

Discretionary Spending Options

Discretionary spending—the part of federal spending that lawmakers control through annual appropriation acts—amounted to about \$1.2 trillion, or 31 percent of total federal outlays, in 2016, the Congressional Budget Office estimates.¹ Just under half of that spending was for defense programs; the rest paid for an array of nondefense activities. Some fees and other charges that are triggered by appropriation action are classified in the budget as offsetting collections and credited against discretionary spending.

The discretionary budget authority (that is, the authority to incur financial obligations) provided in appropriation acts results in outlays when the money is spent. Some appropriations (such as those for employees' salaries) are spent quickly, but others (such as those for major construction projects) are disbursed over several years. Thus, in any given year, discretionary outlays include spending from new budget authority as well as spending from budget authority provided in earlier appropriations.²

Trends in Discretionary Spending

The share of federal spending that results from the annual appropriation process has diminished since the 1960s. From 1966 to 2016, discretionary spending fell from 67 percent of total federal spending to 31 percent. Measured as a percentage of gross domestic product (GDP), discretionary spending declined from 11.5 percent in

1966 to a low of 6.0 percent in 1999 before reaching 6.4 percent in 2016 (see Figure 3-1).

Most of that decline in discretionary spending relative to GDP stemmed from a decrease in spending for national defense measured as a share of GDP.³ Discretionary spending for defense was 7.5 percent of GDP in 1966, and on the whole, it fell over the next several decades, reaching a low of 2.9 percent at the turn of the century. Such spending began climbing again shortly thereafter and averaged 4.6 percent of GDP from 2009 through 2011. (A large portion of the growth in defense spending over the 2001–2011 period resulted from spending on operations in Afghanistan and Iraq; in 2011, such spending amounted to 1.0 percent of GDP.) Since then, discretionary defense spending has declined in relation to the size of the economy, falling to 3.2 percent of GDP in 2016, CBO estimates.

The nondefense discretionary category comprises spending for an array of federal activities in areas such as education, transportation, veterans' health care, and homeland security. Over the past five decades, such spending has generally ranged from about 3 percent to 4 percent of GDP. One exception was the period from 1976 to 1981, when such spending averaged almost 5 percent of GDP. Another exception occurred from 2009 through 2011, when funding from the American Recovery and Reinvestment Act of 2009 helped push nondefense outlays above 4 percent of GDP. Nondefense discretionary outlays have declined in relation to the size of the economy since then, dropping to 3.3 percent of GDP in 2016, CBO estimates.

From 2012 through 2016, discretionary outlays measured as a percentage of GDP decreased largely because of constraints imposed by the Budget Control Act of 2011 and lower spending for military operations

1. In this volume, “spending” generally refers to outlays.

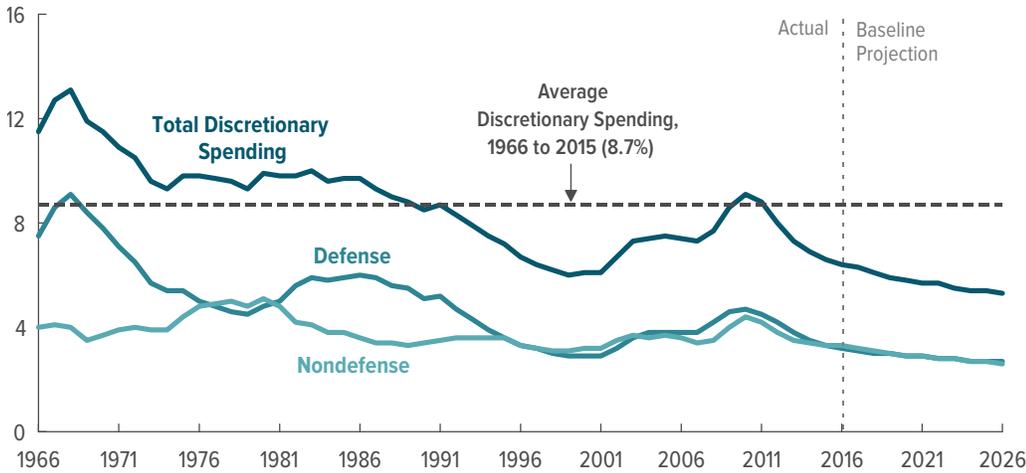
2. For some major transportation programs, budget authority is considered mandatory, but the outlays resulting from that authority are discretionary. Budget authority for those programs is provided in authorizing legislation rather than appropriation acts, but the amount of that budget authority that the Department of Transportation can obligate each year is limited by appropriation acts. Those obligation limitations are treated as a measure of discretionary budgetary resources. For more information, see Congressional Budget Office, *The Highway Trust Fund and the Treatment of Surface Transportation Programs in the Federal Budget* (June 2014), www.cbo.gov/publication/45416.

3. Most defense spending is funded through discretionary appropriations.

Figure 3-1.

Discretionary Spending

Percentage of Gross Domestic Product



Source: Congressional Budget Office (as of August 2016).

If current statutory limits on discretionary spending remained in place through 2021 and grew with inflation thereafter, discretionary spending would decline as a percentage of gross domestic product over the next 10 years.

in Afghanistan and Iraq. In CBO's baseline projections, discretionary spending further declines in relation to the size of the economy over the next 10 years, falling from about 6 percent of GDP in 2016—already below the 50-year average of 8.7 percent—to 5.3 percent in 2026. Two main factors account for that decline. First, the caps and automatic spending reductions put in place by the Budget Control Act, if adhered to, will constrain most discretionary appropriations through 2021; between 2016 and 2018, those caps decline by an average of 0.1 percent a year, but from 2018 through 2021 they grow by about 2 percent a year, on average, which is slower than GDP is projected to grow. Second, in CBO's baseline projections for 2022 through 2026, discretionary appropriations grow from the 2021 amount at the rate of inflation, which is also slower than GDP is projected to grow. By 2026, defense spending would equal 2.7 percent of GDP and nondefense spending 2.6 percent of GDP—the smallest share of the economy that either category (and discretionary spending as a whole) has accounted for since at least 1962, the first year for which comparable data are available.

Analytic Method Underlying the Estimates of Discretionary Spending

For the most part, the budgetary effects described in this chapter were calculated in relation to CBO's March 2016 baseline projections of discretionary

spending over the next 10 years.⁴ In accordance with section 257 of the Balanced Budget and Emergency Deficit Control Act of 1985, those projections reflect the assumption that current appropriations will continue in future years, with adjustments to keep pace with inflation. (Although CBO follows that law in constructing baseline projections for individual components of discretionary spending, its baseline projections of overall discretionary spending incorporate the caps and automatic spending reductions put in place by the Budget Control Act.) As specified in the law, CBO uses the following measures of inflation when constructing its baseline: the employment cost index for wages and salaries (applied to spending for federal personnel) and the GDP price index (applied to other spending).

The budgetary effects of the option involving military force structure (Option 1) and of the options related to the Department of Defense's (DoD's) operation and maintenance (Option 2) and acquisition (Options 5 through 10) were measured on a different basis. Because the baseline projections do not reflect programmatic details for force structure and acquisition (and maintenance) of specific weapon systems, the effects of those options are calculated in relation to DoD's planned spending as laid out in its 2017 Future Years Defense

4. Congressional Budget Office, *Updated Budget Projections: 2016 to 2026* (March 2016), www.cbo.gov/publication/51384.

Program (FYDP). The FYDP provides details about DoD's intended funding requests for the 2017–2021 period—including the Administration's plans for the number of military and civilian personnel, the procurement and maintenance of weapon systems, and operational intensity—so measuring estimates of DoD's spending under a given option against that planned defense spending better captures the effects the option would have than comparing estimated spending under the option with CBO's baseline projections. Through 2021, the budgetary effects estimated for those eight options are based on DoD's estimates of the costs of its plans. From 2022 through 2026, they are based on DoD's estimates (such as those in the Navy's annual 30-year shipbuilding plan) when available and on CBO's projections of price and compensation trends for the overall economy when they are not. For an option that would cancel the planned acquisition of a weapon system, for example, the potential savings reported in this volume reflect DoD's estimates of the cost and purchasing schedule for that system; CBO often adjusts those savings to account for the costs to continue purchasing and operating existing systems instead of the system that would be canceled. In addition to budgetary costs, the text of each acquisition option discusses the effects of the option on DoD's ability to perform its missions, as well as any other consequences the option might have.

Because the costs of implementing the FYDP would exceed CBO's baseline projections for defense spending—in some cases, by significant amounts—the options involving military force structure, operation and maintenance, and acquisition would not necessarily reduce deficits below those projected in CBO's baseline. Rather, they are, at least in part, options for bringing DoD's planned funding closer to the amounts projected in the baseline, which accord with the current-law limits on such spending.

In many instances, CBO would have estimated higher costs for DoD's planned programs than the amounts budgeted either in DoD's FYDP or in CBO's extension of the FYDP, which relies primarily on DoD's cost estimates.⁵ However, the savings from an option in relation to DoD's budget request are better represented by the program's costs in the FYDP and the extended FYDP

than by CBO's independent cost estimates. If lawmakers enacted legislation to cancel a planned weapon system, for instance, DoD could delete the amounts budgeted for that system from its FYDP and increase the amounts for operating existing systems to come closer to the funding limits currently in place.

Options in This Chapter

The 28 options in this chapter encompass a broad range of discretionary programs. (They do not include options that would affect spending for health care programs, which are presented in Chapter 5 along with options that would affect taxes related to health.) Ten options in this chapter deal with defense programs and the rest with nondefense programs. Some include broad cuts—such as Option 1, which would reduce the size of the military to satisfy caps specified by the Budget Control Act, or Option 25, which would reduce federal civilian employment. Others focus on specific programs; for instance, Option 13 concerns the Department of Energy's programs for research and development in energy technologies. Some options would change the rules of eligibility for certain federal programs; Option 21, for example, would tighten eligibility criteria for Pell grants. Option 25 would impose fees to cover the cost of enforcing regulations and providing certain services.

To reduce deficits through changes in discretionary spending, lawmakers would need to lower the statutory funding caps below the amounts already established under current law or enact appropriations that were below those caps. The options in this chapter could be used to help accomplish either of those objectives. Alternatively, some of the options could be implemented to help comply with the existing caps on discretionary funding.

Under the constraints imposed by the Budget Control Act, total discretionary spending over the 2017–2026 period is projected to be \$717 billion (or about 6 percent) lower than it would be if the funding provided for 2016 was continued in future years with increases for inflation. In other words, spending would have to be \$717 billion lower than it is in the baseline projections for individual accounts just to comply with the discretionary caps (which are currently in place through 2021). CBO estimates that thereafter discretionary spending will grow from those lower levels at the rate of inflation. If all of the options presented in this chapter

5. For CBO's estimates of the cost of DoD's plans, see Congressional Budget Office, *Long-Term Implications of the 2017 Future Years Defense Program* (forthcoming).

other than those involving military force structure or acquisition were implemented, the savings generated would amount to roughly \$820 billion—about 14 percent greater than the discretionary savings that result

from the caps. (That estimate reflects the assumptions that there are no interactions between the options and that for those options with multiple alternatives, the one resulting in the highest savings is implemented.)

Discretionary Spending—Option 1

Function 050

Reduce the Size of the Military to Satisfy Caps Under the Budget Control Act

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Planned Defense Spending													
Budget authority	0	-18	-23	-23	-24	-36	-40	-35	-41	-41		-87	-281
Outlays	0	-11	-18	-20	-22	-31	-36	-35	-38	-39		-72	-251

This option would take effect in October 2017.

Estimates of changes in spending displayed in the table are based on the 2017 Future Years Defense Program—which projects costs that are higher than are permitted under the Budget Control Act—and CBO’s extension of that plan. This option would not reduce spending and deficits below the amounts projected in CBO’s baseline, which reflect the law’s funding caps.

The cost of the plans described in the Department of Defense’s (DoD’s) most recent Future Years Defense Program (FYDP) greatly exceeds the funding allowed under the Budget Control Act of 2011 (BCA), as amended. For example, by DoD’s estimate, implementing the FYDP would require funding of \$557 billion in 2018, which is \$35 billion, or 7 percent, higher than the limit of \$521 billion implied by the BCA for that year (roughly 95 percent of the overall BCA cap of \$549 billion in 2018 for the broader category of national defense). (The gap is even larger when the resource requirements are estimated using the Congressional Budget Office’s projections of cost factors and growth rates that reflect DoD’s experience in recent years.) Closing that gap to bring DoD’s budget into compliance with the BCA would require a reduction in the size of the military (measured by the number of major combat units such as Marine regiments or Army brigade combat teams—BCTs); a decrease in the per-unit funding provided to man, equip, train, and operate forces; or a combination of both of those measures.

Under this option, the size of the military would be gradually reduced so that by 2020, DoD’s budget would satisfy the BCA cap for that year and average funding per military unit would remain commensurate with 2016 amounts (including adjustments for anticipated cost growth in areas such as pay, military health care, and new weapon systems). The size of the military would remain unchanged thereafter. Using DoD’s cost assumptions, CBO estimates that the force cuts would require \$281 billion less in budget authority from 2018 through 2026 than DoD’s current plans. As a result, CBO estimates that outlays would be reduced by

\$251 billion through 2026. The initial cuts would be phased in from 2018 through 2020 to provide time for an orderly drawdown and to avoid sudden changes in the size of the force. As a consequence, this option alone would not satisfy the BCA caps for the years 2018 and 2019.

If reductions were spread evenly across DoD’s four military services and among all full-time (active) and part-time (reserve and National Guard) units, those reductions might, for example, eliminate the following forces by 2021: 6 Army brigade combat teams (out of a planned force of 56), an aircraft carrier and 11 other major warships (out of 238), 2 Marine battalions (out of 32), and 72 Air Force fighters (out of about 1,200 in combat squadrons). Proportional reductions would be made to most other types of units in each service and in support organizations across DoD, as well as in the acquisition of new weapons.

An advantage of this option is that it would reduce the mismatch between the cost of DoD’s plans and the funding available through 2021, the final year that funding is constrained under the BCA. Also, unlike reductions that merely postpone costs, savings from the reductions in military force structure under this option would continue to accrue after 2021 for as long as forces were held at the smaller size. Consequently, it would eliminate pressure for a sudden, large increase in defense spending when the BCA lapses in 2022. Although keeping the current force structure and using short-term reductions in average funding per unit to stay within the BCA caps might be possible through 2021, such an approach would, over the long term, pose the risk of having a so-called hollow

force—one that is large but that lacks the equipment or training necessary to be effective. Under this option, units would continue to receive funding equivalent to what they had in 2016 and would not require a large increase in 2022.

The disadvantage of this option is that the size and number of military operations that could be simultaneously conducted and the duration for which they could be

sustained would be reduced if the size of the force was cut. Under Army policy, for example, three active BCTs (or five National Guard BCTs) are required to support the rotation of a single BCT in and out of a combat zone. Consequently, the number of BCTs that the Army could continuously deploy would decrease by one for every three active or five National Guard BCTs that were cut from the force structure.

RELATED OPTION: Discretionary Spending, Option 25

RELATED CBO PUBLICATIONS: *Long-Term Implications of the 2017 Future Years Defense Program* (forthcoming); *The U.S. Military's Force Structure: A Primer* (July 2016), www.cbo.gov/publication/51535; *Approaches for Scaling Back the Defense Department's Budget Plans* (March 2013), www.cbo.gov/publication/43997

Discretionary Spending—Option 2

Function 050

Reduce DoD’s Operation and Maintenance Appropriation, Excluding Funding for the Defense Health Program

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Freeze O&M Budget Authority for Five Years and Then Limit Its Growth to the Rate of Inflation													
Change in Planned Defense Spending													
Budget authority	0	-9	-13	-17	-20	-20	-21	-21	-21	-21	-22	-59	-163
Outlays	0	-6	-11	-15	-18	-19	-20	-20	-21	-21	-21	-49	-151
Limit the Growth of O&M Budget Authority to the Rate of Inflation													
Change in Planned Defense Spending													
Budget authority	0	-5	-7	-6	-5	-6	-6	-6	-6	-6	-6	-24	-53
Outlays	0	-3	-6	-6	-6	-6	-6	-6	-6	-6	-6	-21	-49

This option would take effect in October 2017.

