

5. FEDERAL INVESTMENT

Federal investment is the portion of Federal spending of taxpayer money intended to yield long-term benefits for the economy and the Nation. This spending promises greater benefits than if that money had been allocated in the private sector. It promotes improved efficiency within Federal agencies, as well as growth in the national economy by increasing the overall stock of capital. Investment spending can take the form of direct Federal spending or grants to State, local, tribal, and territorial governments.¹ It can be designated for physical capital—a tangible asset or the improvement of that asset—that increases production over a period of years or increases value to the Government. It can also be used for research and development, education, or training, all of which are intangible,

¹ For more information on Federal grants to State and local governments see the “Aid to State and Local Governments” chapter of this volume.

but can still increase income in the future or provide other long-term benefits.

Most presentations in the *Analytical Perspectives* volume combine investment spending with spending intended for current use. In contrast, this chapter focuses solely on Federal and federally financed investment, providing a comprehensive picture of Federal spending for physical capital, research and development, and education and training. Because the analysis in this chapter excludes spending for non-investment activities, it gives only a partial picture of Federal support for specific national needs, such as defense.

Total Federal investment spending was \$536.1 billion in 2023. It is expected to increase by 69.4 percent in 2024 to \$907.9 billion. The Budget proposes a 5.9 percent decrease from 2024, for a total of \$854.1 billion in 2025.

DESCRIPTION OF FEDERAL INVESTMENT

The Budget uses a relatively broad definition of investment. It defines Federal investment as encompassing spending for research, development, education, and training as well as physical assets such as land, structures, infrastructure, and major equipment. It also includes spending regardless of the ultimate ownership of the resulting asset or the purpose it serves. For the purposes of this definition, however, Federal investment does not include “social investment,” meaning investments in healthcare or social services programs where it is difficult to separate out the degree to which the spending provides current versus future benefits. The distinction between investment spending and current outlays is a matter of judgment, but the definition used for the purposes of this analysis has remained consistent over time and is useful for historical comparisons.²

Investment in physical assets can be for the construction or improvement of buildings, structures, and infrastructure, including the development or acquisition of major equipment. The broader research and development category includes spending on the facilities in which these activities occur and major equipment for the conduct of research and development, as well as spending for basic and applied research, and experimental development.³ Investment in education and training includes vocational rehabilitation, programs for veterans, funding for school systems and higher education, and agricultural extension

services. This category excludes training for military personnel or other individuals in Government service.

The Budget further classifies investments as either grants to State, local, tribal, and territorial governments (e.g., for highways or education) or “direct Federal programs.” The “direct Federal” category consists primarily of spending for assets owned by the Federal Government, such as weapons systems and buildings, but also includes grants to private organizations and individuals for investment, such as capital grants to Amtrak, Pell Grants, and higher education loans to individuals. For grants made to State, local, tribal, and territorial governments, it is the recipient jurisdiction, not the Federal Government, that ultimately determines whether the money is used to finance investment or for current use. This analysis classifies outlays based on the category in which the recipient jurisdiction is expected to spend a majority of the money. General purpose fiscal assistance is classified as current spending, although in practice, some may be spent by recipient jurisdictions on investment.

Additionally, in this analysis, Federal investment includes credit programs that are for investment purposes. When direct loans and loan guarantees are used to fund investment, the subsidy value is included as investment. The subsidies are classified according to their program purpose, such as construction, or education and training.

This discussion presents spending for gross investment, without adjusting for depreciation.

² Historical figures on investment outlays beginning in 1940 may be found in the Budget’s *Historical Tables*. The *Historical Tables* are available at <https://whitehouse.gov/omb/historical-tables/>.

³ A more thorough discussion of research and development funding may be found in the “Research and Development” chapter of this volume.

