4; see CRS In Focus IF12084, *Nuclear-Armed Sea-Launched Cruise Missile (SLCM-N)*.

²⁰ DOE, *FY 2025 Congressional Justification*, Vol. 1, March 2024, p. 628, <https://www.energy.gov/sites/default/files/2024-03/doe-fy-2025-budget-vol-1-v4.pdf>.

²¹ *Ibid.*, p. 672.

also reflects a 10-year deferral of the expansion of plutonium pit disassembly and processing capability, which will be needed to complete the disposition of all 34 metric tons of surplus plutonium.²²

Cleanup of Former Nuclear Sites: Adequacy of Proposed Funding

DOE's Office of Environmental Management (EM) is responsible for environmental cleanup and waste management at the department's nuclear facilities. The \$8.229 billion request for EM activities for FY2025 is \$253 million (-3%) below the FY2024 enacted level of \$8.482 billion, including adjustments and offsets.

The primary appropriations component of the EM program is the Defense Environmental Cleanup account, which finances the cleanup of former nuclear weapons production sites. For FY2025, the Administration requests \$7.060 billion, a reduction of \$225 million (-3%) from the FY2024 enacted amount. For the Non-Defense Environmental Cleanup account, which funds the cleanup of federal nuclear energy research sites, the request is \$315 million, a reduction of \$27 million (-8%) below the FY2024 enacted level. The third component of the EM budget is the Uranium Enrichment Decontamination and Decommissioning Fund (UED&D), for which the FY2025 request is \$854 million, nearly the same as the FY2024 enacted amount. This fund was established by Title XI of the Energy Policy Act of 1992 (P.L. 102-486) to pay for the cleanup of three federal facilities that enriched uranium for national defense and civilian purposes, located near Paducah, KY; Piketon, OH (Portsmouth plant); and Oak Ridge, TN.

The adequacy of funding for the Office of Environmental Management to attain cleanup milestones across the entire site inventory has been a recurring issue. Cleanup milestones are enforceable measures incorporated into compliance agreements negotiated among DOE, the Environmental Protection Agency, and the states. These milestones establish time frames for the completion of specific actions to satisfy applicable requirements at individual sites.

Federal Regional Commissions and Authorities: Amending or Expanding Uses of Funding

The FY2025 budget request included proposed appropriations language to amend or expand the use of funding by certain federal regional commissions and authorities (i.e., Delta Regional Authority (DRA), the Denali Commission, and the Northern Border Regional Commission (NBRC)). The FY2025 request proposes to repeal the sunset (or termination of authority) provision for DRA's authority and allow the DRA to collect and spend fees to cover the costs of operating a visa sponsorship program.²³ The President's budget would allow funding provided by the Denali Commission to be considered a non-federal match in projects for which the Denali Commission is not the primary funding source and proposes that the non-federal cost-share

²² Ibid., p. 628.

²³ The FY2025 budget request included proposed appropriations language to repeal section 382N of the Delta Regional Authority Act of 2000 (7 U.S.C. 2009aa-13). See Office of Management and Budget (OMB), *Appendix: Budget of the U.S. Government, Fiscal Year 2025* (2024), p. 1143, https://www.whitehouse.gov/wp-content/uploads/2024/03/com_fy2025.pdf.

maximum be 80% for certain construction projects.²⁴ The FY2025 request also proposes to waive the 10% limit on FY2025 funding that may be used for administrative expenses for the NBRC.²⁵

Bill Status and Recent Funding History

Table 3 indicates major congressional actions that could be taken during consideration of FY2025 Energy and Water Development appropriations, which had not begun by the date of publication. (For more details, see the CRS Appropriations Status Table at <http://www.crs.gov/AppropriationsStatusTable/Index>.)

Table 3. Status of Energy and Water Development Appropriations, FY2025

Subcommittee Markup		Final Approval							
House	Senate	House Comm.	House Passed	Senate Comm.	Senate Passed	Conf. Report	House	Senate	Public Law

Source: CRS Appropriations Status Table.

Note: Congressional consideration had not begun by publication. Dates will be added as action occurs.

Table 4 includes budget totals for regular (excluding supplementals) energy and water development appropriations enacted for FY2019 through actions in FY2025.

Table 4. Energy and Water Development Appropriations, FY2019-FY2025

(budget authority in billions of current dollars)

FY2019	FY2020	FY2021	FY2022	FY2023	FY2024	FY2025 Request
44.7	48.4	49.5	55.6	59.2	61.4	61.3

Source: Compiled by CRS from totals provided by congressional budget documents.

Notes: Figures exclude permanent budget authorities, scorekeeping adjustments, rescissions, and emergency funding. See **Table I** for emergency funding for these fiscal years.

Description of Major Energy and Water Programs

The annual Energy and Water Development appropriations bill includes four titles: Title I—Corps of Engineers—Civil; Title II—Department of the Interior (Bureau of Reclamation and Central Utah Project); Title III—Department of Energy; and Title IV—Independent Agencies, as shown in **Table 5**. Major programs in the bill are described in this section in the approximate order they appear in the bill. Previous appropriations and recent budget requests are shown in the

²⁴ OMB, *Appendix: Budget of the U.S. Government, Fiscal Year 2025 (2024)*, p. 1144, https://www.whitehouse.gov/wp-content/uploads/2024/03/com_fy2025.pdf.

²⁵ OMB, *Appendix: Budget of the U.S. Government, Fiscal Year 2025 (2024)*, p. 1201, https://www.whitehouse.gov/wp-content/uploads/2024/03/com_fy2025.pdf. The authorizing statute for several regional commissions and authorities (including the Northern Border Regional Commission (NBRC)) limits the amount of appropriated funding that may be used for administrative expenses to 10% of appropriated funds, unless less than \$10 million is provided in a fiscal year (see 40 U.S.C. §15751(b)). The exception to the 10% limit on administrative expenses for the NBRC was previously included in the FY2024 Consolidated Appropriations Act (P.L. 118-42). For additional information, see CRS In Focus IF12165, *Federal Regional Commissions and Authorities: Administrative Expenses*, by Julie M. Lawhorn.

accompanying tables, and additional details about many of these programs are provided in separate CRS reports as indicated. For a discussion of current funding issues related to these programs, see “Funding Issues and Initiatives,” above. Congressional clients may obtain more detailed information by contacting CRS analysts listed in CRS Report R42638, *Appropriations: CRS Experts*, by James M. Specht and Justin Murray.

Table 5. Energy and Water Development Appropriations Summary
(budget authority in millions of current dollars)

Title	FY2020 Approp	FY2021 Approp	FY2022 Approp	FY2023 Approp	FY2024 Request	FY2024 Approp	FY2025 Request
Title I: USACE	7,650	7,795	8,343	8,310	7,413	8,703	7,220
Title II: CUP and Reclamation	1,680	1,691	1,924	1,954	1,469	1,923	1,619
Title III: Department of Energy	38,657	39,625	44,856	48,445	52,571	50,247	51,906
Title IV: Independent Agencies	407	414	454	494	559	502	519
Subtotal	48,395	49,525	55,576	59,204	62,012	61,375	61,265
Rescissions and Scorekeeping Adjustments ^a	-71	-73	-2,704	-2,202	-4	-22	491
E&W Total	48,324	49,452	52,872	57,002	62,008	61,353	60,774

Sources: FY2025 Administration budget request, explanatory statement for Consolidated Appropriations Act, 2024; P.L. 117-328 and explanatory statement; FY2022 agency budget justifications; explanatory statement for H.R. 133, 116th Congress; FY2021 agency budget justifications; explanatory statement for Division C of H.R. 1865, 116th Congress. Excludes emergency appropriations. Subtotals may include other adjustments. Columns may not sum to totals because of rounding and adjustments.

a. Budget “scorekeeping” refers to determinations of spending amounts for congressional budget enforcement purposes. These scorekeeping adjustments may include rescissions and offsetting revenues from various sources.

Agency Budget Justifications

FY2025 budget justifications for the largest agencies funded by the annual Energy and Water Development appropriations bill can be found through the links below. The justifications provide detailed descriptions and funding breakouts for programs, projects, and activities under the agencies’ jurisdiction.