Estimates of savings displayed in the table are based on the 2017 Future Years Defense Program and CBO’s extension of that plan.

O&M = operation and maintenance.

The Department of Defense (DoD) uses funds from its operation and maintenance (O&M) account to pay the salaries and benefits of most of its civilian employees, to train its military personnel, and to purchase goods (ranging from paper clips to jet fuel) and services (including, for example, health care, the maintenance and repair of equipment, and information technology support). O&M accounts for about 40 percent of DoD’s request for base-budget funding in 2017 (which does not include the additional funding that DoD requested for overseas contingency operations), making it the largest single appropriation title in DoD’s budget. In real terms (that is, after the amounts have been adjusted to remove the effects of inflation as measured by growth in the price index for gross domestic product), DoD’s base-budget costs for O&M grew by nearly 40 percent from 2000 to 2016, despite a slight decrease in the size of the military. Under DoD’s current plans as laid out in its Future Years Defense Program (FYDP), O&M funding—measured in real dollars—would grow by 4 percent from 2016 through 2021, the last year in the most recent FYDP.

This option has two alternatives that would reduce the growth in DoD’s O&M appropriation without affecting the portion of O&M funding slated for the Defense Health Program (DHP). (The Congressional Budget Office excluded funding for the DHP from this option

because the causes of growth in that program are well-known and distinct from the factors that underlie growth in the rest of the O&M account; such funding is addressed by two health options in this volume, which are listed below.) Under the first alternative, DoD’s O&M appropriation in the base budget (excluding funding for the DHP) for the years 2018 through 2021 would equal the amount that the department requested in its budget for 2017. That portion of the budget would grow with inflation from 2022 through 2026. Under the second alternative, DoD’s O&M appropriation in the base budget (excluding funding for the DHP) would grow with inflation from the 2017 amount throughout the entire 10-year period.

The first alternative would reduce the discretionary budget authority needed for O&M by \$163 billion over 10 years in relation to what would be needed under the FYDP and CBO’s extension of it. Outlays would decrease by \$151 billion over that period. With the compound effects of inflation, the effect of the first alternative would be to reduce the purchasing power of the O&M appropriation (excluding funding for the DHP) in 2022 by 10 percent. The second alternative would reduce discretionary budget authority by \$53 billion and outlays by \$49 billion. DoD’s total purchasing power for O&M

would be 3 percent less than it would be under the department's current plan.

The option does not specify how the O&M reductions would be spread among the four military services and the defensewide agencies or how they would be implemented within each service or agency. Rather than stipulating across-the-board cuts, for example, the option would allow DoD to redistribute O&M funding among the services and agencies in its future budget requests as it sees fit and would leave it to the services and agencies to reallocate their funding in a manner that minimizes any losses of capability or readiness.

There are a number of methods that DoD could use to meet the O&M targets. Although those methods could be implemented individually, they might be more effective if they were applied as part of a DoD-wide effort to streamline its functions and business processes. One approach would be to gradually but significantly reduce the number of civilian personnel paid from the O&M account. If DoD used that approach, by 2022 it would, under the first alternative, employ roughly 220,000 (or 35 percent) fewer civilian personnel than it would under its current plan; under the second alternative, DoD would employ 60,000 (or 10 percent) fewer civilians. However, such cuts would generate the necessary savings only if the functions performed by the civilian personnel who were cut were not fulfilled by contractors (who would also be paid through the O&M account). The military services and DoD could continue to provide those functions if they found ways to operate more efficiently, or they could forgo the functions altogether. Using military personnel to replace civilians, contractors, or contracted services would not be an effective solution: Although that approach would lower O&M spending, it would transfer those costs to the military personnel account. Further, CBO has found that in many cases, substituting military personnel for civilians would have the net effect of increasing total costs.

Another method that could be used to meet the O&M targets would be to reduce the use of contractors and

contracted services. DoD relies on contractors to perform a wide range of functions—from mowing lawns to maintaining complex weapon systems—that in the past were performed almost exclusively by military personnel and civilian employees. As with reducing the civilian workforce, cutting down on the use of contractors each year could save billions of dollars—but only if DoD forgoes the functions that contractors fulfill or finds more efficient ways of performing them.

The primary advantage of this option is that slowing the growth in O&M would make it easier for DoD to preserve force structure (the number of major combat units such as Army brigade combat teams or Marine regiments) and to modernize its weapon systems while still responding to pressures to constrain overall defense spending. Costs per uniformed service member generally increase every year because their pay and health care costs typically rise faster than inflation, and DoD's current plan calls for significant increases in spending to modernize many of its weapon systems. Slowing the growth in O&M spending would help offset those increases.

A disadvantage of this option is that it could negatively affect the capability of the military if care is not taken to ensure that personnel remain as well trained and equipment as well maintained as under DoD's current plan. If DoD was unable to afford that level of readiness under this option, it would have to reduce force structure to preserve readiness. Another disadvantage of the option is that it could discourage DoD's efforts to make changes that would allow it to provide essential functions more efficiently. For example, in 2012, DoD identified about 14,000 military positions in commercial activities that could be converted to positions filled by federal civilian employees or contractors (see Option 4). By reducing spending on military personnel, such conversions would probably reduce DoD's overall costs, but they would nevertheless increase the department's O&M spending. Policymakers and DoD would need to take precautions to prevent the option from forestalling such conversions.

RELATED OPTIONS: Discretionary Spending, Option 4; Health, Options 14, 15

RELATED CBO PUBLICATIONS: *Replacing Military Personnel in Support Positions With Civilian Employees* (December 2015), www.cbo.gov/publication/51012; *Growth in DoD's Budget from 2000 to 2014* (November 2014), www.cbo.gov/publication/49764

Discretionary Spending—Option 3

Function 050

Cap Increases in Basic Pay for Military Service Members

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Spending													
Budget authority	0	-0.3	-0.8	-1.2	-1.7	-2.3	-2.8	-3.4	-4.0	-4.7		-4.1	-21.3
Outlays	0	-0.3	-0.7	-1.2	-1.7	-2.2	-2.8	-3.4	-4.0	-4.7		-4.0	-21.1

This option would take effect in January 2018.

About 20 percent of the savings displayed in the table reflect intragovernmental transfers and thus would not reduce the deficit.

Basic pay is the largest component of military members' cash compensation, accounting for about 60 percent of the total. (Allowances for housing and for food, along with the tax advantage that arises because those allowances are not subject to federal taxes, make up the remainder of that compensation.) Between 2006 and 2015, real (inflation-adjusted) spending per capita on basic pay rose by 9 percent. Lawmakers typically use the percentage increase in the employment cost index (ECI) for private-sector workers' wages and salaries (for all occupations and industries) as a benchmark for setting the annual increase in basic pay. Under current law, the pay raise is, by default, set to equal the percentage change in the ECI. However, lawmakers have often overridden that stipulation by temporarily changing the law to specify a different pay raise for a single year through the annual defense authorization and appropriations acts while reverting to current law for future years. Although for each of the years from 2000 to 2013 lawmakers enacted pay raises equal to or higher than the increase in the ECI, in recent years they have approved pay raises that were smaller than the increase in the ECI.

This option would, starting in January 2018, cap basic pay raises at 0.5 percentage points below the increase in the ECI for five years and then return them to the ECI benchmark in 2023. The Congressional Budget Office estimates that this option would reduce the need for discretionary budget authority by \$21 billion from 2018 through 2026 compared with what personnel costs would be if the raises were equal to the annual percentage increase in the ECI. Discretionary outlays would decrease by about the same amount.

Although the prospect of smaller basic pay raises could make it harder to retain personnel, CBO anticipates that

the effect would be small and that the military services would not need to offer additional incentives to service members to encourage them to stay in the military. Anticipated reductions in force size would make it easier for the Department of Defense (DoD) to tolerate small declines in retention rates and still maintain the services' force structures. DoD has already implemented some reductions, decreasing the size of the Marine Corps and the Army beginning in 2010 and 2012, respectively. The Marine Corps has achieved its target for the number of active duty personnel, and the Army plans to reach its goal by 2018. For this estimate, CBO assumed that all four service branches will achieve their personnel goals as planned and that the numbers of military personnel in each service branch will remain at those levels—about 1.3 million active duty service members—for the rest of the 10-year estimation period.

One rationale for this option is that DoD has consistently exceeded its goal of ensuring that the average cash compensation for military personnel exceeds the wages and salaries received by 70 percent of civilians with comparable education and work experience. According to DoD's analysis in 2012, the average cash compensation for enlisted personnel is greater than the wages and salaries of 90 percent of their civilian counterparts; the corresponding value for officers is 83 percent. Furthermore, the annual increase in the ECI might not be the most appropriate benchmark for setting pay raises over the long run. The comparison group for the ECI includes a broad sample of civilian workers who are, on average, older than military personnel and more likely to have a post-secondary degree. Historically, pay raises for those workers have been larger than for younger or less educated workers, who more closely match the demographic profile of military personnel.

An argument against this option is that, over the next decade, military recruiting and retention could be compromised if basic pay raises did not keep pace with the ECI. Capping raises would also constrain the amount

service members received in other benefits, such as the retirement annuities that are tied to a member's 36 highest months of basic pay over the course of a military career.

RELATED OPTION: Discretionary Spending, Option 24

RELATED CBO PUBLICATIONS: *Long-Term Implications of the 2017 Future Years Defense Program* (forthcoming); *Costs of Military Pay and Benefits in the Defense Budget* (November 2012), www.cbo.gov/publication/43574; testimony of Carla Tighe Murray, Senior Analyst for Military Compensation and Health Care, before the Subcommittee on Personnel, Senate Committee on Armed Services, *Evaluating Military Compensation* (April 28, 2010), www.cbo.gov/publication/21430

Discretionary Spending—Option 4

Function 050

Replace Some Military Personnel With Civilian Employees

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Spending													
Budget authority	0	-0.2	-0.6	-1.1	-1.5	-1.9	-2.0	-2.1	-2.2	-2.3		-3.4	-13.8
Outlays	0	-0.1	-0.5	-0.9	-1.4	-1.7	-1.9	-2.0	-2.1	-2.2		-2.9	-12.9

This option would take effect in October 2017.

About 40 percent of the savings displayed in the table reflect intragovernmental transfers and thus would not reduce the deficit.

The workforce of the Department of Defense (DoD) consists of members of the active-duty and reserve military, federal civilian employees, and private contractors. According to data from DoD, thousands of members of the military work in support, or “commercial,” jobs that could be performed by civilian employees or contractors. Many of those jobs do not involve functions that could raise concerns about personal safety or national security and are performed in military units that do not deploy overseas for combat.

Under this option, over four years DoD would replace 80,000 of the roughly 340,000 active-duty military personnel in commercial jobs with 64,000 civilian employees and, as a result, decrease active-duty end strength (the number of military personnel on the rolls on the final day of the fiscal year) by 80,000. By the Congressional Budget Office’s estimate, those changes could reduce the need for appropriations by \$14 billion and discretionary outlays by \$13 billion from 2018 through 2026. The savings would occur primarily because fewer civilians would be needed to replace a given number of military personnel. (Civilians require less on-the-job training, do not have to devote part of the work year to general military training, and generally do not rotate among positions as rapidly as military personnel do.) Although not shown here, the long-term savings to the federal government as a whole, particularly beyond the next decade, would be larger than those amounts because, ultimately, some of the costs of military personnel are borne by other departments and because a smaller proportion of civilian pay than of military pay is exempt from federal income taxation.

Although there is precedent for such conversions (between 2004 and 2010, DoD converted about 48,000

military positions to 32,000 civilian jobs), only a small percentage of all military positions have been reviewed for that purpose. Moreover, the mix of military and civilian employees used to perform various commercial functions differs from branch to branch. For example, the Army fills 27 percent of its finance and accounting jobs with military personnel, whereas the Marine Corps staffs 64 percent of those jobs with military personnel. The Navy employs military personnel for 8 percent of its jobs in motor vehicle transportation services; the Air Force, 67 percent. If each service adopted the personnel mix with the lowest percentage of military personnel in commercial occupations, up to 100,000 jobs currently held by military personnel could be opened to civilians, CBO estimates. Under this option, 80,000 of those jobs would be filled with 64,000 civilian employees.

One argument for converting military to civilian positions is that civilians require, on average, less job-specific training over their careers because, unlike military personnel, they are not subject to frequent transfers. The military services can thus employ, on average, a smaller number of civilians than military personnel to provide the same quantity and quality of services. However, if DoD did not reduce military end strength but simply reassigned military personnel to other duties, total personnel costs would increase by an amount equal to the cost of the civilian replacements. In that case, this option would still free some military personnel to fulfill their primary mission of training for and, if necessary, engaging in combat.

An argument against this option is that even though many service members might spend part of their career in jobs that could be performed by civilians, most are trained fighters who could be deployed if needed.

Replacing such military personnel with civilians could reduce DoD's ability to surge quickly if called upon to do so. Moreover, despite the potential cost savings, the military services try to avoid converting certain types of positions because doing so could lead to reductions in

effectiveness or morale and hinder their workforce management objectives. For example, the Navy must provide shore positions for sailors—so that they do not spend their entire careers at sea—even if some of those positions could be filled by civilians.

RELATED CBO PUBLICATION: *Replacing Military Personnel in Support Positions With Civilian Employees* (December 2015), www.cbo.gov/publication/51012

Discretionary Spending—Option 5

Function 050

Cancel Plans to Purchase Additional F-35 Joint Strike Fighters and Instead Purchase F-16s and F/A-18s

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total	
											2017–2021	2017–2026
Change in Planned Defense Spending												
Budget authority	0	-4.1	-3.1	-3.2	-4.2	-5.0	-1.5	-1.6	-2.4	-3.9	-14.6	-29.0
Outlays	0	-0.4	-1.5	-2.5	-3.0	-3.5	-3.9	-3.3	-2.5	-2.4	-7.4	-23.0

This option would take effect in October 2017.

Estimates of savings displayed in the table are based on the 2017 Future Years Defense Program and CBO’s extension of that plan.

The F-35 Joint Strike Fighter (JSF) program is the military’s largest aircraft development program. The F-35 is a stealthy aircraft—one that is difficult for adversaries to detect by radar and other air defense sensors. The objective of the program is to produce three versions of that aircraft: the conventional takeoff F-35A for the Air Force, the short takeoff and vertical landing (STOVL) F-35B for the Marine Corps, and the carrier-based F-35C for the Navy. Through 2016, 285 F-35s had been purchased for the U.S. military: 178 F-35As, 71 F-35Bs, and 36 F-35Cs. Current plans call for purchasing 2,158 more F-35s through 2038. The Department of Defense (DoD) has estimated that the remaining cost of those purchases, including the cost to complete development, will amount to \$265 billion (in nominal dollars). The Marine Corps and the Air Force declared their versions of the F-35 operational in 2015 and 2016, respectively. The Navy expects to declare its version operational by 2019.

Under this option, DoD would halt further production of the F-35 and instead purchase the most advanced versions of older, nonstealthy fighter aircraft that are still in production: the F-16 Fighting Falcon for the Air Force and the F/A-18 Super Hornet for the Navy and Marine Corps. The services would operate the F-35s that have already been purchased. By the Congressional Budget Office’s estimates, the option would reduce the need for discretionary budget authority by \$29 billion from 2018 through 2026 if the F-16s and F/A-18s were purchased on the same schedule as that currently in place for the F-35s. Outlays would decrease by \$23 billion over that period. Additional savings would accrue from 2027

through 2038 if F-16s and F/A-18s were purchased instead of the F-35s that are scheduled to be purchased in those later years. However, the Navy and Air Force are both planning to develop entirely new aircraft with fighterlike capabilities to be fielded in the 2030s and might choose to replace some planned F-35s with those aircraft instead.

An advantage of this option is that it would reduce the cost of replacing DoD’s older fighter aircraft while still providing new F-16s and F/A-18s with improved capabilities—including modern radar, precision weapons, and digital communications—that would be able to defeat most of the threats that the United States is likely to face in the coming years. The F-35s that have already been purchased would augment the stealthy B-2 bombers and F-22 fighters that are currently in the force, improving the services’ ability to operate against adversaries equipped with advanced air defense systems. The military has successfully operated a mix of stealthy and nonstealthy aircraft since the advent of the F-117 stealth fighter in the 1980s.