Table 5–1. COMPOSITION OF FEDERAL INVESTMENT OUTLAYS
(In billions of dollars)

Federal Investment	Actual 2023	Estimate	
		2024	2025
Major public physical capital investment:			
Direct Federal:			
National defense	193.5	210.8	232.8
Nondefense	51.0	71.5	69.6
Subtotal, direct major public physical capital investment.....	244.5	282.3	302.4
Grants to State and local governments	111.9	132.0	161.1
Subtotal, major public physical capital investment	356.3	414.3	463.5
Conduct of research and development:			
National defense	87.4	93.6	94.9
Nondefense	84.3	89.7	92.6
Subtotal, conduct of research and development	171.7	183.3	187.5
Conduct of education and training:			
Grants to State and local governments	89.0	85.0	74.8
Direct Federal	–82.1	218.1	121.4
Subtotal, conduct of education and training	6.9	303.2	196.2
Total, major Federal investment outlays	534.9	900.8	847.2
MEMORANDUM			
Major Federal investment outlays:			
National defense	281.0	304.4	327.7
Nondefense	254.0	596.4	519.6
Total, major Federal investment outlays	534.9	900.8	847.2
Miscellaneous physical investment:			
Commodity inventories	–1.9	*	*
Other physical investment (direct)	3.0	7.1	6.9
Total, miscellaneous physical investment	1.1	7.1	6.9
Total, Federal investment outlays, including miscellaneous physical investment	536.1	907.9	854.1

*\$500 million or less

COMPOSITION OF FEDERAL INVESTMENT OUTLAYS

Major Federal Investment

The composition of major Federal investment outlays is summarized in Table 5–1. The categories include major public physical investment, the conduct of research and development, and the conduct of education and training. Total major Federal investment outlays were \$534.9 billion in 2023. They are estimated to increase by 68.4 percent to \$900.8 billion in 2024, and decrease by 5.9 percent to \$847.2 billion in 2025. For 2023 through 2025, defense investment outlays comprise about 40 percent of total major Federal investment, while non-defense investment comprises about 60 percent. In 2024, defense investment outlays are expected to increase by \$23.4 billion, or 8.3 percent, and non-defense investment outlays are expected to increase by \$342.4 billion, or 134.8 percent. In 2025, the Budget projects a defense investment increase of \$23.3 billion, or 7.7 percent over 2024 and a decrease in non-defense investment of \$76.9 billion, or 12.9 percent.

Physical investment:

Outlays for major public physical capital (hereafter referred to as “physical investment”) were \$356.3 billion

in 2023 and are estimated to increase by 16.3 percent to \$414.3 billion in 2024. In 2025, outlays for physical investment are estimated to increase by 11.9 percent to \$463.5 billion. Physical investment outlays are for construction and renovation, the development or purchase of major equipment, and the purchase or sale of land and structures. Around 65 percent of these outlays are for direct physical investment by the Federal Government, with the remainder being grants to State and local governments for physical investment.

Direct physical investment outlays by the Federal Government are primarily for defense. Defense outlays for physical investment are estimated to be \$232.8 billion in 2025, \$22 billion higher than in 2024. Outlays for direct physical investment for non-defense purposes are estimated to be \$69.6 billion in 2025, a decrease of 2.6 percent from 2024.

Outlays for grants to State and local governments for physical investment are estimated to be \$161.1 billion in 2025, a 22 percent increase over the 2024 estimate of \$132.0 billion. Grants for physical investment fund transportation programs, sewage treatment plants, community

and regional development, public housing, and other State and tribal assistance. Much of this investment originates from funding included in the Infrastructure Investment and Jobs Act (IIJA, Public Law 117-58), which was signed into law on November 15, 2021. The IIJA makes an array of transformational investments in the Nation's infrastructure.

Conduct of research and development:

Outlays for research and development were \$171.7 billion in 2023. Outlays are estimated to increase by 6.8 percent to \$183.3 billion in 2024, and increase by 2.3 percent in 2025 to \$187.5 billion. Roughly half of research and development outlays are for defense, a trend which has remained consistent over the past decade. Physical investment for research and development facilities and equipment is included in the physical investment category.

Non-defense outlays for the conduct of research and development are estimated to be \$92.6 billion in 2025, 3.2 percent higher than 2024. Highlights include a roughly \$20 billion investment at the Department of Energy's Office of Science, the National Science Foundation, and the Department of Commerce's National Institute for Standards and Testing in research and development activities that support the goals of Public Law 117-167, commonly referred to as the CHIPS and Science Act of 2022. Additionally, the 2025 Budget reflects approximately \$3 billion in investments across multiple agencies to fund artificial intelligence research and development activities that focus both on leveraging its benefits and enhancing protections from its risks.