- Title I, U.S. Army Corps of Engineers, Civil Works, <https://www.usace.army.mil/missions/civil-works/budget> (see **Table 6**)
- Title II (see Table 7)
 - Bureau of Reclamation, <https://www.usbr.gov/budget>
 - Central Utah Project, <https://www.doi.gov/media/document/fy-2025-central-utah-project-completion-act-greenbook>
- Title III, Department of Energy, <https://www.energy.gov/cfo/articles/fy-2025-budget-justification> (see **Table 8**)

- Title IV, Independent Agencies (see Table 13)
 - Appalachian Regional Commission, <https://www.arc.gov/budget-performance-and-policy>
 - Delta Regional Authority, <https://dra.gov/accountability/congressional-budget-justification>
 - Denali Commission, <https://www.denali.gov/finance/congressional-budget-justifications>
 - Northern Border Regional Commission, <https://www.nbrc.gov/content/CJ>
 - Southeast Crescent Regional Commission, <https://srcr.gov/cj>
 - Nuclear Regulatory Commission, <https://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1100>
 - Defense Nuclear Facilities Safety Board, <https://www.dnfsb.gov/about/congressional-budget-requests>
 - Nuclear Waste Technical Review Board, <http://www.nwtrb.gov/about-us/plans>

Army Corps of Engineers

USACE is an agency in the Department of Defense with both military and civilian responsibilities. Under its civil works program, which is funded by the Energy and Water Development appropriations bill, USACE plans, builds, operates, and in some cases maintains water resource facilities for coastal and inland navigation, riverine and coastal flood risk reduction, and aquatic ecosystem restoration.²⁶

In recent decades, Congress has generally authorized USACE studies, construction projects, and other activities in omnibus water authorization bills, typically titled as Water Resources Development Acts (WRDAs), prior to funding them through appropriations legislation. Recent Congresses enacted omnibus water resources authorization acts in 2014, 2016, 2018, 2020, and 2022. (The latest WRDA was Title LXXXI of Division H of the James M. Inhofe National Defense Authorization Act for Fiscal Year 2023, P.L. 117-263.) These acts consisted largely of authorizations for new USACE studies and projects, and they altered numerous USACE policies and procedures.²⁷

Unlike for highways and in municipal water infrastructure programs, federal funds for USACE are not distributed to states or projects based on formulas or delivered via competitive grants. Instead, USACE generally is directly involved in planning, designing, and managing the construction of projects that are cost-shared with nonfederal project sponsors.

Policies in the 112th through the 116th Congresses limited congressionally directed funding of site-specific projects (i.e., *earmarks*). Prior to the 112th Congress, Congress would direct funds to specific projects not in the budget request or increase funds for certain projects. For FY2011-FY2021, Congress appropriated additional funding for categories of USACE work without identifying specific projects. During that period, after congressional enactment of the

²⁶ Military responsibilities are funded through the Military Construction, Veterans Affairs, and Related Agencies appropriations bill.

²⁷ For more information on USACE authorization legislation, see CRS In Focus IF11322, *Water Resources Development Acts: Primer*, by Nicole T. Carter and Anna E. Normand, and CRS Report R45185, *Army Corps of Engineers: Water Resource Authorization and Project Delivery Processes*, by Nicole T. Carter and Anna E. Normand.

appropriations legislation and accompanying report language on priorities and other guidance for use of the additional funding, the Administration developed a work plan that reported on (1) the studies and construction projects selected to receive funding for the first time (new starts) and (2) the specific studies and projects receiving additional funds. For FY2022 through FY2024, Congress approved earmarks in specified categories, in addition to providing additional funding for specific categories for USACE to allocate in work plans.²⁸ House and Senate rules again allow USACE earmarks for FY2025. For more information, see CRS Report R46320, *U.S. Army Corps of Engineers: Annual Appropriations Process*, by Anna E. Normand and Nicole T. Carter.

Table 6 shows USACE appropriations accounts from FY2020 through FY2024, including the FY2024 and FY2025 requests.

Table 6. Army Corps of Engineers
(budget authority in millions of current dollars)

Program	FY2020 Approp	FY2021 Approp	FY2022 Approp	FY2023 Approp	FY2024 Request	FY2024 Approp	FY2025 Request
Investigations	151.0	153.0	143.0	172.5	129.8	143.0	110.6
Construction	2,681.0	2,692.6	2,492.8	1,808.8	2,014.6	1,854.7	1,958.4
Mississippi River and Tributaries (MR&T)	375.0	380.0	370.0	370.0	226.5	368.0	244.8
Operation and Maintenance (O&M)	3,790.0	3,849.7	4,570.0	5,078.5	2,629.9	5,552.8	2,469.5
Regulatory	210.0	210.0	212.0	218.0	221.0	221.0	221.0
General Expenses	203.0	206.0	208.0	215.0	212.0	216.0	231.2
FUSRAP	200.0	250.0	300.0	400.0	200.0	300.0	200.3
Flood Control and Coastal Emergencies (FCCE)	35.0	35.0	35.0	35.0	40.0	35.0	45.0
Office of the Asst. Secretary of the Army	5.0	5.0	5.0	5.0	6.0	5.0	6.4
WIFIA Program ^a	—	14.2	7.2	7.2	7.2	7.2	7.0
Harbor Maintenance Trust Fund ^b	—	—	—	—	1,726.0	—	1,726.0

²⁸ USACE work plans are available at USACE, “Civil Works Budget and Performance,” at <https://www.usace.army.mil/Missions/Civil-Works/Budget/#Work-Plans>.

Program	FY2020 Approp	FY2021 Approp	FY2022 Approp	FY2023 Approp	FY2024 Request	FY2024 Approp	FY2025 Request
Total approp.	7,650.0	7,795.5	8,343.0	8,310.0	7,413.0	8,702.7	7,220.2
Rescissions	—	-0.5	—	—	-4.5	-22.2	—
Total Title I	7,650.0	7,795.0	8,343.0	8,310.0	7,408.5	8,680.5	7,220.2

Sources: FY2025 Administration budget request; explanatory statement for Consolidated Appropriations Act, 2024; USACE Civil Works FY2024 Budget and USACE Civil Works FY2022 Budget at <https://www.usace.army.mil/Missions/Civil-Works/Budget/>; FY2024 Budget Appendix for Corps of Engineers—Civil Works at https://www.whitehouse.gov/wp-content/uploads/2023/03/coe_fy2024.pdf; Division D of P.L. 117-328; Division D of P.L. 117-103; Division D of P.L. 116-260; Division C of P.L. 116-94; Division A of P.L. 115-244.

Notes: FUSRAP = Formerly Utilized Sites Remedial Action Program; WIFIA = Water Infrastructure Finance and Innovation Act. Columns may not sum to totals because of rounding.

- a. The Consolidated Appropriations Act, 2021, created a new USACE account to support direct loans and for the cost of guaranteed loans, as authorized by the Water Infrastructure Finance and Innovation Act of 2014 (WIFIA, Title V, Subtitle C of P.L. 113-121).
- b. In the Administration’s FY2025 request, as with previous requests, some activities that are funded in the O&M, Construction, and MR&T accounts are proposed to be funded directly from the Harbor Maintenance Trust Fund (HMTF) account. That is, the Administration proposes funding eligible USACE activities directly from the trust fund. This would replace the current practice of having USACE’s O&M, Construction, and MR&T accounts incur expenses for HMTF-eligible activities, and for these expenses to be reimbursed from the HMTF accounts. For example, HMTF-eligible maintenance dredging would no longer be funded by the O&M account and reimbursed by the HMTF; instead, the dredging would be funded directly from the HMTF account. These proposals were not enacted in FY2024. Similar proposals also were not enacted in FY2019, FY2020, FY2021, FY2022, and FY2023.

In addition to the regular appropriations for FY2022 and FY2023, USACE received the following supplemental appropriations:

- \$5.711 billion in Division B of P.L. 117-43;
- \$14.969 billion for FY2022, \$1.080 billion for FY2023, and \$1.050 billion for FY2024 in the IIJA (P.L. 117-58);
- \$1.480 billion in Division N of P.L. 117-328;²⁹ and
- \$20 million in the FY2023 continuing resolution (P.L. 117-180).

For more information on USACE supplemental funding, see CRS In Focus IF11945, *U.S. Army Corps of Engineers: Supplemental Appropriations*, by Anna E. Normand and Nicole T. Carter.

Bureau of Reclamation and Central Utah Project

Most of the large dams and water diversion structures in the West were built by, or with the assistance of, the Bureau of Reclamation. While USACE built hundreds of flood control and navigation projects, Reclamation’s original mission was to develop water supplies, primarily for irrigation to reclaim arid lands in the West for farming and ranching. Reclamation has evolved into an agency that assists in meeting the water demands in the West while working to protect the

²⁹ Of the \$1.480 billion in emergency supplemental funds provided by the Disaster Relief Supplemental Appropriations Act, 2023 (Division N of P.L. 117-328), \$350 million was made available for USACE to allocate in a work plan for construction and O&M of certain categories of projects (i.e., similar to additional funding provided through annual appropriations in FY2014-FY2022). USACE allocated the \$350 million from Division N along with additional funding provided by Division D in its FY2023 work plans.

environment and the public’s investment in Reclamation infrastructure. The agency’s municipal and industrial water deliveries have more than doubled since 1970.

Today, Reclamation manages hundreds of dams and diversion projects, including more than 300 storage reservoirs, in 17 western states. These projects provide water to approximately 10 million acres of farmland and 31 million people. Reclamation is the largest wholesale supplier of water in the 17 western states and the second-largest hydroelectric power producer in the nation. Reclamation facilities also provide substantial flood control, recreation, and other benefits. Reclamation facility operations are often controversial, particularly for their effect on fish and wildlife species and because of conflicts among competing water users during drought conditions.