A disadvantage of this option is that a force consisting of a mix of stealthy and nonstealthy aircraft would be less flexible against advanced enemy air defense systems. An inability to neutralize such defenses in the early stages of a conflict might preclude the use of F-16s and F/A-18s, effectively reducing the number of fighters that the United States would have at its disposal. Another disadvantage is that the services would have to continue to

operate more types of aircraft instead of concentrating on a smaller number of types. For example, F-16s would remain in the Air Force's inventory longer than currently planned, and the Marine Corps might need to field new

F/A-18s to augment its F-35Bs. Depending on how expensive it was to operate the F-35, the added costs of maintaining mixed fleets of fighters for a longer period could offset some of the savings under this option.

RELATED OPTION: Discretionary Spending, Option 10

RELATED CBO PUBLICATIONS: *Long-Term Implications of the 2017 Future Years Defense Program* (forthcoming); *Strategies for Maintaining the Navy's and Marine Corps' Inventories of Fighter Aircraft* (May 2010), www.cbo.gov/publication/21251; *Alternatives for Modernizing U.S. Fighter Forces* (May 2009), www.cbo.gov/publication/41181

Discretionary Spending—Option 6

Function 050

Stop Building Ford Class Aircraft Carriers

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Planned Defense Spending													
Budget authority	0	-1.8	-1.7	-1.8	-3.1	-3.0	-3.1	-2.2	-2.1	-2.2	-8.4	-21.0	
Outlays	0	-0.1	-0.6	-0.9	-1.3	-1.9	-2.3	-2.6	-2.5	-2.5	-2.9	-14.7	

This option would take effect in October 2017.

Estimates of savings displayed in the table are based on the 2017 Future Years Defense Program and CBO's extension of that plan.

The Administration's 2017 budget calls for maintaining a fleet of 11 aircraft carriers and 9 active-duty naval air wings. (The number of active air wings is two less than the number of carriers because normally two of the Navy's carriers are having their nuclear reactors refueled or undergoing other major maintenance at any particular time.) Aircraft carriers are accompanied by a mix of surface combatants (typically cruisers and destroyers) and submarines to defend against enemy aircraft, ships, and submarines. The Navy calls such a force a carrier strike group.

Under this option, the Navy would stop building new aircraft carriers after completion of the second of its modern Ford class carriers, the *John F. Kennedy*, which lawmakers authorized in 2013 and which is expected to be completed in 2022. Thus, plans to start building the third Ford class carrier (the *Enterprise*) in 2018 would be canceled, as would the Navy's plans to purchase additional carriers in subsequent years. (Under its current shipbuilding plan, the Navy would purchase a new carrier every five years. Because those ships are expensive and take a long time to build, the Congress allows the Navy to spread the costs out over six years. Funding for the *Enterprise* began in 2016.)

Savings under this option would result exclusively from not buying new carriers; those savings would be offset somewhat by higher costs for nuclear-powered submarines and for refueling the Navy's existing carriers because the fixed overhead costs of the shipyard would be allocated to fewer programs. (The same commercial shipyard that builds and overhauls aircraft carriers also builds parts of submarines. Some of the overhead costs for that yard that are currently associated with building new carriers would instead be charged to submarine programs

and to refueling carriers, increasing the total costs of those programs.) This option would reduce the need for discretionary budget authority by \$21 billion from 2018 through 2026, the Congressional Budget Office estimates. Outlays would decrease by \$15 billion over that period. Additional savings would be realized after 2026 because the Navy would no longer be purchasing new aircraft carriers and because it would need to buy fewer aircraft to put on its carrier fleet, which would slowly shrink as old ships retired from the fleet. Those additional savings would, however, be substantially offset if the Navy decided that it had to buy other weapon systems to replace the capability and capacity that it lost by not purchasing additional carriers.

One argument in favor of this option is that the existing fleet and the carriers under construction would maintain the current size of the carrier force for a long time because the ships are designed to operate for 50 years. Two Ford class carriers, including the *John F. Kennedy*, are currently under construction and will replace the first two Nimitz class carriers when they are retired in the 2020s, so as late as 2030, the Navy would still field 10 carriers under this option. The size of the carrier force would decline thereafter, however, falling to 7 ships by 2040. If national security interests made additional carriers necessary in the future, the Navy could once again start building new carriers. But doing so would be more expensive and complex than building new carriers is today, and it takes years to construct such large ships. Building new designs of small warships is a challenge; relearning how to build the largest warship ever produced would pose much greater challenges for the shipyard tasked with the job.

Another argument in favor of this option is that, as new technologies designed to threaten and destroy surface

ships are developed and are acquired by an increasing number of countries, the large aircraft carrier may cease to be an effective weapon system for defending the United States' interests overseas. Among the technologies that might threaten the carrier in the future are long-range supersonic antiship cruise missiles, antiship ballistic missiles, very quiet submarines, and satellite and other tracking systems. The risk to the carrier force is not great today, but if the United States' defensive capabilities fail to keep pace with advances in antiship technologies, the Navy's large surface warships may face much greater risks in the future. If over the next 20 years the technologies to detect, track, and attack the Navy's aircraft carriers advanced to such an extent that it could not effectively defend against those weapons, then any large investment in new carriers that the Navy made today would ultimately not be cost-effective.

An argument against this option is that it could hamper the Navy's fighting ability. Since World War II, the aircraft carrier has been the centerpiece of the U.S. Navy. According to the Navy, each of its 10 older Nimitz class carriers can sustain 95 strike sorties per day and, with each aircraft carrying four 2,000-pound bombs, deliver three-quarters of a million pounds of bombs each day. That firepower far exceeds what any other surface ship

can deliver. The new Ford class aircraft carriers will be able to generate an even larger number of sorties each day.

Another argument against this option is that carriers may prove adaptable to a future environment that includes more sophisticated threats to surface ships—perhaps through the development of new weapon systems on the carriers. Since World War II, carriers have transported many different types and generations of aircraft. The Navy is now developing long-range unmanned aircraft that would be capable of striking an enemy's shores while allowing the carrier to operate outside the range of air and missile threats. Equipping long-range unmanned aircraft with long-range precision, stealthy munitions could perhaps extend the life of the aircraft carrier as an effective weapon system for decades to come. Furthermore, the Navy is developing new technologies that may make the defense of large surface ships economically and tactically effective. Energy-based weapons designed to shoot down incoming missiles would probably be far more cost-effective than today's ship defenses, which rely primarily on missiles. In short, if either of those technological developments bears fruit, then the large aircraft carrier could remain a potent weapon system into the distant future.

RELATED OPTION: Discretionary Spending, Option 7

RELATED CBO PUBLICATIONS: *Long-Term Implications of the 2017 Future Years Defense Program* (forthcoming); *An Analysis of the Navy's Fiscal Year 2017 Shipbuilding Plan* (forthcoming)

Discretionary Spending—Option 7

Function 050

Reduce Funding for Naval Ship Construction to Historical Levels

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Planned Defense Spending													
Budget authority	0	-3.8	-2.0	-3.8	-4.6	-5.0	-5.4	-5.9	-6.3	-6.7	-14.2	-43.5	
Outlays	0	-0.2	-1.1	-1.5	-2.4	-3.1	-3.8	-4.4	-4.9	-5.4	-5.2	-26.8	

This option would take effect in October 2017.

Estimates of savings displayed in the table are based on the 2017 Future Years Defense Program and CBO’s extension of that plan.

The Navy’s fiscal year 2017 shipbuilding plan calls for buying 254 new ships over the next 30 years at an average cost of \$17 billion per year in 2016 dollars. Including the costs of all activities funded by the Navy’s shipbuilding account, such as refueling nuclear-powered aircraft carriers and outfitting new ships, the average annual cost of implementing the plan is \$18.8 billion. That amount is 18 percent more than the average of \$15.9 billion per year (in 2016 dollars) that the Navy has spent on shipbuilding over the past 30 years.

This option would decrease spending on naval ship construction to the 30-year average. Specifically, the option would reduce the number of ships that the Navy is scheduled to purchase over the next 30 years from 254 to 180, cutting the number to be purchased between 2017 and 2026 from 86 to 75. The cuts would affect several types of ships in the Navy’s fleet: surface combatants, attack submarines, amphibious ships, and combat logistics and support ships. The number of aircraft carriers, however, would remain unchanged to comply with the Congressional mandate that the Navy maintain a force of 11 such ships. The number of ballistic missile submarines also would not be affected by the cuts, because Navy officials consider those ships their highest acquisition priority. If funding for ship construction was reduced to the 30-year average, the need for discretionary budget authority would be reduced by \$44 billion through 2026. Outlays would fall by a total of \$27 billion over that period, the Congressional Budget Office estimates.

An argument in favor of this option is that the Navy would still have a powerful fleet in 2026 and beyond. Because ships take a long time to build and then serve in the fleet for 25 to 50 years, even with the cuts the size of the fleet would grow by nearly the same amount through

2026 under this option as it would under the 2017 plan. Today, the fleet numbers 272 ships. Under the Navy’s 30-year plan, the fleet would grow to 309 ships by 2026 before dropping to 292 ships in 2046. Under this option, the fleet would grow to 308 ships in 2026, and then it would steadily decline to 231 ships in 2046.

An argument against this option is that it would further decrease the size of the fleet over the next 30 years when the fleet has already shrunk over the past 30 years. Since 1987, the number of ships in the fleet has fallen by more than 50 percent—from 568 to 272. With a smaller fleet, the Navy may not have the forces that it needs to implement its war plans if a conflict was to erupt. The Navy’s shipbuilding plan is based on the 2014 update to its 2012 force structure assessment, which concluded that the fleet should comprise 308 ships. That is the minimum number of ships that the Navy has determined it needs in its fleet in order to deploy an adequate number of ships overseas in the event of a conflict. At any given time, some ships are undergoing long-term maintenance or are in the early stages of training and thus are unavailable to be immediately deployed, so the Navy must maintain more ships in the fleet than it would need to fight. Some observers, pointing to the increasing assertiveness with which Russia and China conduct foreign relations, have noted that the world appears to be entering an era of renewed competition between major powers. Decreasing funding for shipbuilding and substantially reducing the size of the fleet would, over the long run, result in the Navy’s having fewer ships than it says it needs to protect the United States’ interests overseas in the event of a conflict with another major power.

Another argument against this option is that it could lead the Navy to reduce its overseas presence. Today the Navy

operates more than a third of its fleet—or about 100 ships—overseas. If the fleet was smaller, it is likely that fewer ships would be based overseas in peacetime. The Navy could, however, maintain the same level of presence with a smaller fleet by stationing more ships

overseas, increasing the practice of crew rotation, or extending the length of deployments. But those measures would cost money and, in the case of longer deployments, place greater stress on the crews that operate the ships.

RELATED OPTION: Discretionary Spending, Option 6

RELATED CBO PUBLICATIONS: *Long-Term Implications of the 2017 Future Years Defense Program* (forthcoming); *An Analysis of the Navy's Fiscal Year 2017 Shipbuilding Plan* (forthcoming); *Preserving the Navy's Forward Presence With a Smaller Fleet* (March 2015), www.cbo.gov/publication/49989

Discretionary Spending—Option 8

Function 050

Reduce the Size of the Nuclear Triad

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total	
											2017–2021	2017–2026
Retain a Nuclear Triad With 10 Submarines, 300 ICBMs, and 1,550 Warheads												
Change in Planned Defense Spending												
Budget authority	0	0.1	-0.2	-0.4	-0.7	-2.4	-0.2	-5.6	-1.5	-1.2	-1.2	-12.3
Outlays	0	-0.1	-0.2	-0.4	-0.6	-0.8	-1.2	-1.4	-2.4	-2.1	-1.3	-9.2
Retain a Nuclear Triad With 8 Submarines, 150 ICBMs, and 1,000 Warheads												
Change in Planned Defense Spending												
Budget authority	0	-0.1	-0.3	-0.5	-0.7	-2.8	-0.8	-6.7	-2.8	-2.3	-1.6	-17.0
Outlays	0	-0.2	-0.3	-0.5	-0.7	-1.1	-1.7	-2.1	-3.3	-3.2	-1.7	-13.0

This option would take effect in October 2017.

Estimates of savings displayed in the table are based on the 2017 Future Years Defense Program and CBO’s extension of that plan.

The United States’ nuclear deterrence strategy, developed during the Cold War, is built around the strategic nuclear triad, which comprises intercontinental ballistic missiles (ICBMs), submarines that launch ballistic missiles (SSBNs), and long-range bombers. Each component of the triad plays a particular role that complements the other two. Bombers provide flexibility, and by changing the tempo of their operations, the United States can signal intent to an adversary. ICBMs provide the most rapid response, and their dispersed underground silos present several hundred targets that an adversary would need to destroy in order to disable the United States’ nuclear forces. The ability of SSBNs to remain on alert while submerged and undetectable for long periods makes them the most difficult of the three components to destroy and ensures that the United States can retaliate against a nuclear attack. That ability to retaliate and assure the destruction of an adversary that launched a nuclear attack helps provide stability during a crisis by deterring adversaries from using nuclear weapons.

The most recent arms control treaty between the United States and Russia, New START, limits strategic forces to 700 deployed (800 total) delivery systems and 1,550 deployed warheads. To comply with those limits when they take effect in 2018, the United States plans to maintain a nuclear force consisting of the following: 12 deployed (14 total) Ohio class SSBNs that together carry up to 1,090 warheads on 240 missiles; 400 deployed (454 total) Minuteman III ICBMs, each carrying a single

warhead; and 60 deployed (66 total) B-52H and B-2A bombers, each of which counts as a single warhead under New START rules.

Almost all components of the United States’ nuclear forces are scheduled to be modernized (refurbished or replaced by new systems) over the next 20 years. Current plans call for developing and purchasing 12 new SSBNs, 642 new ICBMs (of which up to 450 would be fielded in existing silos after they were refurbished; the remainder would be spares and test stock), and 80 to 100 B-21 bombers, the next-generation long-range strategic bombers currently under development. Through the mid-2030s, modernization is expected to roughly double annual spending on nuclear forces (currently about \$20 billion).

This option would reduce the cost of modernization by retiring some existing delivery systems early and by purchasing fewer of the new systems, but it would allow the United States to retain the strategic benefits provided by the complementary roles of the legs of the triad. The Congressional Budget Office examined two alternative approaches to reducing the size of the triad: The first would keep U.S. forces at the New START limit of 1,550 warheads, and the second would make deeper cuts and reduce the number of deployed warheads to 1,000. Neither alternative would change the size or composition of the planned bomber fleet because the number of

bombers is determined largely by their conventional (that is, non-nuclear) mission.

Smaller Triad With 1,550 Warheads

The first alternative would reduce forces to 10 SSBNs and 300 ICBMs and would load more warheads on SSBNs or ICBMs. Under this alternative, the Navy would retire 4 Ohio class SSBNs at a rate of one per year starting in 2018; delay by one year the purchases of new SSBNs included in its current shipbuilding plan, starting with the second submarine, which is slated to be procured in 2024; and cancel orders for the last 2 SSBNs scheduled to be purchased under the current plan. In addition, the Department of Defense (DoD) would retire 150 ICBMs—50 each year for three years starting in 2018—and procure 482 new ICBMs instead of the 640 that are in the current plan. Over the next decade, this alternative would reduce the need for discretionary budget authority by \$12 billion, CBO estimates. Outlays would decrease by \$9 billion over that period. However, the majority of savings from this alternative would occur after the 10-year period, when DoD would purchase fewer new systems and operate fewer systems overall than it would under the current plan.

An argument in favor of this approach is that it would reduce the cost of nuclear modernization without sacrificing the complementary roles of the triad or reducing the size of the nuclear forces significantly below those permitted under New START. In addition, scaling back plans now may reduce the chances of problematic programs being canceled later and thus may prevent development funding for such programs from being wasted.

An argument against this alternative is that it would reduce the capabilities of the nuclear forces. In particular, with fewer boats the Navy may not be able to meet the current requirements for the number of SSBNs on patrol even though the number of warheads deployed with the submarine fleet could remain the same as under the current plan. In addition, cutting the number of ICBMs that were deployed by one-third would present fewer targets to an adversary, thereby increasing the likelihood that such an adversary could disable that leg of the United States' nuclear triad.