A discussion of research and development funding can be found in the "Research and Development" chapter of this volume.

Conduct of education and training:

Outlays for the conduct of education and training were \$6.9 billion in 2023. Outlays are estimated to increase to \$303.2 billion in 2024, and decrease in 2025 to \$196.2 billion.

Grants to State, local, tribal, and territorial governments for this category were \$89.0 billion in 2023. The grants are estimated to decrease by 4.4 percent to \$85.0 billion in 2024, and decrease by 12 percent to \$74.8 billion in 2025. In 2025, grants are estimated to be slightly over one-third of total investment in education and training. This pattern of spending on grants to State, local, tribal, and territorial governments for education and training is largely explained by changes in spending levels in response to the health and economic crises caused by the COVID-19 pandemic. For example, through the Education Stabilization Fund, which received nearly \$166 billion in funding from the American Rescue Plan Act of 2021

(Public Law 117-2), the Department of Education outlayed roughly \$20 billion in grants for education and training in 2023 and is estimated to outlay roughly \$7 billion in grants for education and training in 2024, before closing out the program and outlaying \$0 in 2025.

Direct Federal education and training outlays in 2023 were -\$82.1 billion. They are estimated to be \$218.1 billion in 2024, and \$121.4 billion in 2025. Programs in this category primarily consist of aid for higher education through student financial assistance, loan subsidies, and veterans' education, training, and rehabilitation. This category does not include outlays for education and training of Federal civilian and military employees. Outlays for education and training that are for physical investment and for research and development are in the categories for physical investment and the conduct of research and development.

The negative outlays in this category are explained by changes in accounting for the Federal Direct Student Loan Program. In 2023, outlays for this program were -\$189 billion, mainly due to the impacts of loan modifications and reestimates. There were much smaller negative subsidies and reestimates in this program for 2024, yielding total estimated outlays for the Federal Direct Student Loan Program in 2024 of roughly \$93 billion. In 2025, outlays for this program are estimated to be \$38 billion and are only associated with loan subsidies for the 2025 cohort, as no modifications or reestimates for 2025 have been made.

Major Federal investment outlays will comprise an estimated 11.7 percent of total Federal outlays in 2025 and 2.9 percent of the Nation's gross domestic product. Budget authority and outlays for major Federal investment by subcategory may be found in Table 5-2 at the end of this chapter.

Miscellaneous Physical Investment

In addition to the categories of major Federal investment, miscellaneous categories of investment outlays are shown at the bottom of Table 5-1.

Outlays for commodity inventories are for the purchase or sale of agricultural products pursuant to farm price support programs and other commodities. Outlays for other miscellaneous physical investment are estimated to be \$6.9 billion in 2025.

Detailed Table on Investment Spending

Table 5-2 provides data on budget authority as well as outlays for major Federal investment, divided according to grants to State and local governments and direct Federal spending. Miscellaneous investment is not included in this table.

Table 5–2. FEDERAL INVESTMENT BUDGET AUTHORITY AND OUTLAYS: GRANT AND DIRECT FEDERAL PROGRAMS

(In millions of dollars)