As with USACE, the Reclamation budget is made up largely of individual project funding lines, rather than general programs that would not be covered by congressional earmark requirements. Therefore, as with USACE, these Reclamation projects have often been subject to earmark disclosure rules. The moratorium on earmarks through FY2021 restricted congressional steering of money directly toward specific Reclamation projects. For FY2022 through FY2025, the rules again have allowed congressionally directed funding for specific Reclamation projects.

Reclamation’s single largest account, Water and Related Resources, encompasses the agency’s traditional programs and projects, including construction, operations and maintenance, dam safety, and ecosystem restoration, among others.³⁰ Reclamation also typically requests funds in a number of smaller accounts, and has proposed additional accounts in recent years.

Implementation and oversight of CUP, also funded by Title II, is conducted by a separate office within the Department of the Interior.³¹

For more information, see CRS In Focus IF12369, *Bureau of Reclamation: FY2024 Budget and Appropriations*, by Charles V. Stern, and CRS In Focus IF12127, *Bureau of Reclamation: FY2023 Budget and Appropriations*, by Charles V. Stern. **Table 7** shows Reclamation and CUP appropriations accounts from FY2020 through FY2025, including the FY2024 and FY2025 requests.

Table 7. Bureau of Reclamation and CUP

(budget authority in millions of current dollars)

Program	FY2020 Approp	FY2021 Approp	FY2022 Approp	FY2023 Approp	FY2024 Request	FY2024 Approp	FY2025 Request
Water and Related Resources	1,512.2	1,521.1	1,747.1	1,787.2	1,301.0	1,751.7	1,443.5
Policy and Administration	60.0	60.0	64.4	65.1	66.8	66.8	66.8
CVP Restoration Fund (CVPRF)	54.8	55.9	56.5	45.8	48.5	48.5	55.7

³⁰ The Water and Related Resources Account is largely funded by the Reclamation Fund, which receives and distributes receipts related to a number of federal activities (including royalties received from oil and gas leasing on federal lands). For more on this fund and financing of selected Reclamation Projects, see CRS Report R41844, *The Reclamation Fund: A Primer*, by Charles V. Stern.

³¹ The Central Utah Project moves water from the Colorado River basin in eastern Utah to the western slopes of the Wasatch Mountain range. It was authorized in 1956 under the Colorado River Storage Project Act (P.L. 84-485). For more information, see the CUP website at <https://www.usbr.gov/projects/index.php?id=498>.

Program	FY2020 Approp	FY2021 Approp	FY2022 Approp	FY2023 Approp	FY2024 Request	FY2024 Approp	FY2025 Request
Calif. Bay-Delta (CALFED)	33.0	33.0	33.0	33.0	33.0	33.0	33.0
Gross Current Reclamation Authority	1,660.0	1,670.0	1,901.0	1,931.0	1,449.3	1,900.0	1,599.0
Central Utah Project (CUP) Completion	20.0	21.0	23.0	23.0	19.6	23.0	20.3
Reclamation and CUP	1,680.0	1,691.0	1,924.0	1,954.0	1,468.9	1,923.0	1,619.3
Offsets and Adjustments	—	—	—	-45.8	-48.5	—	—
Total	1,680.0	1,691.0	1,924.0	1,908.2	1,420.4	1,923.0	1,619.3

Sources: FY2025 Administration budget request; explanatory statement for Consolidated Appropriations Act, 2024; Reclamation and CUP FY2024 congressional budget justifications; Division D of P.L. 117-328; Division D of P.L. 117-103; Division D of P.L. 116-260; Division C of P.L. 116-94; Division A of P.L. 115-244.

Note: Columns may not sum to totals because of rounding. CVP = Central Valley Project.

IJA provided \$1.660 billion in additional funding for each of FY2022 through FY2026 for Reclamation’s Water and Related Resources account. (For more information, see CRS Report R47032, *Bureau of Reclamation Provisions in the Infrastructure Investment and Jobs Act (P.L. 117-58)*, by Charles V. Stern and Anna E. Normand.) IRA also appropriated additional funds in FY2022 for Reclamation: \$4.000 billion for drought mitigation, available through FY2026; \$550 million for disadvantaged communities, available through FY2031; \$25 million for projects to cover water conveyance facilities with solar panels, available through FY2031; and \$13 million for drought relief actions to mitigate drought impacts for tribes affected by the operation of a Reclamation water project, available through FY2031.

Department of Energy

The Energy and Water Development appropriations bill has funded all DOE programs since FY2005. Major DOE activities are authorized under multiple energy statutes and include the following:

- R&D on renewable energy, energy efficiency, nuclear power, fossil energy, and electricity;
- nuclear weapons and nonproliferation;
- general science;
- environmental cleanup;
- energy statistics, projections, and analysis;
- loan programs;
- the Strategic Petroleum Reserve; and
- power marketing administrations.

Table 8 provides the recent funding history and the FY2024 and FY2025 budget requests for DOE programs, most of which are briefly described further below.

Table 8. Department of Energy
(budget authority in millions of current dollars)

	FY2021 Approp	FY2022 Approp	FY2023 Approp	FY2024 Request	FY2024 Approp	FY2025 Approp
Energy Programs						
Energy Efficiency and Renewable Energy	2,861.8	3,200.0	3,460.0	3,826.1	3,460.0	3,118.0 ^a
Electricity Delivery	211.7	277.0	350.0	297.5	280.0	293.0
Cybersecurity, Energy Security, and Emergency Response	156.0	185.8	200.0	245.5	200.0	200.0
Nuclear Energy ^b	1,507.6	1,654.8	1,473.0	1,562.6	1,685.0	1,590.7
Fossil Energy and Carbon Management	750.0	825.0	890.0	905.5	865.0	900.0
Energy Projects	—	—	222.0	—	83.7	—
Naval Petroleum and Oil Shale Reserves	13.0	13.7	13.0	13.0	13.0	13.0
Strategic Petroleum Reserve ^c	189.0	226.4	207.3	281.0	213.4	241.3
Northeast Home Heating Oil Reserve	6.5	6.5	7.0	7.2	7.2	7.2
Energy Information Administration	126.8	129.1	135.0	156.6	135.0	141.7
Non-Defense Environmental Cleanup	319.2	333.9	358.6	348.7	342.0	314.7
Uranium Enrichment Decontamination and Decommissioning Fund	841.0	860.0	879.1	857.5	855.0	854.2
Science	7,026.0	7,475.0	8,100.0	8,800.4	8,240.0	8,583.0
Office of Technology Transitions	—	19.5	22.1	56.6	20.0	27.1
Office of Clean Energy Demonstrations	—	20.0	89.0	215.3	50.0	180.0
Federal Energy Management Program	—	—	—	82.2	—	64.0
Grid Deployment Office	—	—	—	106.6	60.0	101.9
Office of Manufacturing and Energy Supply Chains	—	—	—	179.5	—	113.4
Office of State and Community Energy Programs	—	—	—	705.0	—	574.0

	FY2021 Approp	FY2022 Approp	FY2023 Approp	FY2024 Request	FY2024 Approp	FY2025 Approp
Advanced Research Projects Agency— Energy (ARPA-E)	427.0	450.0	470.0	650.2	460.0	450.0
Nuclear Waste Disposal	27.5	27.5	10.2	12.0	12.0	12.0
Departmental Admin. (net)	166.0	240.0	283.0	433.5	286.5	334.7
Office of Inspector General	57.7	78.0	86.0	165.2	86.0	149.0
Office of Indian Energy	22.0	58.0	75.0	110.1	70.0	95.0
Advanced Technology Vehicles Manufacturing (ATVM) Loans	5.0	5.0	9.8	13.0	13.0	27.5
ATVM Rescission of Emergency Funding	-1,908.0	—	—	—	—	—
Title 17 Loan Guarantee	29.0	29.0	181.2	—	—	-184.6
Title 17 Rescission of Emergency Funding	-392.0	—	—	—	—	—
Tribal Energy Loan Guarantee	2.0	2.0	4.0	6.3	6.3	6.3
Critical and Emerging Technologies	—	—	—	—	—	5.0
Total, Energy Programs	12,444.8	16,116.0	17,525.2	20,036.8	17,443.2	18,211.8
NNSA						
Weapons Activities	15,345.0	15,920.0	17,116.1	18,832.9	19,108.0	19,848.6
Nuclear Nonproliferation	2,260.0	2,354.0	2,490.0	2,509.0	2,581.0	2,465.1
Naval Reactors	1,684.0	1,918.0	2,081.5	1,964.1	1,946.0	2,118.8
Office of Admin./Salaries and Expenses	443.2	464.0	475.0	539.0	500.0	564.5
Total, NNSA	19,732.2	20,656.0	22,162.6	23,845.0	24,135.0	24,997.0
Defense Environmental Cleanup	6,426.0	6,710.0	7,025.0	7,073.6	7,285.0	7,059.7
Defense Uranium Enrichment D&D	—	573.3	586.0	427.0	285.0	385.0
Other Defense Activities	920.0	985.0	1,035.0	1,075.2	1,080.0	1,140.0
Power Marketing Administrations						
Southwestern	10.4	10.4	10.6	11.4	11.4	11.4
Western	89.4	90.8	98.7	99.9	99.9	100.9

	FY2021 Approp	FY2022 Approp	FY2023 Approp	FY2024 Request	FY2024 Approp	FY2025 Approp
Falcon and Amistad O&M	0.2	0.2	0.2	0.2	0.2	0.2
Total, PMAs	100.0	101.4	109.6	111.5	111.5	112.5
General Provisions	2.0	-286.1	2.0	2.0	-93.0	—
DOE Total Appropriations	39,625.0	44,855.6	48,445.4	52,571.1	50,246.8	51,906.0
Offsets and Adjustments	—	—	-2,202.0	—	—	-491.0
Total, DOE	39,625.0	44,855.6	46,243.4	52,571.1	50,246.8	51,415.0

Sources: FY2025 Administration budget request; explanatory statement for Consolidated Appropriations Act, 2024; DOE FY2024 budget justification; P.L. 117-328 and explanatory statement; H.Rept. 117-98; DOE FY2022 congressional budget justification, explanatory statement for H.R. 133, 116th Congress; H.Rept. 116-449; explanatory statement for Division C of H.R. 1865, 116th Congress.