Smaller Triad With 1,000 Weapons

The second alternative under this option would make deeper cuts to forces but still retain a triad structure. Under this alternative, the Navy would field 8 SSBNs and the Air Force would deploy 150 ICBMs. That force level would be reached by retiring existing systems early, starting in 2018, and by purchasing fewer replacement systems. Over the coming decade, those steps would reduce the need for discretionary budget authority by an estimated \$17 billion. Outlays would decrease by \$13 billion. As with the first alternative, the majority of savings would occur after 10 years, when DoD would purchase and operate fewer modernized systems.

An argument in favor of this alternative is that a force with 1,000 warheads would comport with the *Nuclear Weapons Employment Strategy of the United States*, released in 2013, which states that the United States could maintain a “strong and credible” strategic nuclear deterrent with about one-third fewer weapons deployed than allowed under New START. Such a reduction would continue the trend started by earlier treaties, which have made the United States' current nuclear arsenal about 85 percent smaller than it was at its peak during the Cold War. Some analysts argue that further reduction would strengthen efforts at preventing nuclear proliferation by continuing the United States' compliance with the Nuclear Non-Proliferation Treaty, in which countries with nuclear weapons agreed to work toward reductions in and the eventual elimination of such weapons and, in exchange, countries without nuclear weapons agreed not to develop or acquire them.

An argument against this alternative is that unless a new arms control agreement was reached—which may not be possible in the current international atmosphere—the United States' decision to reduce its stockpile to 1,000 warheads would be unilateral and could be politically untenable domestically. Internationally, those allies that do not have their own nuclear weapons and rely on U.S. nuclear forces to deter attacks would probably oppose such cuts. If they determined that a reduction to 1,000 warheads signaled that the United States was less committed to protecting them than it has been in the

past, they may choose to pursue their own nuclear weapons programs, which could provoke regional arms races. Furthermore, this approach would reduce the capabilities of U.S. nuclear forces even more than would the first alternative. The possibility of the Navy's encountering

difficulties in meeting SSBN patrol requirements under this alternative would therefore be greater than under the first, and the smaller ICBM force would present even fewer targets to an adversary.

RELATED OPTION: Discretionary Spending, Option 9

RELATED CBO PUBLICATIONS: *Projected Costs of U.S. Nuclear Forces, 2015 to 2024* (January 2015), www.cbo.gov/publication/49870; *Projected Costs of U.S. Nuclear Forces, 2014 to 2023* (December 2013), www.cbo.gov/publication/44968

Discretionary Spending—Option 9

Function 050

Build Only One Type of Nuclear Weapon for Bombers

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Cancel the Long-Range Standoff Weapon													
Change in Planned Defense Spending													
Budget authority	0	-0.8	-1.1	-1.0	-1.1	-1.0	-1.0	-0.8	-0.9	-1.3	-4.1	-9.1	
Outlays	0	-0.5	-0.9	-1.0	-1.1	-1.1	-1.0	-0.9	-0.9	-1.0	-3.5	-8.3	
Cancel the B61-12 Life Extension Program													
Change in Planned Defense Spending													
Budget authority	0	-1.0	-1.0	-0.8	-0.7	-0.7	-0.8	-0.7	-0.4	-0.3	-3.5	-6.4	
Outlays	0	-0.6	-0.9	-0.9	-0.8	-0.7	-0.6	-0.6	-0.4	-0.3	-3.2	-5.9	

This option would take effect in October 2017.

Estimates of savings displayed in the table are based on the 2017 Future Years Defense Program and CBO’s extension of that plan.

Long-range bombers are the most visible of the three components of the strategic nuclear triad, which also includes intercontinental ballistic missiles and submarine-launched ballistic missiles. Since 1945, the United States has used nuclear-capable bombers to deter adversaries and assure allies during crises by raising the pace of their operations or deploying the aircraft to areas of potential conflict. For bomber weapons to be effective, they must be able to penetrate air defenses to reach their targets. To ensure that they are able to do so, the Air Force relies on hard-to-detect platforms, including cruise missiles that can deliver a warhead when launched from a bomber operating safely away from air defenses and stealthy manned bombers that can fly into defended airspace and deliver short-range gravity bombs from directly above targets. Currently, the Air Force fields two types of long-range bombers that can carry nuclear weapons, both of which can also perform conventional missions: the B-52H, which carries the Air-Launched Cruise Missile (ALCM), and the stealthy B-2A, which carries several varieties of nuclear gravity bombs.

The major pieces of the nuclear bomber force are slated for modernization over the coming decades through the combined efforts of the Department of Defense (DoD) and the Department of Energy (DOE). The most expensive program related to that modernization effort is the development of a new stealthy bomber, the B-21. Two other programs focus on the development of new

weapons for that bomber. In one, the B61-12 life extension program (LEP), DOE is working to refurbish and combine several varieties of the B61 bomb into a single hybrid design. In the other, DoD is developing the Long-Range Standoff Weapon (LRSO), a new nuclear air-launched cruise missile that will carry a warhead that DOE will produce. Plans call for the B-21 to be capable of carrying both the B61-12 bomb and the LRSO.

This option would cancel one of the two new weapons and limit the United States’ nuclear arsenal to a single type of weapon that could be carried by bombers in the future. The option includes two alternatives. The first would cancel the LRSO but retain the B61-12 LEP. After the nuclear cruise missiles that are currently in service reached the end of their operational lifetime, strategic bombers would no longer be equipped with such missiles. The second alternative would do the opposite—cancel the B61-12 LEP and retain the LRSO. Under that alternative, after the nuclear bombs that are currently in service reached the end of their operational lifetime, strategic bombers would cease to carry such bombs. Canceling the B61-12 program would also eliminate the option to deploy that weapon on tactical fighter aircraft based in Europe. Neither variant of this option would change the planned size of the strategic bomber fleet. Only one version of the option or the other could be implemented without eliminating the nuclear capability of the bomber component of the nuclear triad.

One argument in favor of this option is that by equipping bombers with a single type of nuclear weapon, the United States could reduce costs while still retaining the ability to deploy nuclear bombers. In addition, the timing of the option makes the savings particularly beneficial: The savings would occur when nearly all other components of the United States' nuclear forces are currently scheduled to be modernized. Over the next 20 years, the modernization efforts are expected to roughly double the total amount that the United States spends annually on nuclear forces (currently about \$20 billion).

An argument against canceling the development of one type of bomber weapon is that doing so would reduce nuclear capabilities at a time when international tensions, particularly with Russia and China, might make reductions risky. The impact of the option on the United States' nuclear capabilities would depend on which alternative was pursued.

Cancel the Long-Range Standoff Weapon

Under the first alternative, the Air Force would stop equipping bombers with cruise missiles armed with nuclear warheads after the current ALCMs reached the end of their service life around 2030. Specifically, DoD would cancel development and production of the LRSO, and DOE would cancel the development and production of the associated warhead. That approach would reduce the need for discretionary budget authority by \$9 billion over the next decade, the Congressional Budget Office estimates. Outlays would decrease by \$8 billion. Additional savings would accrue after the 10-year projection period by eliminating both the cost of the additional LRSO missiles and warheads that are currently slated for purchase after 2026 and the expense of operating the new systems.

One argument for canceling the LRSO program is that the need for nuclear cruise missiles has been significantly reduced by the development of modern conventional cruise missiles, which can perform most of the same missions. In addition, to maintain the ability to conduct missions requiring nuclear weapons, some analysts argue, the LRSO program could be postponed until adversaries' air defenses advanced to the point that the B-21 could no longer penetrate them.

An argument against canceling the development of new air-launched cruise missiles is that doing so would somewhat diminish the capabilities of U.S. nuclear forces,

particularly the forces' capacity to carry out limited nuclear strikes. Cruise missiles offer operational planners flexibility because they can travel for extended distances (the unclassified range for the current ALCM is more than 1,500 miles) along complicated flight paths, potentially allowing bombers to avoid dangerous or sensitive areas. Thus, removing air-launched cruise missiles would be more detrimental to the Air Force's strategic nuclear capabilities than eliminating nuclear bombs, which must be dropped in close proximity to a target.

Cancel the B61-12 Life Extension Program

Under the second alternative, the United States would cancel the B61-12 program and the associated program that is developing improved guidance kits for the bombs. Strategic bombers (and tactical fighters) would no longer be equipped with nuclear gravity bombs after current models reach the end of their service life. This version of the option would reduce the need for discretionary budget authority by about \$6 billion over the next decade. The decrease in outlays would be slightly smaller.

One argument for canceling the B61-12 LEP is the potential that the costs of the program will grow: Early cost estimates varied widely, and the DOE's current estimates are substantially lower than an independent estimate from DoD, so the actual costs may exceed them. Furthermore, the planned guidance systems are considered by some analysts to be a significant improvement in performance and thus contradict the United States' publicly declared policy of not developing new nuclear military capabilities. Moreover, like those of the bombs that it will replace, the nuclear yield of the B61-12—that is, the amount of nuclear energy that it releases upon detonation—will be variable. Many analysts argue that the improvements in accuracy on the B61-12 would allow it to destroy a larger set of targets at a low-yield setting than current bombs can and that the availability of such advanced low-yield weapons might increase the likelihood that nuclear weapons would be used.

An argument against the second alternative is that, in addition to strategic nuclear bomber capability, it would also affect the United States' short-range nuclear capabilities. The B61-12 is slated to be carried not only by the long-range B-21 but also by shorter-range tactical aircraft; those shorter-range aircraft do not carry nuclear cruise missiles. The United States fields such nuclear-equipped tactical aircraft at bases in Europe, where it also has nuclear bombs that could be carried by those aircraft

or by the tactical aircraft of its allies in the North Atlantic Treaty Organization (NATO). If the B61-12 LEP was canceled, U.S. policymakers might choose to eliminate that tactical nuclear mission. Such a choice, however, would probably be opposed by other NATO member nations given current tensions between NATO allies and Russia. If the United States chose to continue the tactical nuclear mission, it would need to overhaul

the tactical varieties of the B61 when they reached the end of their lifetime or seek some other solution, such as adapting the LRSO for tactical missions. Any of those approaches to preserve the tactical nuclear mission would reduce—and, in some cases, perhaps even negate—savings from this alternative, but those effects may occur beyond CBO’s 10-year projection period.

RELATED OPTION: Discretionary Spending, Option 8

RELATED CBO PUBLICATIONS: *Projected Costs of U.S. Nuclear Forces, 2015 to 2024* (January 2015), www.cbo.gov/publication/49870; *Projected Costs of U.S. Nuclear Forces, 2014 to 2023* (December 2013), www.cbo.gov/publication/44968

Discretionary Spending—Option 10

Function 050

Defer Development of the B-21 Bomber

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Planned Defense Spending													
Budget authority	0	-2.2	-2.6	-3.0	-3.0	-3.0	-5.5	-6.1	-7.0	-6.2	-10.8	-38.5	
Outlays	0	-1.2	-2.1	-2.6	-2.8	-2.9	-3.3	-3.5	-3.7	-4.6	-8.8	-26.7	

This option would take effect in October 2017.

Estimates of savings displayed in the table are based on the 2017 Future Years Defense Program and CBO’s extension of that plan.

The Air Force operates a fleet of 158 long-range bombers: 76 B-52Hs built in the 1960s, 62 B-1Bs from the 1980s, and 20 B-2A stealth bombers from the 1990s. Although those aircraft should be able to continue flying through at least 2040, the Air Force is in the early stages of developing a new bomber—recently named the B-21—that it plans to field in the mid- to late-2020s. The goal of that program is to produce 100 aircraft that could augment and eventually replace today’s bombers. The Air Force currently estimates that the total program (including development and procurement) will cost \$80 billion (in 2016 dollars). Other specifics—including the aircraft’s speed, payload, and stealth characteristics, as well as the production schedule—are classified.

Under this option, development of a new bomber would be deferred until after 2026, reducing the need for new budget authority by \$39 billion (in nominal dollars) through that year. Those savings include \$11 billion that the Air Force has budgeted for development for 2018 through 2021 in the most recent Future Years Defense Program, plus an estimated \$28 billion for development and procurement for 2022 through 2026. The Congressional Budget Office based its estimate of savings for that latter period on its analysis of the Department of Defense’s plans for bombers as described in the Annual Aviation Inventory and Funding Plan issued in 2016. Measured in terms of outlays, savings would total \$27 billion from 2018 through 2026, CBO estimates.

An advantage of this option is that it would reduce acquisition costs at a time when the Air Force plans to modernize other parts of its fleet of aircraft. Funding

would not have to be provided for full bomber production while the Air Force carried out its plan to purchase KC-46A tankers and F-35A fighters and to develop other aircraft, including two types of helicopter, advanced trainers, reconnaissance aircraft, and a replacement for Air Force One. Another advantage of this option is that a bomber program that begins later might be able to take advantage of any general advances in aerospace technology that are made in the coming years. Such advances might make possible an even more capable bomber or might lead to other types of weapons that would make a new bomber unnecessary or reduce the number of bombers needed. Taking advantage of future technological developments could be particularly valuable for weapon systems that are expected to be in use for several decades. Even with a 10-year delay, a new bomber would still be available before today’s bombers reach the end of their service life.

A disadvantage of this option is that if some of today’s bombers need to be retired sooner than expected, a new bomber would not be available. By 2035, the B-52Hs will be almost 75 years old, the B-1Bs about 50 years old, and the B-2As about 40 years old. Expecting those aircraft to perform reliably at such advanced ages may prove to be overly optimistic. Similarly, a gap in capability could arise if the new bomber was deferred and ended up taking significantly more time to field than expected (as was the case for the F-35 fighter program). Another disadvantage is that the Air Force’s inventory of stealthy bombers that are able to fly in defended airspace would remain limited to the B-2A, which makes up only

about 12 percent of today's bomber force. Larger numbers of stealthy bombers might be useful in operations against adversaries that employed advanced air defenses. A third disadvantage is that fewer bombers would be available to address the recent shift in strategic focus

toward the western Pacific Ocean, where long distances and limited basing options would make long-range aircraft such as the B-21 particularly useful during a conflict.

RELATED OPTION: Discretionary Spending, Option 5

RELATED CBO PUBLICATION: *Long-Term Implications of the 2017 Future Years Defense Program* (forthcoming)

Discretionary Spending—Option 11

Function 150

Reduce Funding for International Affairs Programs

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Spending													
Budget authority	0	-14	-15	-15	-15	-16	-16	-16	-17	-17	-59	-141	
Outlays	0	-6	-9	-12	-13	-14	-15	-15	-16	-16	-40	-117	

This option would take effect in October 2017.

The budget for international affairs funds diplomatic and consular programs, global health initiatives, security assistance, and other programs. In 2016, those programs cost an estimated total of \$51.6 billion, including \$11.3 billion for international security assistance, \$8.2 billion for diplomatic and consular programs, \$9.0 billion for global health programs, and \$1.2 billion for narcotics control and law enforcement programs. Most funding for international affairs is funneled through the Department of State or the Agency for International Development. Several other agencies, such as the Departments of Defense, Agriculture, and the Treasury, also receive funding for overseas assistance programs. Eliminating any single program would result in very modest savings, but a broad cut to the entire international affairs budget could yield significant savings.

This option would reduce the total international affairs budget by 25 percent. By doing so, the option would save \$117 billion from 2018 through 2026, the Congressional Budget Office estimates.

An advantage of this option is that reducing federal spending on international affairs could encourage the private sector to take a larger role in providing foreign assistance. Private organizations already provide significant resources for various international initiatives, such as HIV/AIDS research and financial development assistance, and further diversifying funding sources for

international initiatives could increase their overall success. In addition, some of the government’s foreign assistance may be ineffective at promoting growth and reducing poverty. Although some projects and programs are generally considered successful, the Congressional Research Service concludes that “in most cases, clear evidence of the success or failure of U.S. assistance programs is lacking, both at the program level and in the aggregate.” Another argument for this option is that a reduction in federal spending on international affairs would lead to greater savings than eliminating smaller foreign aid programs, such as cargo preference for international food assistance (which is projected to cost less than \$500 million from 2018 through 2026).