Description	Budget Authority			Outlays		
	2023 Actual	2024 Estimate	2025 Estimate	2023 Actual	2024 Estimate	2025 Estimate
GRANTS TO STATE AND LOCAL GOVERNMENTS						
Major public physical investment:						
Construction and rehabilitation:						
Transportation:						
Highways	70,796	71,367	69,334	53,422	62,271	67,726
Mass transportation	22,158	22,222	21,706	23,593	20,474	20,753
Rail transportation	16,293	16,287	16,033	3,378	3,931	7,833
Air and other transportation	12,219	12,221	12,082	5,679	8,477	9,520
Subtotal, transportation	121,466	122,097	119,155	86,072	95,153	105,832
Other construction and rehabilitation:						
Pollution control and abatement	17,254	15,997	16,448	6,084	5,535	9,647
Community and regional development	14,774	8,386	5,971	10,663	16,754	20,400
Housing assistance	6,061	6,260	17,937	5,350	6,771	8,695
Other	1,545	1,002	1,284	1,319	3,592	11,875
Subtotal, other construction and rehabilitation	39,634	31,645	41,640	23,416	32,652	50,617
Subtotal, construction and rehabilitation	161,100	153,742	160,795	109,488	127,805	156,449
Other physical assets	3,876	3,468	3,045	2,370	4,238	4,697
Subtotal, major public physical investment	164,976	157,210	163,840	111,858	132,043	161,146
Conduct of research and development:						
Agriculture	396	396	399	370	370	443
Other	364	406	404	189	224	242
Subtotal, conduct of research and development	760	802	803	559	594	685
Conduct of education and training:						
Elementary, secondary, and vocational education	46,302	46,055	46,155	63,507	55,632	46,496
Higher education	668	668	678	639	796	755
Research and general education aids	959	1,012	1,023	1,057	1,193	1,060
Training and employment	3,637	3,287	3,561	3,244	3,595	3,717
Social services	16,247	18,005	18,073	16,239	19,192	18,124
Agriculture	471	471	495	408	434	558
Other	3,431	3,405	3,330	3,860	4,207	4,136
Subtotal, conduct of education and training	71,715	72,903	73,315	88,954	85,049	74,846
Subtotal, grants for investment	237,451	230,915	237,958	201,371	217,686	236,677
DIRECT FEDERAL PROGRAMS						
Major public physical investment:						
Construction and rehabilitation:						
National defense:						
Military construction and family housing	16,998	16,958	15,424	10,042	13,093	16,665
Atomic energy defense activities and other	4,908	4,597	4,707	3,751	3,833	3,957
Subtotal, national defense	21,906	21,555	20,131	13,793	16,926	20,622
Nondefense:						
International affairs	1,290	1,282	1,292	1,224	1,222	1,425
General science, space, and technology	2,058	1,969	2,039	2,056	2,182	2,143
Water resources projects	6,449	5,974	5,445	4,216	9,289	7,218
Other natural resources and environment	4,932	3,195	3,318	1,963	2,311	2,639
Energy	4,793	5,135	6,964	3,171	6,665	9,693
Postal service	2,938	754	754	1,009	945	945
Transportation	687	679	716	80	219	403
Veterans hospitals and other health facilities	7,335	8,862	7,873	5,822	4,860	4,955
Administration of justice	2,025	2,035	1,277	1,833	2,934	3,033
GSA real property activities	1,585	1,497	11,877	1,136	1,619	3,238
Other construction	4,670	5,555	6,480	4,016	5,509	4,537
Subtotal, nondefense	38,762	36,937	48,035	26,526	37,755	40,229
Subtotal, construction and rehabilitation	60,668	58,492	68,166	40,319	54,681	60,851

5. FEDERAL INVESTMENT

Table 5–2. FEDERAL INVESTMENT BUDGET AUTHORITY AND OUTLAYS: GRANT AND DIRECT FEDERAL PROGRAMS—Continued

(In millions of dollars)