Notes: Columns may not sum to totals because of rounding. Table includes some category adjustments for comparability.

- Excludes requests for the FEMP, MESC, and SCEP accounts.
- Includes \$178 million from defense budget function.
- Includes Strategic Petroleum Reserve Petroleum Account and rescissions.

As well as the regular annual appropriations shown in **Table 8**, DOE received additional appropriations from IIJA; the additional amounts for FY2023, FY2024, and FY2025 are shown in **Table 9**. Additional appropriations also became available to DOE from IRA, beginning in FY2022 as shown in **Table 10**. Additional amounts for FY2023 were appropriated by Division M and N of P.L. 117-328, as shown in **Table 11**.

Table 9. Additional FY2023-FY2025 DOE Funding Under IIJA
(budget authority in millions of current dollars)

Program	IIJA FY2023	IIJA FY2024	IIJA FY2025
Energy Efficiency and Renewable Energy	2,221.8	1,945	1,945.0
Cybersecurity, Energy Security, and Emergency Response	100.0	100.0	100.0
Electricity	1,610.0	1,610.0	1,610.0
Nuclear Energy	1,200.0	1,200.0	1,200.0
Fossil Energy and Carbon Management	1,444.5	1,447.0	1,449.5
Carbon Dioxide Transportation Infrastructure Finance and Innovation Program Account	2,097.0	—	—
Office of Clean Energy Demonstrations	4,426.3	4,476.3	4,526.3
Total	13,099.6	10,778.3	10,830.8

Source: H.Rept. 117-394, DOE FY2024 and FY2025 congressional budget justifications.

Table 10. Additional FY2023 DOE Funding Under IRA
(budget authority in millions of current dollars)

Program	IRA Section	Approp.	Fiscal Years
Home Energy Efficiency Rebates	50121	4,300	FY2022-FY2031
Home Electric Efficiency Rebates, States	50122	4,275	FY2022-FY2031
Home Electric Efficiency Rebates, Tribes	50122	225	FY2022-FY2031
Home Efficiency Contractor Training Grants	50123	200	FY2022-FY2031
Building Energy Code Adoption	50131(b)	330	FY2022-FY2029
Building Energy Code Adoption	50131(c)	670	FY2022-FY2029
Title 17 Loan Guarantees	50141	3,600	FY2022-FY2026
ATVM Loans	50142	3,000	FY2022-FY2028
Domestic Manufacturing Conversion Grants	50143	2,000	FY2022-FY2031
Energy Infrastructure Reinvestment	50144	5,000	FY2022-FY2026
Tribal Energy Loan Guarantees	50145	75	FY2022-FY2028
Electric Transmission Facility Financing	50151	2,000	FY2022-FY2030
Transmission Line Siting Grants	50152	760	FY2022-FY2029
Offshore Wind Planning	50153	100	FY2022-FY2031
Advanced Industrial Facilities Deployment	50161	5,812	FY2022-FY2026
Inspector General	50171	20	FY2022-FY2031
National Laboratory Infrastructure	50172		FY2022-FY2027
Office of Science	50172(a)		
Science Laboratory Infrastructure Projects		133	
High Energy Physics Construction and Equipment		304	
Fusion Energy Construction and Equipment		280	
Nuclear Physics Construction and Equipment		217	
Advanced Scientific Computing Facilities		164	
Basic Energy Sciences Projects		295	
Isotope Research and Development Facilities		158	
Office of Fossil Energy and Carbon Management	50172(b)	150	
Office of Nuclear Energy	50172(c)	150	
Office of Energy Efficiency and Renewable Energy	50172(d)	150	
Availability of High-Assay Low-Enriched Uranium	50173	700	FY2022-FY2026
DOE Total		35,067	

Source: P.L. 117-169. Appropriations for items in Section 50172 are for the same fiscal year period.

Table 11. Additional FY2023 Funding for DOE in Divisions M and N of P.L. 117-328
(budget authority in millions of current dollars)

Program	Division M	Division N	Total
Nuclear Energy			
Advanced Nuclear Fuel Availability	100.0	—	100.0
Advanced Reactor Demonstration Program	60.0	—	60.0
National Reactor Innovation Center	20.0	—	20.0
Risk Reduction for Future Demonstrations	120.0	—	120.0
Defense Nuclear Nonproliferation (Ukraine-related activities)	125.3	—	125.3
Electricity (Puerto Rico electricity grid resilience)	—	1,000.0	1,000.0
Western Area Power Administration	—	520.0	520.0
Total	425.3	1,520.0	1,945.3

Source: P.L. 117-328, Divisions M and N.

DOE Crosscutting Activities

Crosscutting activities consist of activities that draw funding and resources from multiple DOE program offices and their corresponding appropriations accounts. Crosscutting activities are identified in the FY2025 budget justification,³² as shown in **Table 12**.

Table 12. DOE Crosscutting Initiatives
(FY2025 budget request in millions of current dollars)

Crosscut	EERE	FECM	Science	CESER	OE	MESC	NNSA	Other	Total
Carbon Dioxide Removal	13.3	130.2	94.0	—	—	—	—	—	237.5
Clean Energy Technology Manufacturing	370.3	6.0	17.0	—	—	93.4	—	—	486.6
Clean Fuels and Products	353.9	128.5	417.7	—	—	—	—	—	900.1
Artificial Intelligence and Machine Learning	76.0	—	259.0	—	—	—	114.1	6.0	455.1
Biotechnology and Biomanufacturing	103.8	—	804.9	—	—	—	—	—	908.7

³² DOE, *FY 2025 Congressional Justification*, vol. 2, March 2024, p. 237, <https://www.energy.gov/sites/default/files/2024-03/doe-fy-2025-budget-vol-2-v4.pdf>.

Crosscut	EERE	FECM	Science	CESER	OE	MESC	NNSA	Other	Total
Microelectronics	24.5	—	94.7	—	—	—	157.0	—	276.2
Quantum Information Systems	—	—	280.4	—	—	—	9.0	—	289.4
Critical Minerals	192.2	74.0	25.0	—	—	34.4	—	—	325.5
Energy Cybersecurity	12.8	1.5	—	123.5	15.0	—	—	6.6	159.4
Energy Storage	415.3	6.0	128.3	—	94.8	34.4	—	16.6	695.3
Energy-Water Systems	31.8	—	14.5	—	—	—	—	2.3	48.5
Fusion	—	—	118.8	—	—	—	26.9	—	145.6
Grid Modernization	248.0	3.7	—	106.5	273.3	—	—	92.1	723.6
Hydrogen	210.1	110.4	50.7	—	—	—	—	6.0	377.2
Industrial Decarbonization	603.9	240.7	44.7	—	—	21.0	—	26.1	936.5
Total	2,655.9	701.0	2,332.7	230.0	383.1	183.2	307.0	172.7	6,965.2

Source: DOE FY2025 congressional budget justification, vol. 2.

Notes: EERE = Energy Efficiency and Renewable Energy; FECM = Fossil Energy and Carbon Management; CESER = Cybersecurity, Energy Security, and Emergency Response; OE = Office of Electricity; MESC = Manufacturing and Energy Supply Chains; NNSA = National Nuclear Security Administration. Numbers may not add exactly to totals due to rounding.

Energy Efficiency and Renewable Energy

DOE’s Office of Energy Efficiency and Renewable Energy conducts R&D on transportation energy technology, energy efficiency in buildings and manufacturing processes, and the production of solar, wind, geothermal, and other renewable energy.