The primary argument against this option is that reducing funding for international affairs programs could have far-reaching effects that might ultimately impede both the international and the domestic policy agendas of the United States. Such programs, which encompass many activities in addition to foreign aid, are central to establishing and maintaining positive relations with other countries. Those relationships contribute to increased economic opportunities at home, better international cooperation, and enhanced national security. Significant reductions in federal funding for international affairs programs could hinder humanitarian, environmental, public health, economic, and national security efforts.

Discretionary Spending—Option 12

Function 250

Eliminate Human Space Exploration Programs

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Spending													
Budget authority	0	-8.5	-8.7	-8.9	-9.1	-9.3	-9.5	-9.7	-9.9	-10.1		-35.2	-83.5
Outlays	0	-6.3	-8.5	-8.8	-9.0	-9.2	-9.4	-9.6	-9.8	-10.0		-32.6	-80.7

This option would take effect in October 2017.

The National Aeronautics and Space Administration’s (NASA’s) Human Exploration and Operations Mission Directorate oversees both the development of the systems and capabilities required to explore deep space and the agency’s operations in low-Earth orbit. The directorate’s human exploration programs fund the research and development of the next generation of systems for deep space exploration and provide technical and financial support to the commercial space industry. Complementing those efforts, the space operations programs carry out missions in low-Earth orbit, most notably using the International Space Station, and provide space communications capabilities.

This option would terminate NASA’s programs for human space exploration and space operations, except for those necessary to meet space communications needs, such as communication with the Hubble Space Telescope. (The agency’s science and aeronautics programs and robotic space missions would continue.) Eliminating those human space programs would save \$81 billion between 2018 and 2026, the Congressional Budget Office estimates.

The main argument for this option is that increased capabilities in electronics and information technology have generally reduced the need for humans to fly space missions. The scientific instruments used to gather knowledge in space today rely much less (or not at all) on nearby humans to operate them. NASA and other federal agencies have increasingly used robots to perform potentially dangerous missions in order to avoid putting

humans in harm’s way. For example, NASA uses remotely piloted vehicles to track hurricanes over the Atlantic Ocean. Those vehicles are able to operate at much higher altitudes than conventional tracking aircraft without exposing pilots to the dangers presented by severe storms.

Eliminating humans from spaceflights would avoid risk to human life and would decrease the cost of space exploration by reducing the weight and complexity of the vehicles needed for the missions. (Unlike instruments, humans need water, air, food, space to move around in, and rest.) In addition, by replacing people with instruments, one-way missions would be possible, thus eliminating the cost and complexity of return and reentry into the Earth’s atmosphere. Return trips would be necessary only when a particular mission required it, such as to collect samples for further analysis.

A major argument against this option is that eliminating human spaceflight from the orbits near Earth would end the technical progress necessary to prepare for human missions to Mars (though such missions are—at a minimum—decades away). Moreover, if robotic missions proved too limiting, then human space efforts would have to be restarted. Another argument against this option is that there may be some scientific advantage to having humans at the International Space Station to conduct experiments in microgravity that could not be carried out in other, less costly, ways. (However, the International Space Station is currently scheduled to be retired in 2024; its decommissioning was twice postponed, first from 2015 and then from 2020.)

Discretionary Spending—Option 13

Function 270

Reduce Department of Energy Funding for Energy Technology Development

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total	
											2017–2021	2017–2026
Reduce Funding for Fossil Energy Research, Development, and Demonstration												
Change in Spending												
Budget authority	0	-0.2	-0.3	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.6	-1.5	-4.1
Outlays	0	*	-0.1	-0.2	-0.3	-0.4	-0.5	-0.5	-0.5	-0.5	-0.6	-3.0
Reduce Funding for Nuclear Energy Research, Development, and Demonstration												
Change in Spending												
Budget authority	0	-0.2	-0.4	-0.7	-0.7	-0.7	-0.7	-0.7	-0.8	-0.8	-2.1	-5.8
Outlays	0	-0.1	-0.3	-0.5	-0.6	-0.7	-0.7	-0.7	-0.8	-0.8	-1.5	-5.2
Reduce Funding for Energy Efficiency and Renewable Energy Research, Development, and Demonstration												
Change in Spending												
Budget authority	0	-0.4	-0.7	-1.1	-1.2	-1.2	-1.2	-1.2	-1.3	-1.3	-3.4	-9.6
Outlays	0	-0.1	-0.3	-0.5	-0.8	-1.0	-1.1	-1.2	-1.2	-1.2	-1.7	-7.5
Total												
Change in Spending												
Budget authority	0	-0.7	-1.5	-2.3	-2.4	-2.4	-2.5	-2.5	-2.6	-2.6	-6.9	-19.5
Outlays	0	-0.2	-0.6	-1.2	-1.8	-2.1	-2.3	-2.4	-2.5	-2.5	-3.8	-15.6

This option would take effect in October 2017.

* = between –\$50 million and zero.

The Department of Energy's (DOE's) spending on the development of new technologies in the areas of fossil fuels, nuclear power, and energy efficiency and renewable energy has varied from year to year but has generally been lower in recent years than in the past. Measured in 2015 dollars, spending in those three areas has averaged \$4.7 billion per year since 2010, whereas in the early 1990s, it averaged \$7.6 billion per year. (A notable exception to the trend occurred in 2009 when substantial amounts of funding were provided by the American Recovery and Reinvestment Act.) Currently, DOE's programs support the various stages of the development process, from basic energy research through commercial demonstration projects. Roughly one-third of DOE's funding in 2015 went to basic energy sciences and the remaining two-thirds to applied energy research. About half of the applied research projects that received funding from DOE focused on energy efficiency and renewable energy.

This option would reduce spending for technology development in fossil fuel, nuclear power, energy efficiency, and renewable energy programs to roughly 25 percent of their 2016 amounts incrementally over three years. The Congressional Budget Office estimates that, in total, those reductions would lower discretionary outlays by \$16 billion from 2018 through 2026. This option would eliminate DOE's efforts to support the later stages of technology development and the demonstration of commercial feasibility while leaving untouched DOE's support of basic and early applied research. (This option would not affect funding for technical assistance or financial assistance, such as that for weatherization services for low-income families; for an option that would affect such funding, see Option 28.)

An argument for this option is that federal funding is generally more cost-effective when it supports basic science and research aimed at the very early stages of

developing new technologies than when it supports research that is focused on technologies that are closer to reaching the marketplace. That is because basic research done early in the technology development process is more likely to lead to knowledge that, although it may be valuable to society, results in benefits that cannot be fully captured by firms in the form of higher profits. In contrast, research done in the later stages of the technology development process is more likely to be profitable for firms to undertake.

Another argument for this option is that the private sector has an advantage in the development, demonstration, and deployment of new energy technologies. Generally, the direct feedback that the markets provide to private investors has proven more effective than the judgment of government managers in selecting which technologies will be commercially successful. The limits on the government's ability to promote the development of new energy technologies are illustrated by federal efforts to commercialize technology to capture and store carbon dioxide. For example, although DOE has offered

financial incentives to firms to build that technology into new commercial power plants, it has found few firms willing to do so. Overall, DOE has long sought to introduce new energy technologies for coal through expensive technology demonstration plants that have often failed to deliver commercially useful knowledge or attract much private interest.

An argument against this option is that reducing federal support may result in too little spending on the development and use of products that reduce energy consumption or produce energy with minimal greenhouse gas emissions. Reducing emissions of greenhouse gases would diminish the potentially large long-run costs associated with climate change, but producers and consumers have little incentive to manufacture or purchase technologies that reduce those emissions. That lack of incentive results from the fact that the costs imposed by climate change are not reflected in current energy prices. Federal support can help compensate for the resulting underinvestment in greenhouse gas-reducing technologies.

RELATED CBO PUBLICATIONS: *Federal Support for the Development, Production, and Use of Fuels and Energy Technologies* (November 2015), www.cbo.gov/publication/50980; *Federal Efforts to Reduce the Cost of Capturing and Storing Carbon Dioxide* (June 2012), www.cbo.gov/publication/43357; *Federal Climate Change Programs: Funding History and Policy Issues* (March 2010), www.cbo.gov/publication/21196

Discretionary Spending—Option 14

Function 300

Eliminate Certain Forest Service Programs

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2025	Total		
											2017–2021	2017–2026	
Change in Spending													
Budget authority	0	-0.6	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7	-0.7		-2.5	-5.9
Outlays	0	-0.4	-0.5	-0.6	-0.6	-0.6	-0.7	-0.7	-0.7	-0.7		-2.2	-5.6

This option would take effect in October 2017.

The Department of Agriculture’s Forest Service is responsible for more research and development (R&D) on forestry and forest-related resources than any other organization in the world. The Forest Service’s R&D programs address environmental concerns and provide information and tools to assist businesses and other stakeholders in sustainably managing and using natural resources.

Research in seven primary areas—which range from the systematic collection and analysis of data on the trees in a particular forest to the identification of best practices in resource management and use—supports a wide variety of projects. Among them are projects aimed at developing new biobased products (such as wood-based chemicals, biofuels, and products that can substitute for petroleum-based materials), identifying innovations in nanotechnology that allow wood fibers to be used to manufacture a variety of products (car body panels or textiles, for example), improving carbon sequestration, measuring how resilient resources are to changes in climate, and supporting the management of forest health (such as efforts to combat damaging insects, diseases, and invasive plants).

This option would eliminate two Forest Service programs: the Forest and Rangeland Research program and the State and Private Forestry program. Doing so would

save \$6 billion through 2026, the Congressional Budget Office estimates.

One argument in favor of eliminating federal R&D spending for forestry is that extending such support to the private sector distorts businesses’ investment decisions. When businesses receive support for developing certain products—fuels and chemicals derived from plant materials or new durable composite materials and papers made from wood, for example—they do not have to weigh the full costs of developing those products against the potential gains. Similarly, in a well-functioning market, the domestic and international demand for forest and rangeland products and services would compensate resource managers for investing appropriately in the sustainable production of those goods and services.

One argument against this option is that the benefits of those programs are so widely dispersed that only the federal government has sufficient incentive to provide them. For example, it may be most efficient for the federal government to conduct research and disseminate information on the resiliency of forest resources to changes in climate. Also, markets do not fully account for the benefits that forests and rangelands provide in terms of improved air quality, water quality, and habitat. If those benefits are to be preserved, it may be necessary for the federal government to continue to address forest health.

Discretionary Spending—Option 15

Function 370

Convert the Home Equity Conversion Mortgage Program From a Guarantee Program to a Direct Loan Program

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total	
											2017–2021	2017–2026
Estimated Using the Method Established in the Federal Credit Reform Act												
Change in Discretionary Spending												
Budget authority	0	-2.1	-2.2	-2.3	-2.4	-2.5	-2.6	-2.7	-2.8	-3.0	-9.1	-22.8
Outlays	0	-2.1	-2.2	-2.3	-2.4	-2.5	-2.6	-2.7	-2.8	-3.0	-9.1	-22.8
Change in Mandatory Outlays	0	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.7
Estimated Using the Fair-Value Method												
Change in Discretionary Spending												
Budget authority	0	-1.4	-1.5	-1.6	-1.6	-1.7	-1.8	-1.9	-1.9	-2.0	-6.2	-15.5
Outlays	0	-1.4	-1.5	-1.6	-1.6	-1.7	-1.8	-1.9	-1.9	-2.0	-6.2	-15.5
Change in Mandatory Outlays	0	*	*	*	*	*	*	*	*	*	*	*

This option would take effect in October 2017.

* = between –\$50 million and zero.

Under current law, the Federal Housing Administration (FHA) of the Department of Housing and Urban Development is permitted to guarantee private home equity conversion mortgages (HECMs) for elderly homeowners. Such loans, which are also called reverse mortgages, enable homeowners who are at least 62 years old to withdraw some of the equity in their home in the form of monthly payments, a lump sum, or a line of credit. As long as they reside in the property, borrowers are not required to repay their loan. But when the home is no longer the borrower's primary residence, the outstanding balance (which includes payments made to the homeowner and any interest accrued on those payments) must be repaid. The borrower or the borrower's estate may either retain the home by repaying the loan in full or sell the home and repay the loan with the proceeds from that sale. If the proceeds are not sufficient to repay the outstanding balance of the loan, FHA will fulfill the terms of its HECM guarantee by reimbursing the private lender. In addition to the cost of the risk associated with that guarantee, FHA bears the cost of servicing some loans. Although private lenders initially bear the servicing costs of the loans they originate under the program, when the outstanding balance of a loan reaches 98 percent of

the guarantee amount, it is assigned to FHA, and the agency takes on those costs.

This option would replace the HECM guarantee program with a direct loan reverse mortgage program. Instead of guaranteeing loans that private lenders originate, FHA would make loan disbursements directly to the borrower. The cost of the risk borne by FHA under a direct loan program would be largely the same as that associated with its guarantee on reverse mortgages under current law. The agency's servicing costs would increase because it would be responsible for the cost of servicing all loans from the time they were originated. However, FHA's interest income would also increase because the agency would collect all repayments of principal and interest from the borrower or the borrower's estate.

The savings that this option generates stem from the fact that, in the Congressional Budget Office's estimation, private lenders are charging rates on reverse mortgages that are higher than is necessary to cover their financing costs. Some of that surplus is used to cover their marketing and other nonfinancing costs, but some of it may result from lenders' ability to charge borrowers more than they would be able to in a more competitive market

simply because the number of lenders originating reverse mortgages is limited. If the legislation that created the direct loan program required FHA to charge borrowers an interest rate that was comparable to those charged by private lenders on reverse mortgages, the option would generate savings for the federal government. Although FHA would incur the costs of financing and servicing loans that are currently borne by private lenders, by charging an interest rate comparable to the rates projected to be charged under the current program structure, the agency would be able to retain the surplus built into that rate.

CBO estimates that if FHA implemented the direct loan program in 2018, it would originate approximately 550,000 reverse mortgages by 2026. (The number of new loans originated each year is estimated to rise from 60,000 in 2018 to nearly 63,000 in 2026). On the basis of that estimate and in accordance with the budgetary procedures prescribed by the Federal Credit Reform Act of 1990 (FCRA), CBO projects that if FHA charged borrowers an interest rate comparable to those charged by private lenders, the option would result in discretionary savings with a net present value of \$23 billion from 2018 to 2026. (A present value is a single number that expresses a flow of current and future payments in terms of an equivalent lump sum paid today; the present value of future cash flows depends on the rate of interest, or discount rate, that is used to translate them into current dollars.)

The option would, under the FCRA approach, increase mandatory spending. Replacing HECMs with direct loan reverse mortgages would eliminate savings for the federal government generated by the securitization of HECMs by the Government National Mortgage Association, or Ginnie Mae. By eliminating the Ginnie Mae securitization program, the option would increase mandatory spending over the period by \$0.7 billion, estimated on a FCRA basis.

Under an alternative method, the fair-value approach, estimates are based on market values—market prices when they are available, or approximations of market prices when they are not—which better account for the risk that the government takes on. As a result, the discount rates used to calculate the present value of projected loan repayments under the option are higher for fair-value estimates than for FCRA estimates, and the savings from those projected repayments are correspondingly lower. On a fair-value basis, net discretionary savings are projected to amount to approximately \$16 billion over the period. Mandatory savings associated with eliminating the Ginnie Mae securitization program would be very close to zero.

The primary advantage of converting FHA's HECM guarantees to direct loans is that the government—instead of private lenders—would earn the interest margin on reverse mortgages without incurring significant additional risk because, in its role as guarantor, FHA already bears much of the risk associated with reverse mortgage loans. In addition, the complexity of reverse mortgages has limited both demand for them and the number of lenders that originate them, so having FHA serve as the single originator of reverse mortgages might provide consistency and transparency and make them more attractive to borrowers. Finally, FHA could potentially reduce the cost of reverse mortgages for borrowers by lowering the interest rate or fees charged on such loans, but doing so would eliminate some of the savings from this option.

An argument against this option is that it would increase federal debt (but not debt net of financial assets) because FHA would need to fund the principal balances of the reverse mortgages that are currently funded by private lenders. The option would also reduce the private sector's involvement in the reverse mortgage market, which may limit innovations in product features and servicing techniques designed to tailor those loans for elderly homeowners.