Description	Budget Authority			Outlays		
	2023 Actual	2024 Estimate	2025 Estimate	2023 Actual	2024 Estimate	2025 Estimate
Acquisition of major equipment:						
National defense:						
Department of Defense	215,613	210,516	215,788	178,358	192,360	210,322
Atomic energy defense activities	1,758	1,618	1,899	1,427	1,543	1,850
Subtotal, national defense	217,371	212,134	217,687	179,785	193,903	212,172
Nondefense:						
General science and basic research	578	539	530	569	571	566
Postal service	4,710	4,748	4,748	1,948	3,878	3,878
Air transportation	4,748	4,690	6,326	4,271	4,714	5,178
Water transportation (Coast Guard)	1,703	1,607	1,545	1,635	5,232	1,834
Other transportation (railroads)	5	6	11	5	6	10
Hospital and medical care for veterans	3,802	3,912	1,134	3,221	3,958	1,574
Federal law enforcement activities	2,920	3,018	2,931	2,972	3,250	3,044
Department of the Treasury (fiscal operations)	239	283	283	773	1,295	1,940
National Oceanic and Atmospheric Administration	1,756	1,477	1,873	1,452	1,752	1,841
Other	6,793	6,853	7,395	7,314	8,952	9,062
Subtotal, nondefense	27,254	27,133	26,776	24,160	33,608	28,927
Subtotal, acquisition of major equipment	244,625	239,267	244,463	203,945	227,511	241,099
Purchase or sale of land and structures:						
National defense	–42	–33	–35	–48	–27	–35
Natural resources and environment	523	522	525	384	490	516
General government	–41	–307		–41	–307	
Other	162	165	168	–69	–68	–61
Subtotal, purchase or sale of land and structures	602	347	658	226	88	420
Subtotal, major public physical investment	305,895	298,106	313,287	244,490	282,280	302,370
Conduct of research and development:						
National defense:						
Defense military	95,541	90,380	92,536	82,338	88,393	89,483
Atomic energy and other	5,356	5,308	5,544	5,087	5,189	5,430
Subtotal, national defense	100,897	95,688	98,080	87,425	93,582	94,913
Nondefense:						
International affairs	268	252	252	280	252	252
General science, space, and technology:						
NASA	10,841	11,000	10,869	10,609	10,956	11,006
National Science Foundation	7,468	7,289	7,482	6,780	7,580	7,888
Department of Energy	6,585	6,141	6,727	6,029	7,670	7,196
Other general science, space, and technology			190			40
Subtotal, general science, space, and technology	24,894	24,430	25,268	23,418	26,206	26,130
Energy	6,185	7,431	7,507	3,655	4,860	5,542
Transportation:						
Department of Transportation	1,079	1,129	1,144	876	1,112	1,194
NASA	771	764	794	693	757	795
Other transportation	41	41	24	38	55	24
Subtotal, transportation	1,891	1,934	1,962	1,607	1,924	2,013
Health:						
National Institutes of Health	46,356	45,753	48,119	44,045	44,454	44,998
Other health	1,544	1,375	2,757	1,169	1,035	1,310
Subtotal, health	47,900	47,128	50,876	45,214	45,489	46,308
Agriculture	2,258	2,249	2,258	2,192	2,634	2,573
Natural resources and environment	3,521	3,304	3,287	3,187	3,125	3,081
National Institute of Standards and Technology	2,839	2,123	2,009	827	1,399	2,717
Hospital and medical care for veterans	1,684	1,799	1,709	1,751	1,564	1,588
All other research and development	1,668	1,698	1,725	1,576	1,660	1,709
Subtotal, nondefense	93,108	92,348	96,853	83,707	89,113	91,913
Subtotal, conduct of research and development	194,005	188,036	194,933	171,132	182,695	186,826

Table 5–2. FEDERAL INVESTMENT BUDGET AUTHORITY AND OUTLAYS: GRANT AND DIRECT FEDERAL PROGRAMS—Continued

(In millions of dollars)

Description	Budget Authority			Outlays		
	2023 Actual	2024 Estimate	2025 Estimate	2023 Actual	2024 Estimate	2025 Estimate
Conduct of education and training:						
Elementary, secondary, and vocational education	1,767	2,356	2,689	47,134	60,252	10,529
Higher education	–149,334	147,446	88,219	–152,319	132,409	82,750
Research and general education aids	2,747	2,792	2,908	2,779	3,078	2,889
Training and employment	2,527	2,681	10,662	2,323	2,669	2,960
Health	2,468	2,551	2,806	2,515	2,983	2,852
Veterans education, training, and rehabilitation	9,132	9,019	16,253	12,659	13,401	16,053
General science and basic research	1,195	1,157	1,313	859	1,180	1,224
International affairs	790	790	797	890	869	794
Other	1,285	1,326	1,303	1,087	1,295	1,305
Subtotal, conduct of education and training	–127,423	170,118	126,950	–82,073	218,136	121,356
Subtotal, direct Federal investment	372,477	656,260	635,170	333,549	683,111	610,552
Total, Federal investment	609,928	887,175	873,128	534,920	900,797	847,229