The Sustainable Transportation program area includes electric vehicles (EVs), vehicle efficiency, hydrogen and fuel cells, and alternative fuels. Goals of the electric vehicle program include “to reduce EV battery cell cost to achieve EV cost parity with internal combustion engine (ICE) vehicles through expanded R&D focused on lithium metal, solid state, and next generation lithium-ion battery technologies” and to “reduce or eliminate dependence on critical materials such as cobalt, nickel, and graphite.”³³

Renewable power programs focus on electricity generation from solar, wind, water, and geothermal sources. They are also developing concentrated solar technologies to produce high-

³³ DOE, *FY 2025 Congressional Justification*, vol. 4, March 2024, p. 15, <https://www.energy.gov/sites/default/files/2024-03/doe-fy-2025-budget-vol-4-v5.pdf>.

temperature heat that could replace fossil fuels in steel manufacturing and other industrial processes.

In the energy efficiency program area, the advanced manufacturing program focuses on improving the energy efficiency of manufacturing processes and on the manufacturing of energy-related products. The building technologies program includes R&D on lighting, space conditioning, windows, and control technologies to reduce building energy-use intensity.

The Biden Administration has split several EERE programs into separate offices and is requesting separate appropriations accounts for them:

- *State and Community Energy Programs*, which provides two types of formula grants to states: weatherization grants for improving the energy efficiency of low-income housing units and state energy planning grants. For more details on energy efficiency grants, see CRS Report R46418, *The Weatherization Assistance Program Formula*, by Corrie E. Clark and Lynn J. Cunningham.
- *Manufacturing and Energy Supply Chains*, which provides support for increasing U.S. manufacturing capacity for critical energy technologies and for increasing industrial energy efficiency.
- *Federal Energy Management Program*, which provides guidance and expertise to federal agencies to meet federal goals on energy use and emissions.

Electricity Delivery, Cybersecurity, Energy Security, and Energy Reliability

The Office of Electricity (OE) “leads the Department of Energy’s research, development, and demonstration programs to strengthen and modernize our nation’s power grid so that our nation maintains a reliable, resilient, and secure electricity delivery infrastructure” according to the OE website.³⁴

OE uses a model of North American energy vulnerabilities for analyzing transmission and other energy infrastructure needs. Other activities include pursuing megawatt-scale electricity storage, integrating electric power system sensing technology, and analyzing electricity-related policy issues. A separate DOE Grid Deployment Office supports modernization of the nation’s electricity transmission system and critical generating facilities through planning and financial assistance.

The Office of Cybersecurity, Energy Security, and Emergency Response (CESER) is the federal government’s lead entity for energy sector-specific responses to energy security emergencies—whether caused by physical infrastructure problems or by cybersecurity issues. The office conducts R&D on energy infrastructure security technology; provides energy sector security guidelines, training, and technical assistance; and enhances energy sector emergency preparedness and response.

Nuclear Energy

DOE’s Office of Nuclear Energy (NE) supports R&D on technologies to improve the efficiency and economic viability of existing U.S. nuclear power plants, development and demonstration of advanced reactor technologies, and R&D on nuclear fuel cycle technologies. NE also is issuing contracts to support growth of the U.S. nuclear fuel supply chain, including uranium mining, conversion to uranium hexafluoride, and enrichment.

³⁴ DOE Office of Electricity, “Mission,” <https://www.energy.gov/oe/office-electricity>.

The Reactor Concepts program area comprises research on advanced reactors, including advanced small modular reactors, and research to enhance the “sustainability” of existing commercial light water reactors. Advanced reactor research focuses on “Generation IV” reactors, as opposed to the existing fleet of commercial light water reactors, which are generally classified as Generations II and III.

The Fuel Cycle Research and Development program includes generic research on nuclear waste management and disposal. One of the program’s primary activities is the development of technologies to separate the radioactive constituents of spent fuel for reuse or solidifying into stable waste forms. Other major research areas in the Fuel Cycle R&D program include the development of accident-tolerant fuels for existing commercial reactors, evaluation of fuel cycle options, and development of improved technologies to prevent diversion of nuclear materials for weapons. The program is also developing sources of HALEU, in which uranium is enriched to between 5% and 20% in the fissile isotope U-235, for potential use in advanced reactors. HALEU would be required for several designs currently receiving cost-shared support by DOE’s Advanced Reactor Demonstration Program. For more information, see CRS Report R45706, *Advanced Nuclear Reactors: Technology Overview and Current Issues*, by Mark Holt.

Fossil Energy and Carbon Management

The Office of Fossil Energy and Carbon Management (FECM) has historically supported research related to coal, natural gas, and petroleum,³⁵ including a major focus area on the development of carbon capture and storage technologies for use with coal-fired power plants. The office also supports operations at the National Energy Technology Laboratory.

Under the Biden Administration, FECM has shifted its focus to what it calls carbon management. This includes a focus on development of carbon capture, utilization, and storage technologies, hydrogen technologies, and options to reduce methane emissions from fossil fuel infrastructure. FECM also leads DOE’s activities related to critical minerals and rare earth elements.

Additionally, FECM is involved in a number of programs funded by IJJA, either managing the programs directly or consulting with other DOE offices that have the lead management role. These programs include Regional Direct Air Capture Hubs, Carbon Storage Validation and Testing, Critical Mineral Innovation Efficiency, and Alternatives, and the Carbon Dioxide Transportation Infrastructure Finance and Innovation Act (CIFIA).

FECM’s current carbon capture research focuses on natural gas-fired power plants and applications outside the power sector, in line with congressional direction provided in the Energy Act of 2020 (Division Z of P.L. 116-260) and other recent laws. FECM also focuses on research into producing hydrogen from fossil fuels and using hydrogen in the power sector.

For more information, see CRS In Focus IF11861, *DOE’s Carbon Capture and Storage (CCS) and Carbon Removal Programs*, by Ashley J. Lawson; CRS In Focus IF12163, *Department of Energy Funding for Hydrogen and Fuel Cell Technology Programs FY2022*, by Martin C. Offutt; and CRS Report R44902, *Carbon Capture and Sequestration (CCS) in the United States*, by Angela C. Jones and Ashley J. Lawson.

³⁵ The Biden Administration renamed the Office of Fossil Energy as the Office of Fossil Energy and Carbon Management in 2021. This name change was also adopted by appropriators throughout the FY2022 appropriations process. See DOE, “Our New Name Is Also a New Vision,” July 8, 2021, <https://www.energy.gov/fe/articles/our-new-name-also-new-vision>.

Strategic Petroleum Reserve (SPR)

Authorized in 1975 by the Energy Policy and Conservation Act (P.L. 94-163, as amended; 42 U.S.C. §§6201 et seq.), the SPR fulfills two statutory policy objectives: (1) reduce the economic impact of oil supply disruptions, and (2) carry out U.S. obligations under the Agreement on an International Energy Program (IEP)—a multilateral, voluntary agreement subject to international law. Currently, the SPR consists of a government-owned crude oil reserve in Texas and Louisiana.³⁶

Since the SPR was established, various administrations have directed crude oil drawdowns and sales on four occasions in response to emergency oil supply disruptions. During FY2022 and FY2023, emergency SPR authorities addressed anticipated oil supply disruptions following Russia’s military invasion of Ukraine. The Biden Administration sold approximately 180 million barrels between March 2022 and January 2023, the largest-ever emergency SPR release.³⁷ More frequently, DOE uses SPR authorities to exchange crude oil with refiners and traders following natural disasters (i.e., hurricanes) and other regional supply disruption events. From time to time, DOE also activates exchange authorities to temporarily store crude oil during low-price periods and provide additional supply during high-price periods.³⁸

Because of limited utilization in response to emergency oil supply disruptions prior to the 2022 Ukraine war, growing U.S. crude oil production, and rapidly declining net petroleum imports—the basis for determining IEP emergency oil stock obligations—Congress began mandating SPR crude oil sales to pay for other legislative priorities. Between 2015 and 2021, Congress enacted eight laws mandating the sale of 358.6 million barrels of crude oil. Congress cancelled 140 million barrels of these mandated sales in the Consolidated Appropriations Act, 2023 by rescinding some proceeds from emergency sales in FY2022 and FY2023. Additionally, Congress required DOE to sell approximately \$1.5 billion of SPR crude oil to pay for an SPR modernization program.³⁹

Science

The DOE Office of Science conducts basic research in six program areas: advanced scientific computing research, basic energy sciences, biological and environmental research, fusion energy sciences, high-energy physics, and nuclear physics. According to DOE’s FY2025 budget justification, the Office of Science “is the Nation’s largest Federal sponsor of basic research in the physical sciences and the lead Federal agency supporting fundamental scientific research for our Nation’s energy future.”⁴⁰

³⁶ Congress directed DOE to sell and close the 1 million barrel Northeast Gasoline Supply Reserve (NGSR) during FY2024 (P.L. 118-42, Section 308). DOE issued an NGSR notice of sale in May 2024 and plans to complete the sale in June 2024.

³⁷ CRS Insight IN11916, *Strategic Petroleum Reserve Oil Releases: October 2021 Through October 2022*, by Phillip Brown; DOE, “SPR Quick Facts,” <https://www.energy.gov/ceser/spr-quick-facts>.