Discretionary Spending—Option 16

Function 370

Eliminate the International Trade Administration's Trade Promotion Activities

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Spending													
Budget authority	0	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-1.5	-3.6
Outlays	0	-0.3	-0.3	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-1.4	-3.4

This option would take effect in October 2017.

The International Trade Administration (ITA) is an agency within the Department of Commerce that provides support to U.S. businesses that sell their goods and services abroad. The agency assists domestic companies that either are new to the exporting process or are seeking to increase their exports. Under its authority to provide assistance for trade development, ITA assesses the competitiveness of specific U.S. industries in foreign markets and develops trade and investment policies to promote U.S. exports. In addition, ITA supports U.S. exporters in their pursuit of receiving fair market value for their goods, monitors compliance with trade agreements, and enforces U.S. trade law. ITA is one of several federal agencies that engage in trade development and promotion. The Congressional Budget Office estimates that ITA's 2016 appropriation for those purposes was \$334 million—about 70 percent of the agency's budget.

This option would eliminate ITA's trade promotion activities. By doing so, the option would reduce discretionary outlays by \$3 billion from 2018 through 2026, CBO estimates.

One rationale for this option is that the cost to taxpayers of providing trade promotion services at the federal level probably exceeds the benefit to U.S. businesses. Because those costs are not reflected in the prices of the goods and services sold abroad, a portion of the benefits are passed

on to consumers and firms in other countries in the form of lower prices for U.S. exports. In addition, trade promotion activities developed by the private sector would probably be more efficient than those developed by government agencies because the private sector can better tailor policies to meet the particular needs of the businesses involved. Several private-sector entities already provide trade promotion services that target particular industries or regions. For example, TradePort, a joint venture of the Bay Area Council Economic Institute and the Los Angeles Area Chamber of Commerce, is a repository of free information and resources for businesses seeking to increase international trade to and from California.

An argument against eliminating ITA's trade promotion activities is that those activities may be subject to economies of scale. It might therefore be more effective to have a single entity (the federal government) develop the expertise to counsel exporters about foreign legal and other requirements, disseminate information about foreign markets, and promote U.S. products abroad than to have several entities involved in those activities. In addition, eliminating the ITA's trade promotion programs could curtail efforts that are currently under way to increase U.S. exports, including, for example, the National Export Initiative, which relies in part on those programs for support.

Discretionary Spending—Option 17

Function 400

Eliminate Funding for Amtrak and the Essential Air Service Program

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total	
											2017–2021	2017–2026
Amtrak												
Change in Discretionary Spending												
Budget authority	0	-1.4	-1.5	-1.5	-1.5	-1.6	-1.6	-1.6	-1.7	-1.7	-5.9	-14.0
Outlays	0	-1.4	-1.5	-1.5	-1.5	-1.6	-1.6	-1.6	-1.7	-1.7	-5.9	-14.0
Payments to Air Carriers (Under the Essential Air Service program)												
Change in Discretionary Spending												
Budget authority	0	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.7	-1.8
Outlays	0	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2	-0.6	-1.7
Essential Air Service Program												
Change in Mandatory Outlays	0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.4	-1.0

This option would take effect in October 2017.

The federal government subsidizes intercity travel in various ways. For example, the National Railroad Passenger Corporation—or Amtrak—received appropriations of about \$1.4 billion in both 2015 and 2016 to subsidize intercity passenger rail services, including \$1.1 billion in grants for capital expenses and debt service and about \$0.3 billion in grants for operating subsidies. The 2015 grants represented close to 90 percent of Amtrak’s capital spending and 7 percent of its operating expenses (excluding depreciation costs). Another form of federal subsidy for intercity travel is the Essential Air Service (EAS) program, which received \$175 million in discretionary budget authority and an estimated \$103 million in mandatory budget authority in 2016; the latter came from fees charged to foreign aircraft that fly through U.S. airspace without landing. The EAS program—created by the Airline Deregulation Act of 1978 to maintain airline service in communities that had been covered by federally mandated service—subsidized air service in 61 communities in Alaska, 2 in Hawaii, and 111 in the continental United States (CONUS) as of November 2016. Based on EAS data available for those CONUS communities, the federal subsidy per airline passenger in 2015 ranged from \$8 in Joplin, Missouri, to \$985 in Thief River Falls, Minnesota.

This option would eliminate funding for Amtrak and discontinue the EAS program. It would yield savings of

about \$16 billion in discretionary spending from 2018 through 2026, the Congressional Budget Office estimates. That amount consists of \$14 billion in savings from eliminating funding for Amtrak and \$2 billion in savings from eliminating the discretionary component of the EAS program (identified separately in the budget as Payments to Air Carriers). Discontinuing the EAS program would also yield savings in mandatory spending totaling \$1 billion over that same period, CBO estimates.

One argument in favor of the option is that when the Amtrak and EAS subsidies were first authorized in the 1970s, both were viewed as temporary measures. They were intended to help Amtrak become self-supporting and to aid communities and airlines as they adjusted to deregulation.

A second argument for the option is that both subsidies support transportation services that are of some value to particular groups of users but that are not commercially viable and provide little if any benefit to the general public. According to that argument, states or localities that highly value the subsidized rail or air services should provide the subsidies. States are already required to provide support for Amtrak service on rail lines less than 750 miles long in amounts determined by a cost-allocation method that Amtrak developed in consultation with the states to ensure that those lines cover their

operating costs. Some analysts have called for the federal government to extend that requirement to Amtrak lines longer than 750 miles. The EAS program also has cost-sharing requirements, although they affect only the three communities in the program that are less than 40 miles from the nearest small hub airport: Those communities must now negotiate a local cost share before their participation in the program will be renewed. Communities not in the EAS program have used various methods to develop or maintain air service, including guaranteeing airlines a minimum amount of revenues (in some cases, using federal grants to back the guarantees), waiving fees, and taking over ground-handling operations.

The main argument against eliminating either Amtrak or EAS funding is that rail or air transportation service to some smaller communities would be curtailed without the federal subsidies. Amtrak's long rail lines could be particularly vulnerable because reaching agreement among all of the affected states on how to replace the federal subsidies could be difficult. Eliminating service on existing lines could cause hardship for passengers who currently rely on them and might undermine the economies of affected communities.

Another argument against eliminating support for Amtrak is that the amount of such support needs to be analyzed in relation to federal subsidies for travel by highways and air. Rail travel has certain advantages over those alternatives for society, including a better safety record and lower emissions of air pollutants and greenhouse gases. Those advantages could be lost under the option:

Eliminating funding for Amtrak's capital investment, which currently relies almost entirely on federal support, could undermine the future viability of passenger rail service in the United States.

An additional argument against discontinuing EAS is that not enough time has elapsed to assess the effects of recent efforts to control the program's cost. In 2014, the Department of Transportation (DOT) announced that beginning in 2016 (using data from 2015), it would resume enforcing a \$200 per-passenger subsidy cap for CONUS communities within 210 driving miles of a medium or large hub airport. (DOT suspended enforcement of that cap between 2007 and 2014, when disruptive conditions in the airline industry made compliance with the cap very difficult for some communities.) In August 2016, DOT determined that 30 communities had subsidy costs that exceeded the \$200 cap; 12 of the 30 also failed to meet a requirement established by lawmakers in 2012 that CONUS communities within 175 miles of a medium or large hub airport have a daily average of at least 10 passengers boarding planes. The department used its authority to grant temporary waivers to 8 of the 30 communities on the grounds that they had experienced significant disruptions in their air service; the other 22 communities could apply for waivers as well. An additional cap enacted by lawmakers in 2011 limits the subsidy per passenger to \$1,000 for all CONUS communities, regardless of their distance from a hub airport; 3 communities with subsidy costs above that limit lost their eligibility in 2016.

RELATED CBO PUBLICATION: *The Past and Future of U.S. Passenger Rail Service* (September 2003), www.cbo.gov/publication/14769

Discretionary Spending—Option 18

Function T400

Limit Highway Funding to Expected Highway Revenues

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Discretionary Spending													
Budget authority (Obligation limitations)	0	0	0	0	-6.4	-7.6	-8.9	-10.2	-11.6	-13.0	-6.4	-57.7	
Outlays	0	0	0	0	-1.6	-4.5	-6.3	-7.7	-9.1	-10.4	-1.6	-39.6	

This option would take effect in October 2020.

Most of the outlays for the highway program are controlled by limitations on obligations set in annual appropriation acts rather than by contract authority (a mandatory form of budget authority) set in authorizing law. By CBO’s estimate, \$739 million in contract authority is exempt from the limitations each year; spending stemming from that authority would not be affected by this option.

The Federal-Aid Highway program provides grants to states for highway and other surface transportation projects. The last reauthorization for the highway program—the Fixing America’s Surface Transportation Act, or FAST Act—provided highway funding for 2016 through 2020 in the form of contract authority, a type of mandatory budget authority. However, most spending from the program is controlled by annual limitations on obligations set in appropriation acts.

Historically, most of the funding for highway programs has come from the Highway Trust Fund, an accounting mechanism in the federal budget that has two separate accounts—one for highways and another for mass transit. Both accounts are credited with revenues generated by the federal taxes on gasoline and diesel fuels, and the highway account is credited with other federal taxes related to highway transportation as well. Since 2001, the revenues credited to the highway account each year have consistently fallen short of outlays from that account; in 2016, for example, \$45 billion was spent from the account and \$36 billion in revenues and interest was credited to it. Since 2008, lawmakers have addressed the funding shortfall by supplementing revenues dedicated to the trust fund with several transfers, primarily from the Treasury’s general fund. The FAST Act authorized the latest such transfer: \$52 billion to the highway account and \$18 billion to the mass transit account in 2016. The Congressional Budget Office estimates that those transfers, along with the revenues and interest credited to the fund, will permit the highway account to meet all obligations presented to the account through 2021. For later years, in accordance with the Balanced Budget and Emergency Deficit Control Act of 1985, CBO’s baseline

for highway spending incorporates the assumption that obligations incurred by the Highway Trust Fund will be paid in full.

This option would reduce federal funding for the highway system, starting in fiscal year 2021, by lowering the obligation limitations for the Federal-Aid Highway program to the amount of revenues projected to go to the highway account of the Highway Trust Fund. The federal taxes that directly fund the Highway Trust Fund would not change. CBO estimates that from 2021 through 2026, this option would reduce resources provided for the highway program by \$58 billion, relative to the obligation limitations in CBO’s baseline projections. Outlays would decrease by \$40 billion over those years, CBO estimates.

One rationale for this option is that funding federal spending on highways with revenues obtained from the current taxes on highway users, rather than from general taxes paid by all taxpayers, is fairer (because those who benefit from the highways pay the costs of the program) and tends to promote a more efficient allocation of resources (because the taxes give users some incentive to limit their travel and because as use increases, more revenue becomes available). That argument suggests that if current revenues are too low to fund a desired level of federal support for highways, an increase in the taxes that are credited to the Highway Trust Fund is appropriate.

A related argument is that it is fairer and more efficient to have local or state tax revenues pay for highway projects that primarily benefit people in a particular area and to reserve federal revenues for projects that have true

interstate significance. Another rationale for this option is that it would reduce the extent to which differing amounts of federal support distort the spending choices states make between highways and other priorities, as well as those they make among competing highway projects, which is beneficial because such distortion could lead states to pursue projects that do not yield the greatest net benefits. Also, some of the reduction in federal spending under this option could be offset by greater spending by state and local governments. (The Government Accountability Office reported in 2004 that the existence of federal highway grants has encouraged state and local governments to reduce their own spending on highways and to use those funds for other purposes.)

A general argument against reducing federal spending on highways is that doing so could increase the economic

and social costs associated with aging roads and bridges and with increased traffic. In addition, the road network as a whole supports interstate commerce and thus strengthens the national economy.

A specific argument against the option is that using general revenues to support federal spending on highways is reasonable because a portion of the money from the highway account of the Highway Trust Fund is spent on non-highway projects and purposes, such as public transit, sidewalks, bike paths, recreational trails, scenic beautification, and preservation of historic transportation structures. In addition, the efficiency benefits of the current federal taxes on highway users are limited because they give motorists only weak incentives to avoid contributing to the main social costs of road use—traffic congestion and pavement damage by heavy trucks.

RELATED CBO PUBLICATIONS: “Baseline Projections for Selected Programs: Highway Trust Fund Accounts” (March 2016), www.cbo.gov/publication/51300; *Approaches to Making Federal Highway Spending More Productive* (February 2016), www.cbo.gov/publication/50150; cost estimate for the conference agreement on H.R. 22, the FAST Act, as posted on the website of the House Committee on Rules on December 1, 2015 (December 2, 2015), www.cbo.gov/publication/51051; testimony of Joseph Kile, Assistant Director for Microeconomic Studies, before the Senate Committee on Finance, *The Status of the Highway Trust Fund and Options for Paying for Highway Spending* (June 18, 2015), www.cbo.gov/publication/50297

Discretionary Spending—Option 19

Function 500

Eliminate Federal Funding for National Community Service

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Spending													
Budget authority	0	-1.1	-1.1	-1.2	-1.2	-1.2	-1.3	-1.3	-1.3	-1.3	-4.6	-11.0	
Outlays	0	-0.2	-0.7	-0.9	-1.0	-1.0	-1.1	-1.2	-1.2	-1.2	-2.8	-8.5	

This option would take effect in October 2017.

National community service programs provide financial and in-kind assistance to students, senior citizens, and others who volunteer in their communities in areas such as education, public safety, the environment, and health care. In 2016, funding for the programs of the Corporation for National and Community Service (CNCS), which include AmeriCorps and the Senior Corps, totaled \$1.1 billion. Participants in those national community service programs receive one or more of the following types of compensation: wages, stipends for living expenses, training, and subsidies for health insurance and child care. In addition, upon completing their service, participants of certain CNCS programs can earn education awards, paid from the National Service Trust, in amounts tied to the maximum value of the Pell grant (\$5,815 for the 2016–2017 academic year). In 2015, roughly 75,000 people participated in AmeriCorps and 270,000 people in the Senior Corps.

This option would eliminate federal funding for CNCS, reducing outlays by \$9 billion from 2018 through 2026, the Congressional Budget Office estimates. (That estimate includes the savings in administrative costs associated with terminating the programs.)

An argument in favor of this option is that funding community service programs at the local level might be more

efficient than funding them at the federal level because the benefits of such programs accrue more to the local community than to the nation as a whole. According to that argument, the local government, community, or organization that would receive the benefits of a given service project is better positioned than the federal government to decide whether that project is valuable enough to fund and to determine which service projects should receive the highest priority. Another rationale for eliminating student-focused national service programs and the education benefits associated with them is that unlike most other federal programs that provide financial aid to students, CNCS's education benefits are not targeted at low-income students. Participants in AmeriCorps are selected without regard to their family income or assets, so funds do not necessarily go to the students with the greatest financial need.

An argument against eliminating CNCS is that the programs provide opportunities for participants of all socioeconomic backgrounds to engage in public service and develop skills that are valuable in the labor market. In addition, if other community service programs do not take CNCS's place, this option could have adverse effects on the communities in which CNCS currently operates.

Discretionary Spending—Option 20

Function 500

Eliminate Head Start

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Spending													
Budget authority	0	-9.5	-9.7	-9.9	-10.1	-10.3	-10.5	-10.7	-11.0	-11.2	-39.2	-92.9	
Outlays	0	-3.6	-9.1	-9.6	-9.8	-10.0	-10.2	-10.4	-10.6	-10.8	-32.1	-84.0	

This option would take effect in October 2017.

The Department of Health and Human Service’s Head Start programs provide comprehensive development services, including pre-kindergarten education, for children in low-income families. The Head Start program serves primarily 3- and 4-year-old preschoolers, and the Early Head Start program provides services to pregnant women and child care to children under age 3. (In this analysis, “Head Start” refers to both programs collectively.) Head Start is administered by the Department of Health and Human Services, but services are provided by state or local governments or by private nonprofit or for-profit institutions. Children in foster care, homeless children, and children from families that receive public assistance (such as Temporary Assistance for Needy Families or Supplemental Security Income) are eligible for Head Start services, regardless of income. In 2015, roughly 1 million children were enrolled in Head Start.