³⁸ For additional information about SPR releases, see U.S. Department of Energy, *History of SPR Releases*, at <https://www.energy.gov/fe/services/petroleum-reserves/strategic-petroleum-reserve/releasing-oil-spr>, accessed February 27, 2023.

³⁹ For additional information about congressionally required SPR oil sales, see *Strategic Petroleum Reserve: Mandated and Modernization Sales*, by Phillip Brown, a congressional distribution memorandum available to congressional clients by request from the author.

⁴⁰ DOE, *FY2025 Congressional Justification*, March 2024, vol. 5, p. 6, <https://www.energy.gov/sites/default/files/2024-03/doe-fy-2025-budget-vol-5-v2.pdf>. For more information, see “DOE Explains ... Exascale Computing,” <https://www.energy.gov/science/doe-explainsexascale-computing>.

DOE's Advanced Scientific Computing Research (ASCR) program focuses on developing and maintaining computing and networking capabilities for science and research in applied mathematics, computer science, and advanced networking. The program plays a key role in the DOE-wide effort to advance the development of exascale computing, with the first exascale system starting operation at Oak Ridge National Laboratory in May 2022.⁴¹

Basic Energy Sciences (BES), the largest program area in the Office of Science, focuses on understanding, predicting, and ultimately controlling matter and energy at the electronic, atomic, and molecular levels. The program supports research in disciplines such as condensed matter and materials physics, chemistry, and geosciences. BES also provides funding for scientific user facilities (e.g., the National Synchrotron Light Source II, and the Linac Coherent Light Source-II), and certain DOE research centers and hubs (e.g., Energy Frontier Research Centers, as well as the Batteries and Energy Storage and Fuels from Sunlight Energy Innovation Hubs).

Biological and Environmental Research (BER) seeks a predictive understanding of complex biological, climate, and environmental systems across a continuum from the small scale (e.g., genomic research) to the large (e.g., Earth systems and climate). Within BER, Biological Systems Science focuses on plant and microbial systems, while Biological and Environmental Research supports climate-relevant atmospheric and ecosystem modeling and research. BER facilities and centers include four Bioenergy Research Centers and the Environmental Molecular Science Laboratory at Pacific Northwest National Laboratory.⁴²

Fusion Energy Sciences (FES) seeks to increase understanding of the behavior of matter at very high temperatures and to establish the science needed to develop a fusion energy source. FES provides funding for the ITER project, a multinational effort to design and build an experimental fusion reactor.⁴³

The High Energy Physics (HEP) program conducts research on the fundamental constituents of matter and energy, including studies of dark energy and the search for dark matter. Nuclear Physics supports research on the nature of matter, including its basic constituents and their interactions. A major project in the Nuclear Physics program is the construction of the Electron-Ion Collider at Brookhaven National Laboratory in Upton, NY.

Two significant research efforts in the Office of Science cut across multiple program areas: quantum information science, which aims to use quantum physics to process information, and artificial intelligence and machine learning, which use computerized systems that work and react in ways commonly thought to require intelligence.

For more details, see CRS Report R47564, *Federal Research and Development (R&D) Funding: FY2024*. Congressional offices may contact the authors of this report for further information.

⁴¹ Oak Ridge National Laboratory, "Frontier Supercomputer Debuts as World's Fastest, Breaking Exascale Barrier," May 30, 2022, <https://www.ornl.gov/news/frontier-supercomputer-debuts-worlds-fastest-breaking-exascale-barrier>. An exascale computer can perform one quintillion floating point operations per second. See Tim Greene, "World's First Exascale Supercomputer Is the World's Fastest," *Network World*, May 31, 2022, <https://www.networkworld.com/article/3662040/worlds-first-exascale-supercomputer-is-the-worlds-fastest.html>.

⁴² For more information, see DOE Genomic Science Program, "Bioenergy Research Centers," <https://www.genomicscience.energy.gov/bioenergy-research-centers>.

⁴³ The name "ITER" was derived from "international thermonuclear experimental reactor" but is referred to as the ITER Project by the international organization that is building it. See "What Is ITER," at <https://www.iter.org/proj/inafewlines>.

Advanced Research Projects Agency–Energy (ARPA-E)

ARPA-E is a DOE office authorized by the America COMPETES Act (P.L. 110-69) to support transformational energy technology research projects. DOE budget documents describe ARPA-E’s mission as overcoming long-term, high-risk technological barriers to the development of energy technologies. According to DOE, since 2009 ARPA-E has provided \$3.84 billion in R&D funding to 1,590 projects, and 235 project teams have raised more than \$12.6 billion in private sector follow-on funding.⁴⁴

Clean Energy Demonstrations

DOE’s Office of Clean Energy Demonstrations (OCED) funds cost-shared demonstrations of clean energy technologies, including “clean hydrogen, carbon management, industrial decarbonization, advanced nuclear reactors, long-duration energy storage, demonstration projects in rural or remote areas and on current and former mine land, and more.”⁴⁵ OCED’s portfolio includes the Advanced Reactor Demonstration Program (transferred from the Office of Nuclear Energy), which is funding two 50% cost-shared advanced reactor demonstrations in Wyoming and Texas. OCED also supports the regional Hydrogen Hubs established by IHA to establish hydrogen supply chains for industrial, transportation, and other decarbonization uses.

Loan Programs Office

DOE’s Loan Programs Office (LPO) administers several authorized programs that provide loan guarantees and direct loans to eligible projects, including the following:

- Title 17 Incentives for Innovative Technologies (clean energy loan guarantees);
- Advanced Technology Vehicles Manufacturing (direct loans);
- Tribal Energy Financing (loan guarantees and direct loans); and
- Carbon Dioxide Transportation Infrastructure Finance and Innovation Act (CIFIA) financing (loan guarantees and direct loans).

As with all federal credit programs, estimated costs to the federal government must be calculated for each approved project and paid for prior to financial closing. Commonly referred to as “credit subsidy costs,” estimated costs are typically paid using congressionally appropriated funds, but in some cases can be wholly or partially paid by the project applicant. Most LPO programs have available appropriations for credit subsidy costs from previously enacted legislation. The FY2025 budget justification does not request credit subsidy appropriations. Rather, the FY2025 budget requests appropriations for estimated administrative expenses during the fiscal year, some of which are offset by collected fees.

Title 17 Incentives for Innovative Technologies

Title XVII of the Energy Policy Act of 2005 (P.L. 109-58) established the clean energy loan guarantee program by authorizing DOE to guarantee loans for projects located in the United States that (1) generally avoid or reduce air pollutants or greenhouse gas emissions, and (2) incorporate new or significantly improved technology. As amended at 42 U.S.C. §16511 et seq., the original Title 17 program (Section 1703) includes an expanded list of eligible project categories as well as opportunities to guarantee loans for projects that employ commercially

⁴⁴ ARPA-E, “Our Impact,” web page viewed May 31, 2024, <https://arpa-e.energy.gov/about/our-impact>.

⁴⁵ DOE Office of Clean Energy Demonstrations, “About Us,” <https://www.energy.gov/oced/about-us>.

available technologies. The IRA provided \$40 billion of new lending authority for Section 1703 and appropriated \$3.6 billion for credit subsidy and other program-related costs. The IRA also established a new loan guarantee authority (Section 1706) for “Energy Infrastructure Reinvestment Financing” aimed at reducing emissions from operating energy infrastructure and through investments in energy infrastructure that has ceased operations. Section 1706 lending authority is currently \$250 billion, and the IRA appropriated \$5 billion to pay for credit subsidy and related program costs. IRA lending authorities and appropriations for 1703 and 1706 expire at the end of FY2026. For additional background about Title 17 and IRA amendments to the program, see CRS Insight IN11984, *Inflation Reduction Act of 2022 (IRA): Department of Energy Loan Guarantee Programs*, by Phillip Brown.

Advanced Technology Vehicles Manufacturing

Section 136 of the Energy Independence and Security Act of 2007 (P.L. 110-140) established an incentive program for manufacturing advanced technology light duty vehicles, including direct loans for qualified facilities in the United States that manufacture advanced technology vehicles, components for those vehicles, and engineering integration of qualifying vehicles and components. As amended at 42 U.S.C. §17013, advanced technology vehicles currently include medium and heavy-duty vehicles, trains and locomotives, maritime vessels, aircraft, and hyperloop technology. The IRA appropriated \$3 billion to pay for the costs of providing ATVM direct loans. IRA funds are available until the end of FY2028.

Tribal Energy Financing

Section 2602 of the Energy Policy Act of 1992 (P.L. 102-46), as amended by EPACT05 (P.L. 109-58) authorized DOE to provide loan guarantees for energy tribal energy development, including conventional and clean energy projects. As further amended at 25 U.S.C. §3502(d), borrowers are permitted to receive loan guarantees directly from the U.S. Treasury’s Federal Financing Bank. The IRA permanently increased lending authority for this program to \$20 billion and appropriated \$75 million carry out the program. IRA appropriations expire at the end of FY2028. For additional information about tribal energy financing, see CRS In Focus IF11793, *Indian Energy Programs at the Department of Energy*, by Corrie E. Clark, Mark Holt, and Lexie Ryan.

Carbon Dioxide Transportation Infrastructure Finance and Innovation Act (CIFIA) Financing

Section 40304 of the Infrastructure Investment and Jobs Act (IIJA, P.L. 117-58; as amended at 42 U.S.C. §16371) established the CIFIA program to provide grants and federal credit (i.e., direct loans or loan guarantees) for common carrier infrastructure projects or associated equipment that will transport carbon dioxide captured from anthropogenic CO₂ emission sources or from ambient air. LPO coordinates with DOE’s Office of Fossil Energy and Carbon Management (FECM) to execute the CIFIA program. The IIJA appropriated \$2.1 billion for the CIFIA program.

Energy Information Administration

The U.S. Energy Information Administration (EIA) was established within DOE as the lead federal agency for collecting, analyzing, and disseminating data on U.S. and world energy supply and consumption. EIA data collection spans the energy system from supply and transport to consumption. All energy sources are included in EIA’s data and analysis products, though some (e.g., petroleum) are more detailed than others (e.g., renewables). Recent areas of congressional interest include improvements to EIA’s computer models used to project U.S. energy supply and

demand over time, and EIA's data collection related to energy consumption in residential and commercial buildings and by cryptocurrency miners. For more details, see CRS Report R46524, *The U.S. Energy Information Administration*, coordinated by Ashley J. Lawson.

Nuclear Weapons Activities

In the absence of explosive testing of nuclear weapons, the United States has adopted a science-based program to maintain and sustain confidence in the reliability of the U.S. nuclear stockpile. Congress established the Stockpile Stewardship Program in the National Defense Authorization Act for Fiscal Year 1994 (P.L. 103-160). The goal of the program, as amended by the National Defense Authorization Act for Fiscal Year 2010 (P.L. 111-84, §3111), is to ensure “that the nuclear weapons stockpile is safe, secure, and reliable without the use of underground nuclear weapons testing.” The program is operated by NNSA, a semiautonomous agency within DOE established by the National Defense Authorization Act for Fiscal Year 2000 (P.L. 106-65, Title XXXII). NNSA implements the Stockpile Stewardship Program through the activities funded by the Weapons Activities account in the NNSA budget.

Most of NNSA's weapons activities take place at the nuclear weapons complex, which consists of three laboratories (Los Alamos National Laboratory, NM; Lawrence Livermore National Laboratory, CA; and Sandia National Laboratories, NM and CA); four production sites (Kansas City National Security Campus, MO; Pantex Plant, TX; Savannah River Site, SC; and Y-12 National Security Complex, TN); and the Nevada National Security Site (formerly the Nevada Test Site). NNSA manages and sets policy for the weapons complex; contractors to NNSA operate the eight sites. Radiological activities at these sites are subject to oversight and recommendations by the independent Defense Nuclear Facilities Safety Board, funded by Title IV of the annual Energy and Water Development appropriations bill.

NNSA's budget has four major Weapons Activities program areas:

- *Stockpile Management* supports work directly on nuclear weapons. These include life extension programs, warhead surveillance, maintenance, and other activities.
- *Production Modernization* programs focus on maintaining and expanding the production capabilities for the components of nuclear weapons that are critical to weapons performance. According to NNSA, these include primaries, canned subassemblies, radiation cases, and non-nuclear components.
- *Stockpile Research, Technology, and Engineering* provides the scientific and technical foundation for science-based stockpile decisions.
- *Infrastructure and Operations* maintains, operates, and modernizes the NNSA infrastructure. It supports construction of new facilities and funds deferred maintenance in older facilities.

Nuclear Weapons Activities also has several smaller programs, including the following:

- *Secure Transportation Asset*, providing for safe and secure transport of nuclear weapons, components, and materials;
- *Defense Nuclear Security*, providing operations, maintenance, and construction funds for protective forces, physical security systems, personnel security, and related activities; and
- *Information Technology and Cybersecurity*, whose elements include cybersecurity, secure enterprise computing, and Federal Unclassified Information Technology.

Defense Nuclear Nonproliferation

DOE's nonproliferation and national security programs provide technical capabilities to support U.S. efforts to prevent, detect, and counter the spread of nuclear weapons worldwide. These programs are administered by NNSA's Office of Defense Nuclear Nonproliferation (DNN).

- The Materials Management and Minimization program conducts activities to minimize and, where possible, eliminate stockpiles of weapons-useable material around the world, such as conversion of reactors that use highly enriched uranium (useable for weapons) to low-enriched uranium.
- Global Materials Security works to increase the security of vulnerable stockpiles of nuclear material in other countries, promotes the worldwide removal, reduction, and security of radioactive sources (typically used in medical and industrial devices), and improves the capability of other countries to halt illicit trafficking of nuclear materials.
- The Nonproliferation and Arms Control program conducts reviews of nuclear export applications and technology transfer authorizations, implements treaty obligations, and analyzes nonproliferation policies and proposals.
- Defense Nuclear Nonproliferation Research and Development (DNN R&D) advances U.S. capabilities to detect and characterize threats such as foreign nuclear material and weapons production, diversion of special nuclear material, and nuclear detonations.
- The Nonproliferation Construction program disposes of excess U.S. weapons plutonium through a "dilute and dispose" strategy.

This account also includes the Nuclear Counterterrorism and Incident Response Program (NCTIR), which evaluates nuclear and radiological threats and develops emergency preparedness plans, including organizing scientific teams to provide rapid response to nuclear or radiological incidents or accidents worldwide.

For more information, see CRS Report R44413, *Energy and Water Development Appropriations for Defense Nuclear Nonproliferation: In Brief*, by Mary Beth D. Nikitin.

Cleanup of Former Nuclear Weapons Production and Research Sites

The development and production of nuclear weapons since the beginning of the Manhattan Project during World War II resulted in a waste and contamination legacy managed by DOE that continues to present substantial challenges.⁴⁶ DOE also manages legacy environmental contamination at sites used for nondefense nuclear research. In 1989, DOE established the Office of Environmental Management primarily to consolidate its responsibilities for the cleanup of former nuclear weapons production sites that had been administered under multiple offices.⁴⁷

⁴⁶ As described by the Manhattan Project National Historical Park, "The Manhattan Project was a massive, top secret national mobilization of scientists, engineers, technicians, and military personnel charged with producing a deployable atomic weapon during World War II. Coordinated by the US Army, Manhattan Project activities were located in numerous locations across the United States." The nuclear weapons activities begun by the Manhattan Project are now the responsibility of DOE. See National Park Service, Manhattan Project National Historical Park website, <https://www.nps.gov/mapr/learn/historyculture/index.htm>.

⁴⁷ In 1989, DOE created the Office of Environmental Restoration and Waste Management, which later was renamed the Office of Environmental Management.

DOE has identified more than 100 separate sites in over 30 states that historically were involved in the production of nuclear weapons and nuclear energy research for civilian purposes.⁴⁸ Responsibility for long-term stewardship at sites where remediation is complete or remedies are in place is transferred from EM to the separate DOE Office of Legacy Management (LM) and other offices within DOE.⁴⁹ Some of the smaller sites for which DOE initially was responsible were transferred to the Army Corps of Engineers in 1997 under the Formerly Utilized Sites Remedial Action Program (FUSRAP). Once USACE completes the cleanup of a FUSRAP site, it is transferred back to LM, which has its own DOE funding subaccount within Other Defense Activities.

Power Marketing Administrations

DOE's four Power Marketing Administrations (PMAs) were established to sell the power generated by various federal dams. The PMAs operate in 34 states; their assets consist primarily of transmission infrastructure in the form of more than 33,000 miles of high voltage transmission lines and 587 substations. PMA customers are responsible for repaying all power program expenses, plus the interest on capital projects. Since FY2011, power revenues associated with the PMAs have been classified as discretionary offsetting receipts (i.e., receipts that are available for spending by the PMAs), thus the agencies are sometimes noted as having a "net-zero" spending authority. Only the capital expenses of the Western Area Power Administration (WAPA) and Southwestern Power Administration (SWPA) are supported by appropriations from Congress.

Independent Agencies

Independent agencies that receive funding in Title IV of the Energy and Water Development bill include NRC, ARC, and the Defense Nuclear Facilities Safety Board. NRC receives the largest funding of these independent agencies. However, about 85% of NRC's budget is offset by fees, so that the agency's net appropriation is less than half of the total funding in Title IV. NRC and ARC are discussed in more detail below. The recent appropriations history and the FY2024 and FY2025 budget requests for all the Title IV agencies is shown in **Table 13**. Additional FY2025 appropriations were provided by the IJA for ARC and other regional commissions and authorities as shown in **Table 14**.

⁴⁸ For a list of active and completed sites, see the EM "Cleanup Sites" web page and interactive map at <http://energy.gov/em/cleanup-sites>.