This option would eliminate Head Start, resulting in savings of \$84 billion between 2018 and 2026, the Congressional Budget Office estimates.

The main argument for this option is that many of the children expected to be enrolled in Head Start in the future would be enrolled in an alternative preschool or

child care programs if Head Start was eliminated. Those alternative programs include private as well as public programs. For example, several states have instituted a universal pre-K program with the goal of enrolling all 4-year-olds in pre-K. If Head Start was eliminated, most of the children currently enrolled in Head Start in such states would be enrolled in the state-sponsored programs, and their families would likely pay no or only partial tuition. Children in states where such a program was not available could be enrolled in private preschools, although the tuition costs for such programs would most likely be higher than those for public programs.

The main argument against this option is that some children from low-income families would not be enrolled in any preschool program if Head Start was eliminated. Young children who did not attend any program would enter kindergarten less prepared than those who did attend such programs, and research suggests that they might do less well in school and earn less as adults than they would if they had attended preschool. Consequently, economic growth could be lower in the future if Head Start was eliminated. In addition, eliminating federal subsidies for child care would place an additional burden on the resources of low-income families.

Discretionary Spending—Option 21

Function 500

Restrict Pell Grants to the Neediest Students

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total	
											2017–2021	2017–2026
Restrict Pell Grants to Students With an EFC Less Than or Equal to 65 Percent of the Maximum Pell Grant Award												
Change in Discretionary Spending												
Budget authority	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5	-2.1	-4.5
Outlays	-0.1	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5	-0.5	-0.5	-0.5	-1.8	-4.1
Change in Mandatory Outlays	*	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.3	-0.7
Restrict Pell Grants to Students With an EFC of Zero												
Change in Discretionary Spending												
Budget authority	-6.5	-6.7	-6.9	-7.0	-7.0	-7.3	-7.3	-7.3	-7.3	-8.0	-34.0	-71.2
Outlays	-1.7	-6.5	-6.8	-6.9	-7.0	-7.1	-7.3	-7.3	-7.3	-7.5	-28.8	-65.3
Change in Mandatory Outlays	-0.7	-2.4	-2.5	-2.6	-2.6	-2.6	-2.7	-2.8	-2.8	-2.9	-10.7	-24.5

This option would take effect in July 2017.

EFC = expected family contribution; * = between -\$50 million and zero.

The Federal Pell Grant Program is the largest source of federal grant aid to low-income students for undergraduate education. Grant recipients enroll at a variety of educational institutions, including four-year colleges and universities, for-profit schools, two-year community colleges, and institutions that specialize in occupational training. (Pell grants are not available to students pursuing graduate or professional degrees.) For the 2016–2017 academic year, the program will provide \$28 billion in aid to 7.8 million students, the Congressional Budget Office estimates.

A student’s Pell grant eligibility is chiefly determined on the basis of his or her expected family contribution (EFC)—the amount, calculated using a formula established under federal law, that the government expects a family to contribute toward the cost of their student’s postsecondary education. The EFC is based on factors such as the student’s income and assets. For dependent students (in general, unmarried undergraduate students under the age of 24 who have no dependents of their own), the parents’ income and assets, as well as the number of other people (excluding parents) in the household attending postsecondary schools, are also taken into account. Families with a high EFC generally have less

financial need than those with a low EFC and thus are expected to contribute more to their child’s education.

Since 2008, funding for the Pell grant program has had discretionary and mandatory components. The discretionary component is the maximum award amount set in each fiscal year’s appropriation act. The maximum award for the 2016–2017 academic year is \$4,860 per student. One mandatory component is the funding stemming from the Higher Education Act that is dedicated to supporting the discretionary program. The other mandatory component supports the “add-on” to the maximum award set in appropriation acts. The add-on for the 2016–2017 award year is \$955, resulting in a total maximum award of \$5,815. Under current law, the add-on is indexed to inflation through the 2017–2018 academic year and remains constant thereafter.

This option would tighten eligibility criteria to generate savings in the program. Under current law, students with an EFC exceeding 90 percent of the total maximum Pell grant award (that is, an EFC of \$5,234 or greater for the 2016–2017 academic year) are ineligible for a grant. One version of this option would lower that threshold and make students with an EFC exceeding 65 percent of the total maximum Pell grant award ineligible for a Pell grant. Under that approach, the least needy Pell grant

recipients as determined by the EFC formula—about 6 percent of recipients in recent years—would lose eligibility. Assuming that in future years the maximum discretionary award amount remained at the \$4,860 amount specified in the most recent appropriation act, CBO estimates that this option would yield discretionary savings of \$4 billion and mandatory savings of \$1 billion from 2017 through 2026.

A stricter version of this option would limit eligibility to those students whose EFC is zero. Under that version, about 34 percent of Pell grant recipients in the 2014–2015 award year would have lost eligibility. That approach would yield discretionary savings of \$65 billion and mandatory savings of \$25 billion through 2026, CBO estimates.

A rationale for this option, applicable to both versions, is that it would focus federal aid on students who, on the basis of the federally calculated EFC, have the greatest need. Students who lost eligibility under the first version of the option would probably still be able to afford a public two-year college: Tuition and fees at public two-year colleges for the 2014–2015 academic year averaged about \$2,955, which is below the EFC of students who would lose eligibility under that version of the option. In addition, most students whose EFC was in the affected range under either approach would be eligible for \$3,500 or more in federal loans that are interest-free while they are

in school. Furthermore, a few studies suggest that institutions responded to past increases in the size of Pell grants by raising tuition and shifting more of their own aid to students who did not qualify for those grants, which suggests that they may respond to the tightening of eligibility criteria for Pell grants by shifting some of their own aid to those students who lose eligibility.

An argument against the option is that many Pell grant recipients with an EFC above zero have educational expenses that are significantly greater than the family's expected contribution and are not covered by aid (grants, loans, and work-study programs) from federal, state, institutional, or other sources. In the 2011–2012 academic year, for example, 63 percent of students with an EFC above 65 percent of the maximum grant at the time and 76 percent of students with an EFC between zero and 65 percent of the maximum grant incurred educational expenses that were not covered by those sources. Denying Pell grants to those students would further increase the financial burden of obtaining an undergraduate education and might cause some of them to pursue less postsecondary education or to forgo it altogether. The amount of postsecondary education received is an important determinant of future wages. In 2015, for example, the median wage for workers between the ages of 16 and 64 who had a bachelor's degree was about 76 percent higher than the median wage for those who had only a high school diploma or GED certification.

RELATED OPTIONS: Mandatory Spending, Options 8, 10; Revenues, Option 17

RELATED CBO PUBLICATIONS: *The Pell Grant Program: Recent Growth and Policy Options* (September 2013), www.cbo.gov/publication/44448; *Options to Change Interest Rates and Other Terms on Student Loans* (June 2013), www.cbo.gov/publication/44318; *Changes in the Distribution of Workers' Hourly Wages Between 1979 and 2009* (February 2011), www.cbo.gov/publication/22010

Discretionary Spending—Option 22

Function 600

Increase Payments by Tenants in Federally Assisted Housing

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Spending													
Budget authority	0	-0.5	-1.0	-1.6	-2.1	-2.7	-2.8	-2.9	-3.0	-3.0		-5.2	-19.7
Outlays	0	-0.3	-0.8	-1.3	-1.9	-2.5	-2.8	-2.9	-2.9	-3.0		-4.2	-18.3

This option would take effect in October 2017.

The federal government provides housing assistance directly to low-income tenants through the Housing Choice Voucher program (sometimes called Section 8), public housing, and project-based rental assistance. Those three types of assistance are funded by the Department of Housing and Urban Development (HUD) and generally require tenants to pay 30 percent of their household income (after certain adjustments) toward housing expenses; the federal government covers the balance of the tenants' rent, up to established limits. In 2015, by the Congressional Budget Office's estimate, expenditures for all three programs came to roughly \$7,800 per recipient household. That amount includes rent subsidies as well as payments to the local public housing agencies and contractors that administer the programs.

Under this option, tenants' rental contribution would, starting in 2018, gradually increase from 30 percent of adjusted household income to 35 percent in 2022 and then remain at that higher rate. Those higher rent contributions would reduce outlays by a total of \$18 billion from 2018 through 2026 (\$9 billion for the Housing Choice Voucher program, \$5 billion for public housing,

and \$4 billion for project-based rental assistance), CBO estimates.

One argument for this option is that renters who are eligible for housing assistance but who do not currently receive it usually spend more than 30 percent of their income on rent. That is the case for at least four-fifths of such unassisted renters—a population that outnumbers assisted renters 3 to 1. Thus, even if the required contribution for assisted renters was increased to 35 percent of their income, it may still be less than the percentage of income that most unassisted renters pay toward rent. Furthermore, whereas unassisted renters are vulnerable to increases in housing costs relative to income, households that receive assistance would continue to benefit from paying a fixed percentage of their income toward housing under this option.

An argument against implementing this option is that assisted renters would have fewer resources to purchase other necessary goods and services, such as food, health care, and transportation. In addition, by increasing the proportion of income that tenants are required to pay in rent, the option would reduce the incentive for some participants to boost their income.

RELATED OPTIONS: Discretionary Spending, Option 23; Revenues, Option 32

RELATED CBO PUBLICATIONS: *Federal Housing Assistance for Low-Income Households* (September 2015), www.cbo.gov/publication/50782; *Growth in Means-Tested Programs and Tax Credits for Low-Income Households* (February 2013), www.cbo.gov/publication/43934; *An Overview of Federal Support for Housing* (November 2009), www.cbo.gov/publication/41219

Discretionary Spending—Option 23

Function 600

Reduce the Number of Housing Choice Vouchers or Eliminate the Program

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Reduce the Number of Housing Choice Vouchers													
Change in Spending													
Budget authority	0	-2	-2	-2	-2	-2	-2	-2	-2	-2	-7	-17	
Outlays	0	-1	-2	-2	-2	-2	-2	-2	-2	-2	-6	-16	
Eliminate the Housing Choice Voucher Program													
Change in Spending													
Budget authority	0	-2	-5	-7	-10	-12	-15	-18	-21	-24	-23	-113	
Outlays	0	-3	-4	-7	-9	-12	-15	-17	-20	-23	-23	-111	

This option would take effect in October 2017.

The Housing Choice Voucher program (sometimes called Section 8) provides federally funded vouchers that recipients can use to help pay the rent on units that they find in the private housing market. (Property owners choose whether to participate in the program.) To receive assistance, a household must have income that is below a specified level, and it must wait for a voucher to become available. (Although roughly 20 million households qualify for federal rental assistance on the basis of their income, only about one-quarter of those households receive such assistance because funding for the three discretionary spending programs that provide it is limited.)

Recipients usually pay 30 percent of their household income, after certain deductions, toward their rent. The value of the voucher is the difference between the household's rental payment and the limit on rent for the area that is determined annually by the Department of Housing and Urban Development. That limit is based on the benchmark rent charged for standard rental housing in the area. In some areas, the benchmark rent is set at the 40th percentile (meaning that it is less than 60 percent of rents in the area), and in others, at the 50th percentile. Recipients can continue to use their vouchers when they move; nonetheless, each year households leave the program for a variety of reasons—some because of the dissolution of their family, others because of a violation of program rules, and still others because changing circumstances make it so that they are better off without a voucher. The vouchers that had been used by those

households are reissued, to the extent that funding is available, to eligible households on waiting lists for federal housing subsidies.

This option includes two approaches for reducing the number of vouchers. Lawmakers could retire 10 percent of all outstanding vouchers, principally by not reissuing them when households currently enrolled in the program leave it. Alternatively, lawmakers could gradually eliminate the program from 2018 to 2026. Retiring 10 percent of all outstanding vouchers in 2018 would reduce federal spending by \$16 billion from 2018 through 2026, and eliminating the program altogether would reduce spending by an estimated \$111 billion over that period, the Congressional Budget Office estimates.

An argument in support of retiring 10 percent of outstanding vouchers is that a onetime reduction of that magnitude—about 190,000 vouchers—is roughly equal to the number of households that would be expected to leave the program in a given year, so no one would lose assistance as a direct result of such a reduction. For example, in 2013 about 300,000 voucher-subsidized households (or about 13 percent) left the program.

One rationale in support of eliminating the voucher program entirely is that providing assistance to some households through the program is unfair to other households that are eligible for federally assisted rental housing (through the voucher program and other similar programs) but do not receive assistance. That population is

three times as large as the population of households that receive assistance from those programs. Unassisted households must pay their own rent, and at least four-fifths of those households spend more than 30 percent of their income on rent.

An argument against reducing the number of vouchers available is that doing so would increase the amount of time that eligible but unassisted households would have to wait to receive assistance. The households that were added to the voucher program from the waiting lists in

2013 had been waiting for assistance for an average of 23 months. That number probably understates the amount of time that households have to wait for assistance because many waiting lists are periodically closed to new applicants.

An argument against eliminating the voucher program entirely is that doing so would probably increase overcrowding and homelessness because about 2 million households that would receive vouchers in 2026 under current law would no longer receive housing assistance.

RELATED OPTIONS: Discretionary Spending, Option 22; Revenues, Option 32

RELATED CBO PUBLICATIONS: *Federal Housing Assistance for Low-Income Households* (September 2015), www.cbo.gov/publication/50782; *Growth in Means-Tested Programs and Tax Credits for Low-Income Households* (February 2013), www.cbo.gov/publication/43934; *An Overview of Federal Support for Housing* (November 2009), www.cbo.gov/publication/41219

Discretionary Spending—Option 24

Multiple Functions

Reduce the Annual Across-the-Board Adjustment for Federal Civilian Employees’ Pay

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Spending													
Budget authority	0	-0.8	-2.0	-3.2	-4.5	-5.9	-7.4	-8.9	-10.5	-12.3	-10.6	-55.6	
Outlays	0	-0.8	-1.9	-3.2	-4.5	-5.9	-7.3	-8.9	-10.5	-12.2	-10.4	-55.1	

This option would take effect in January 2018.

About 20 percent of the savings displayed in the table reflect intragovernmental transfers and thus would not reduce the deficit.

Under the Federal Employees Pay Comparability Act of 1990 (FEPCA), most federal civilian employees receive a pay adjustment each January. As specified by that law, the size of the adjustment is set at the annual rate of increase of the employment cost index (ECI) for private industry wages and salaries minus 0.5 percentage points. The across-the-board increase as spelled out in FEPCA does not, however, always occur. The President can limit the size of the increase if he determines that a national emergency exists or that serious economic conditions call for such action. Similarly, the Congress can authorize an adjustment that differs from the one sought by the President. Each year since 2011, policymakers have either lowered the annual across-the-board adjustment for federal employees below the percentage specified in FEPCA or canceled it altogether.

This option would reduce the annual across-the-board adjustment specified in FEPCA by 0.5 percentage points each year from 2018 through 2026, meaning that for those years, the adjustment would equal the ECI growth rate minus one percentage point. Federal outlays would be reduced by \$55 billion from 2018 through 2026, the Congressional Budget Office estimates.

One rationale for this option is that because compensation for federal civilian employees is a large share of discretionary spending (about 18 percent), reducing the annual across-the-board adjustment is a relatively straightforward way to substantially cut spending across

agencies. In addition, those cuts may not significantly affect the agencies’ ability to retain employees in jobs that do not require a bachelor’s degree because those employees would probably still receive more compensation than similar workers in the private sector, on average. Another rationale for this option is that it would signal that the federal government and its workers were sharing in the sacrifices that many beneficiaries of federal programs have made or will have to make to help reduce the deficit.

An argument against this option is that it could make it more difficult for the federal government to recruit qualified employees, and that effect might be more pronounced for federal agencies that require workers with advanced degrees and professional skills. Recent research suggests that federal workers with professional and advanced degrees are paid less than their private-sector counterparts. Thus, smaller across-the-board increases in federal pay would widen the gap between federal and private-sector workers in jobs that require more education. For federal employees who are eligible to retire but have not done so, lowering the across-the-board increases could also reduce the incentive to continue working. If a significant number of those workers decided to retire as a result of smaller increases in pay, the increased retirement costs could offset some of the payroll savings produced by the policy change. (Because retirement costs fall under mandatory spending, the effects of increases in such costs are not included in the estimates shown here.)

RELATED OPTION: Discretionary Spending, Option 3

RELATED CBO PUBLICATIONS: *Comparing the Compensation of Federal and Private-Sector Employees* (January 2012), www.cbo.gov/publication/42921; *Analysis of Federal Civilian and Military Compensation* (January 2011), www.cbo.gov/publication/22002

Discretionary Spending—Option 25

Multiple Functions

Reduce the Size of the Federal Workforce Through Attrition

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Spending													
Budget authority	0	-1.2	-3.6	-5.3	-6.0	-6.4	-6.6	-6.8	-6.9	-7.1	-16.1	-50.0	
Outlays	0	-1.2	-3.5	-5.2	-6.0	-6.4	-6.6	-6.8	-6.9	-7.1	-15.9	-49.7	

This option would take effect in October 2017.

About 20 percent of the savings reflect intragovernmental transfers and thus would not reduce the deficit.

In 2015, the federal government employed about 2.2 million civilian workers, excluding Postal Service employees. About 45 percent worked in the Department of Defense or Department of Homeland Security, and roughly 15 percent were employed by the Department of Veterans Affairs. The rest of the civilian workforce worked in agencies that provide a variety of public services—regulating businesses, investigating crimes, collecting taxes, and administering programs for the elderly, poor, and disabled, for example. The largest costs that the federal government incurred for those employees were for salaries, future retirement benefits, and health insurance.

This option would reduce the number of federal civilian employees at certain agencies by 10 percent by prohibiting those agencies from hiring more than one employee for every three workers who left. The President would be allowed to exempt an agency from the requirement under certain conditions—because of a national security concern or an extraordinary emergency, for instance, or if the performance of a critical mission required doing so. On the basis of the portion of employees that continued working during the two most recent government shut-downs, the Congressional Budget Office estimates that about two-thirds of the federal civilian workforce would be exempt. Thus, given recent rates of employee separation, CBO estimates that under this option, the workforce would be reduced by about 70,000 employees by 2021. Agencies would be limited in their ability to replace those employees with contractors because appropriations would be reduced accordingly. Discretionary

outlays would be reduced by \$50 billion from 2018 through 2026, CBO estimates.

An argument for this option is that some agencies could continue to provide crucial services with a smaller workforce by working more efficiently and by eliminating services that are not cost-effective. The number of management and supervisory positions has increased in many agencies as the workforce has aged, and research suggests that, in some cases, the additional layers of management hamper performance. This option could encourage agencies to reduce the number of managers and supervisors through attrition as people in those positions retired over the next few years. Research also suggests that federal workers earn more in occupations that do not require a college degree than do their counterparts in the private sector. If private-sector compensation is indicative of the value of those positions, then the savings generated by trimming that part of the workforce would exceed the value of the services that those jobs produce.

An argument against this option is that trends in federal employment suggest that the federal workforce may already be under strain from cost-cutting measures and that further reductions could impair the government’s ability to fulfill parts of its mission. The federal civilian workforce is about the same size as it was 20 years ago, although both the number of people the government serves (as measured by the population of the United States) and federal spending per capita have grown substantially since that time. After declining throughout most of the 1990s, federal employment has increased moderately over the past 15 years. That growth largely

reflects the establishment of the Department of Homeland Security and the increase in the volume of service that the Department of Veterans Affairs provides to veterans. Workforce reductions at those or other agencies would probably reduce the quality and quantity of some of the services provided and could have other

negative effects, such as increasing the amount of fraud and abuse in some government programs. Moreover, because this option would be phased in as workers left their positions, federal agencies would have little control over the timing of the workforce reduction.

RELATED OPTION: Discretionary Spending, Option 1

RELATED CBO PUBLICATION: *Comparing the Compensation of Federal and Private-Sector Employees* (January 2012), www.cbo.gov/publication/42921

Discretionary Spending—Option 26

Multiple Functions

Impose Fees to Cover the Cost of Government Regulations and Charge for Services Provided to the Private Sector

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Spending													
Budget authority	0	-1.6	-2.0	-2.3	-2.5	-2.8	-3.0	-3.1	-3.1	-3.2	-8.5	-23.7	
Outlays	0	-1.6	-2.0	-2.3	-2.5	-2.8	-3.0	-3.1	-3.1	-3.2	-8.5	-23.7	

This option would take effect in October 2017.

Fees collected under this option could be recorded in the budget as offsetting collections (discretionary), offsetting receipts (usually mandatory), or revenues, depending on the specific legislative language used to establish them.

The federal government imposes regulations on individuals and businesses to ensure the health and safety of the public and to facilitate commerce. It also provides the private sector with a wide array of services and allows the use of public assets that have economic value, such as navigable waterways and grazing land. To cover the cost of enforcing those regulations and to ensure that it receives compensation for the services that it provides, the government could impose a number of fees or taxes. Those fees could be collected by several federal agencies and through a variety of programs.

This option would increase some existing fees and impose a number of new ones. The option is illustrative and includes several fees and taxes that could be implemented individually or as a group. If all of them were put in place, they would increase income to the government by \$24 billion from 2018 through 2026. Specifically, under this option the government would make the following policy changes:

- Increase fees for permits issued by the Army Corps of Engineers (\$0.6 billion),
- Set grazing fees for federal lands on the basis of the state-determined formulas used to set grazing fees for state-owned lands (\$0.1 billion),
- Impose fees on users of the St. Lawrence Seaway (\$0.3 billion),
- Increase fees for the use of the inland waterway system (\$5.6 billion),

- Impose fees to recover the costs of registering pesticides and new chemicals (\$1.3 billion),
- Charge fees to offset the cost of federal rail safety activities (\$2.1 billion),
- Charge transaction fees to fund the Commodity Futures Trading Commission (\$2.7 billion),
- Assess new fees to cover the costs of the Food and Drug Administration’s reviews of advertising and promotional materials for prescription drugs and biological products (\$0.1 billion), and
- Collect new fees for activities of the Food Safety and Inspection Service (\$10.8 billion).

Whether the fees included in this option were recorded as revenues or as collections that are subtracted from discretionary or mandatory spending would depend on the nature of the fees and the terms of the legislation that imposed them. Several of the specific fees listed in this option would typically be classified as revenues, in accordance with the guidance provided by the 1967 President’s Commission on Budget Concepts. That guidance indicates that receipts from a fee that is imposed under the federal government’s sovereign power to assess charges for government activities should generally be recorded as revenues. If that treatment was applied to any of the specific fees included in this option, the amounts shown in the table would be reduced to account for the fact that the fees would shrink the tax base for income and payroll taxes and thus reduce revenues from those sources. However, lawmakers sometimes make the collection of fees subject to appropriation action. In those cases,

the fees would be recorded as offsets to spending rather than as revenues.

A rationale for implementing user fees is that private businesses would cover more of the costs of doing business, including the costs of ensuring the safety of their activities and products. Some of those costs—the Federal Railroad Administration’s costs for rail safety activities (such as safety inspections of tracks and equipment as well as accident investigations) and the Environmental Protection Agency’s costs to register pesticides and new chemicals, for example—are currently borne by the federal government. Another argument in favor of this option is that the private sector would compensate the government for a greater share of the market value of services that benefit businesses (such as the dredging of the inland waterway system) and for using or acquiring resources on public lands (such as grasslands for grazing).

If consumers highly value the products and services that businesses provide, those businesses should be able to charge prices that cover all of their costs.

An argument against setting fees to cover the cost of regulation and recover the value of public services and resources is that some of the products and services provided by private businesses are beneficial to people who neither produce nor consume those products and services. Thus, it is both fair and efficient for taxpayers to subsidize the provision of those benefits. For example, by lowering the cost of rail transportation, taxpayers’ support for rail safety activities reduces highway congestion and emissions of greenhouse gases. Similarly, support for the registration of new chemicals reduces the use of older chemicals that may be more damaging to public health or the environment.

Discretionary Spending—Option 27

Multiple Functions

Repeal the Davis-Bacon Act

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total		
											2017–2021	2017–2026	
Change in Discretionary Spending													
Spending authority	0	-1.6	-1.6	-1.7	-1.7	-1.7	-1.8	-1.8	-1.9	-1.9		-6.6	-15.7
Budget authority	0	-0.8	-0.8	-0.8	-0.9	-0.9	-0.9	-0.9	-0.9	-1.0		-3.3	-8.0
Outlays	0	-0.4	-1.0	-1.3	-1.4	-1.6	-1.6	-1.7	-1.7	-1.8		-4.1	-12.5
Change in Mandatory Outlays	0	*	*	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.2	-0.5

This option would take effect in October 2017.

Spending authority includes budget authority as well as obligation limitations (such as those for certain transportation programs).

* = between –\$50 million and zero.

Since 1935, the Davis-Bacon Act has required that workers on all federally funded or federally assisted construction projects whose contracts total more than \$2,000 be paid no less than the “prevailing wages” in the area in which the project is located. (A federally assisted construction project is paid for in whole or in part with funds provided by the federal government or borrowed on the credit of the federal government.) The Department of Labor determines the prevailing wages on the basis of the wages and benefits earned by at least 50 percent of the workers in a particular type of job or on the basis of the average wages and benefits paid to workers for that type of job.

This option would repeal the Davis-Bacon Act and reduce appropriations, as well as the government’s authority to enter into obligations for certain transportation programs, accordingly. If this policy change was implemented, the federal government would spend less on construction, saving \$13 billion in discretionary outlays from 2018 through 2026, the Congressional Budget Office estimates. The option would also result in reductions in mandatory spending of less than \$1 billion from 2018 to 2026. Savings would accrue to federal agencies that engage in construction projects. In 2016, about half of all federal or federally financed construction was funded through the Department of Transportation, although a significant portion of federal construction projects were funded through the Department of Defense, the Department of Housing and Urban Development, and the Department of Veterans Affairs, among others.

A rationale for repealing the Davis-Bacon Act is that, since the 1930s, other policies (including a federal minimum wage) have been put in place that ensure minimum wages for workers employed in federal or federally financed construction. Moreover, when prevailing wages (including fringe benefits) are higher than the wages and benefits that would be paid in the absence of the Davis-Bacon Act, the act distorts the market for construction workers. In that situation, federally funded or federally assisted construction projects are likely to use more capital and less labor than they otherwise would, thus reducing the employment of construction workers. Additional arguments for repealing the Davis-Bacon Act are that the paperwork associated with the act effectively discriminates against small firms and that the act is difficult for the federal government to administer effectively.

One argument against repealing the Davis-Bacon Act is that doing so would lower the earnings of some construction workers. Another argument against such a change is that it might jeopardize the quality of construction at federally funded or federally assisted projects. When possible, managers of some construction projects would reduce costs by paying a lower wage than is permitted under the Davis-Bacon Act. As a result, they might attract workers who are less skilled and do lower-quality work. Also, if one of the objectives of federal projects is to increase earnings for the local population, repealing the Davis-Bacon Act might undermine that aim. The act prevents out-of-town firms from coming into a locality, using lower-paid workers from other areas of the country to compete with local contractors for federal work, and then leaving the area upon completion of the work.

Discretionary Spending—Option 28

Multiple Functions

Eliminate or Reduce Funding for Certain Grants to State and Local Governments

Billions of Dollars	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	Total	
											2017–2021	2017–2026
Eliminate Department of Energy Grants for Energy Conservation and Weatherization												
Change in Spending												
Budget authority	0	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-1.1	-2.7
Outlays	0	-0.1	-0.1	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.7	-2.2
Phase Out Environmental Protection Agency Grants for Wastewater and Drinking Water Infrastructure												
Change in Spending												
Budget authority	0	-0.6	-1.2	-2.4	-2.4	-2.5	-2.5	-2.6	-2.6	-2.7	-6.6	-19.5
Outlays	0	*	-0.2	-0.5	-1.1	-1.6	-2.0	-2.2	-2.3	-2.4	-1.8	-12.3
Eliminate New Funding for Community Development Block Grants												
Change in Spending												
Budget authority	0	-3.2	-3.2	-3.3	-3.4	-3.4	-3.5	-3.6	-3.6	-3.7	-13.0	-30.8
Outlays	0	*	-0.7	-2.3	-3.0	-3.2	-3.3	-3.4	-3.5	-3.5	-6.1	-23.0
Eliminate Certain Department of Education Grants												
Change in Spending												
Budget authority	0	-1.5	-1.6	-1.7	-1.8	-2.0	-2.2	-2.5	-3.0	-3.6	-6.5	-19.8
Outlays	0	*	-0.9	-1.4	-1.6	-1.7	-1.9	-2.1	-2.4	-2.8	-3.9	-14.9
Decrease Funding for Certain Department of Justice Grants												
Change in Spending												
Budget authority	0	-0.5	-0.5	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-2.2	-5.2
Outlays	0	-0.1	-0.3	-0.4	-0.5	-0.6	-0.6	-0.6	-0.6	-0.6	-1.2	-4.2
Total												
Change in Spending												
Budget authority	0	-6.0	-6.8	-8.2	-8.4	-8.8	-9.1	-9.6	-10.2	-10.9	-29.4	-78.0
Outlays	0	-0.2	-2.2	-4.8	-6.4	-7.4	-8.1	-8.6	-9.1	-9.6	-13.7	-56.5

This option would take effect in October 2017.

* = between –\$50 million and zero.

The federal government provided \$624 billion in grants to state and local governments in 2015. Those grants redistribute resources among communities around the country, finance local projects that may have national benefits, encourage policy experimentation by state and local governments, and promote national priorities. Although federal grants to state and local governments

fund a wide variety of programs, spending is concentrated in the areas of health care, income security, education, and transportation. The conditions that accompany those federal funds vary substantially: Some grant programs give state and local governments broad flexibility in spending federal funds, whereas others impose more stringent conditions.

This option would reduce or eliminate funding for a group of grants. Specifically, it would make the following changes:

- Eliminate new funding for the Department of Energy's grants for energy conservation and weatherization, saving \$2 billion between 2018 and 2026;
- Phase out grants from the Environmental Protection Agency for wastewater and drinking water infrastructure over three years, reducing outlays by \$12 billion between 2018 and 2026;
- Eliminate new funding for the Community Development Block Grant program, saving \$23 billion from 2018 to 2026;
- Eliminate Department of Education grants that fund nonacademic programs that address the physical, emotional, and social well-being of students, reducing federal outlays by \$15 billion between 2018 and 2026; and
- Decrease funding for certain Department of Justice grants to nonprofit community organizations and state and local law enforcement agencies by 25 percent in relation to such funding in the Congressional Budget Office's baseline, reducing spending by \$4 billion from 2018 through 2026. (Those grants fund various activities, including the purchase of equipment for law enforcement officers, the improvement of forensic activities, substance abuse treatment for prisoners, Boys and Girls Clubs, and research and data collection for justice programs and the judiciary.)

If all of those reductions were put in place, federal spending would be reduced by \$57 billion from 2018 through 2026. (More details on the individual grant programs appear in similar options presented in CBO's March 2011 version of this volume.)

The main argument for this option is that the concerns that those grant programs address are primarily local, so leaving it to state and local governments to decide whether to continue to pay for the programs would lead to a more efficient allocation of resources. According to that reasoning, if state and local governments had to bear the full costs of those activities, they might be more careful in weighing those costs against potential benefits when making spending decisions. In addition, federal funding may not always provide a net increase in spending for those activities because state and local governments may reduce their own funding of such programs in response to the availability of federal funds.

One argument against this option is that those grants support programs that the federal government prioritizes but that state and local governments may lack the incentive or funding to promote to the extent desirable from a national perspective. In fact, many state and local governments face fiscal constraints that might make it difficult for them to compensate for the loss of federal funds. In addition, reducing funding for grants that redistribute resources across jurisdictions could lead to more persistent inequities among communities or individuals. Less federal support could also limit the federal government's ability to encourage experimentation and innovation at the state and local level and to learn from the different approaches taken to address a given policy issue.

RELATED CBO PUBLICATIONS: *Federal Grants to State and Local Governments* (March 2013), www.cbo.gov/publication/43967; *Reducing the Deficit: Spending and Revenue Options* (March 2011), www.cbo.gov/publication/22043