⁴⁹ The Office of Legacy Management administers the long-term stewardship of DOE sites that do not have a continuing mission once cleanup remedies are in place. Sites that have a continuing mission are transferred to the DOE offices that administer those missions, which are responsible for their long-term stewardship.

Table 13. Independent Agencies Funded by Energy and Water Development Appropriations

(budget authority in millions of current dollars)

Program	FY2021 Approp	FY2022 Approp	FY2023 Approp	FY2024 Request	FY2024 Approp	FY2025 Request
Appalachian Regional Commission	180.0	195.0	200.0	235.0	200.0	200.0
Nuclear Regulatory Commission	844.4	887.7	927.2	979.2	944.1	974.9
(Revenues)	-721.4	-756.7	-790.2	-823.2	-807.0	-823.9
Net NRC (including Inspector General)	123.0	131.0	137.0	156.0	137.1	151.0
Defense Nuclear Facilities Safety Board	31.0	36.0	41.4	47.2	42.0	47.2
Nuclear Waste Technical Review Board	3.6	3.8	3.9	4.1	4.1	4.1
Denali Commission	15.0	15.1	17.0	17.0	17.0	17.0
Delta Regional Authority	30.0	30.1	30.1	30.1	31.1	30.1
Great Lakes Authority				5.0	5.0	5.0
Northern Border Regional Commission	30.0	35.0	40.0	40.0	41.0	40.0
Southeast Crescent Regional Commission	1.0	5.0	20.0	20.0	20.0	20.0
Southwest Border Regional Commission	0.3	2.5	5.0	5.0	5.0	5.0
Total	413.9	453.5	494.4	559.4	502.3	519.4

Sources: FY2025 Administration budget request; explanatory statement for Consolidated Appropriations Act, 2024; President’s FY2024 budget; P.L. 117-328 and explanatory statement; President’s FY2022 budget; explanatory statement for H.R. 133, 116th Congress; President’s FY2021 budget; explanatory statement for Division C of H.R. 1865, 116th Congress.

Note: Columns may not sum to totals because of rounding.

Table 14. Additional Appropriations in IJA for Regional Commissions and Authorities

(budget authority in millions of current dollars)

Regional Commission or Authority	IJA FY2022 Approp	IJA FY2023 Approp	IJA FY2024 Approp	IJA FY2025- FY2026 Approp
Appalachian Regional Commission	200.0	200.0	200.0	400.0
Delta Regional Authority (DRA)	150.0			
Denali Commission	75.0			
Northern Border Regional Commission (NBRC)	150.0			
Southeast Crescent Regional Commission (SCRC)	5.0			

Regional Commission or Authority	IJA FY2022 Approp	IJA FY2023 Approp	IJA FY2024 Approp	IJA FY2025- FY2026 Approp
Southwest Border Regional Commission (SBRC)	1.3			
Total	581.3	200	200	400

Sources: H.Rept. 118-126; S.Rept. 118-72; H.Rept. 117-394.

Notes: Funding for the federal regional commissions and authorities in the IJA has varying periods of availability. Appropriations for ARC are available through FY2026, with \$200 million to be allocated each fiscal year starting in FY2022 and continuing through FY2026. Appropriations for the DRA, Denali Commission, NBRC, SCRC, and SBRC are available until expended.

Appalachian Regional Commission

Established in 1965,⁵⁰ ARC is a regional economic development agency. It awards grants and contracts to state and local governments and nonprofit organizations to foster economic opportunities, improve workforce skills, build critical infrastructure, strengthen natural and cultural assets, and improve leadership skills and capacity in the region. ARC’s authorizing statute defines the Appalachian Region as including all of West Virginia and parts of Alabama, Georgia, Kentucky, Maryland, Mississippi, New York, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, and Virginia. More than 25 million people currently live in the region as defined.

ARC provides funding to several hundred projects each year, with particular focus on the region’s most economically distressed counties. Major areas of infrastructure support include broadband communication systems, transportation, and water and wastewater systems. ARC has supported establishment of the Appalachian Development Highway System (ADHS), a planned 3,000-mile system of highways that connect with the U.S. Interstate Highway System. According to ARC, 91.1% of ADHS is “under construction or open to traffic.”⁵¹

Since FY2016, Congress has appropriated approximately \$50 million per year as a set-aside for ARC’s POWER Initiative (Partnerships for Opportunity and Workforce and Economic Revitalization), which assists communities impacted by the decline of the coal industry. In FY2024,⁵² Congress directed ARC to allocate \$65 million to the POWER Initiative. The POWER Initiative funds a variety of economic, workforce, and community development projects to stabilize and stimulate economic activity in affected communities.

For more background on ARC and other regional commissions and authorities, see CRS In Focus IF11140, *Federal Regional Commissions and Authorities: Overview of Structure and Activities*, by Julie M. Lawhorn. For more background on the POWER Initiative, see CRS Report R46015, *The POWER Initiative: Energy Transition as Economic Development*, by Julie M. Lawhorn.

⁵⁰ Appalachian Regional Development Act of 1965, P.L. 89-4.

⁵¹ Appropriations for the Appalachian Highway Development System are provided separately from the appropriations provided for the programs and expenses of the Appalachian Regional Commission. For more information, see “Appalachian Development Highway System Program (ADHS; IJA Division J, Title VIII),” in CRS Report R47022, *Federal Highway Programs: In Brief*, by Robert S. Kirk; and Appalachian Regional Commission, *Appalachian Development Highway System*, <https://www.arc.gov/appalachian-development-highway-system>.

⁵² Amount specified in the House and Senate Appropriations Committee reports.

Nuclear Regulatory Commission

NRC is an independent agency that establishes and enforces safety and security standards for nuclear power plants and users of nuclear materials. Major appropriations and budget request categories for NRC are shown in **Table 15**. Nuclear Reactor Safety is NRC’s largest program and is responsible for licensing and regulating the 94 power reactors in the United States. NRC is also responsible for licensing and regulating nuclear waste facilities, such as the proposed underground nuclear waste repository at Yucca Mountain, NV (which has received no new appropriations since FY2010).

NRC is required by law to offset its total annual appropriation, excluding specified items, through fees charged to nuclear reactor owners and other holders of NRC licenses. NRC does not retain the fee revenue, but instead sends it to the U.S. Treasury. Budget items excluded from fee recovery include prior-year balances, development of advanced reactor regulations, international activities, and non-site-specific homeland security. As a result, NRC’s net appropriation is about 15% of the agency’s total budget.

Table 15. Nuclear Regulatory Commission Funding Categories

(budget authority in millions of current dollars)

Funding Category	FY2021 Approp	FY2022 Approp	FY2023 Approp	FY2024 Request	FY2024 Approp	FY2025 Request
Nuclear Reactor Safety	452.8	477.4	490.7	530.8	522.0	503.5
Nuclear Materials and Waste Safety	102.9	107.3	111.6	126.0	124.2	144.9
Decommissioning and Low-Level Waste	22.8	22.9	23.9	27.0	26.5	—
Corporate Support	271.4	266.3	285.3	304.0	301.6	317.0
Integrated University Program	16.0	16.0	16.0	—	16.0	10
Prior-Year Balances	-35.0	-16.0	-16.0	—	—	—
Inspector General	13.5	13.8	15.8	18.6	15.8	19.6
Total	844.4	887.7	927.2	1,006.4	1,006.1	994.9
Carryover				-27.1	-62.0	-20
Total Minus Carryover				979.2	944.1	974.9

Sources: FY2025 Administration budget request; explanatory statement for Consolidated Appropriations Act, 2024; NRC FY2024 congressional budget justification; P.L. 117-328 and explanatory statement; NRC FY2022 congressional budget justification; explanatory statement for H.R. 133, 116th Congress; NRC FY2021 Budget Justification; explanatory statement for Division C of H.R. 1865, 116th Congress.

Note: Fee offsets and some adjustments are excluded (see **Table 14**). Prior-Year Balances moved to Carryover in FY2024.

Congressional Hearings

The following hearings were held by the Energy and Water Development subcommittees of the House and Senate Appropriations Committees on the FY2025 budget request. Testimony and opening statements are posted on most of the web pages cited for each hearing, along with webcasts in many cases.

House

- *Corps of Engineers and Bureau of Reclamation*, April 17, 2024, <https://appropriations.house.gov/events/hearings/budget-hearing-fiscal-year-2025-request-army-corps-engineers-civil-works-and-bureau>
- *Department of Energy*, March 20, 2024, <https://appropriations.house.gov/events/hearings/fiscal-year-2025-budget-request-department-energy>

Senate

- *Corps of Engineers and Bureau of Reclamation*, May 15, 2024, <https://www.appropriations.senate.gov/hearings/a-review-of-the-presidents-fiscal-year-2025-budget-request-for-the-us-army-corps-of-engineers-and-the-bureau-of-reclamation>
- *Department of Energy*, May 22, 2024, <https://www.appropriations.senate.gov/hearings/a-review-of-the-presidents-fiscal-year-2025-budget-request-for-the-us-department-of-energy-including-the-national-nuclear-security-administration>

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