



Photo by: Staff Sgt. Chad Trujillo

How the Air Force Can Save \$30 Billion

BY Todd Harrison

AIR FORCE CHIEF OF STAFF General David Goldfein recently announced that the Air Force plans to reallocate \$30 billion in its budget over the next five years to invest in the capabilities it needs to implement the National Defense Strategy. The Air Force has divided these investments into four categories: Connecting the Joint Force (\$9 billion); Offensive and Defensive Space (\$9 billion); Generating Combat Power (\$9 billion); and Logistics Under Attack (\$3 billion).

General Goldfein noted in his comments that the \$30 billion in investments will not come from new funding in the Air Force's budget. The Air Force's working assumption is that the budget will remain relatively flat in the future, and these new investments must be funded by making cuts to existing plans and programs. To identify what can be cut, General Goldfein went on to

say that the Air Force "took a look at every legacy program we have and asked the question: does this contribute significantly to the 2030-2038 timeframe?" He went on to add that, "if the answer to that was no, we looked at can we accelerate its retirement in order to free the money up to buy the digital architecture."¹

This paper examines the combination of cuts in legacy force structure that could generate \$30 billion in savings over the next five years. It builds on the data and analysis in CSIS's recent study entitled *The Air Force of the Future: A Comparison of Alternative Force Structures*.²

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It is not intended to be a comprehensive analysis of all potential cuts to legacy force structure, nor does this analysis recommend what cuts the Air Force should make. Rather, it estimates the savings that could result from the wholesale elimination of certain aircraft types that are potential targets for cuts.

Caveats

When estimating the potential savings from cutting legacy aircraft fleets, there are several factors that limit the savings that can be generated. First, cuts to force structure do not generate the full savings rate in the first year the cuts are implemented. In many cases it is not practical or cost efficient to cut an entire fleet of aircraft at once. Cuts are typically phased in over time, and because of the many fixed costs associated with maintaining a unique type of aircraft, the full savings rate is not achieved until all aircraft are removed from the fleet. Moreover, many of the potential savings from eliminating aircraft types come from the military personnel, Department of Defense (DoD) civilians, and contractor staff that support these aircraft. For the Air Force to fully realize the savings, the military, civilian, and contractor workforce will need to be reduced or shifted to support the new investments the Air Force is making.

Another factor to consider is that Congress has the ultimate say in what reductions are allowed. In the past, Congress has rejected many of the Air Force's attempts to retire aircraft, such as the A-10, U-2, and RQ-4.³ The Air Force will need to make the case for why these aircraft are no longer needed and how the missions they support will be fulfilled by other aircraft in the inventory to avoid critical gaps in capabilities when transitioning from legacy systems to the new capabilities the Air Force is pursuing.

Potential Savings

The following sections present the potential savings that could be achieved by eliminating selected legacy

aircraft types. It is not a recommendation for what aircraft should be retired but rather is an analysis of the aircraft types that are potential targets for cuts based on previous actions and comments by senior leaders. The savings presented are estimated based on data derived from the Air Force Total Ownership Cost database, the Air Force's most recent budget request justification documents (P-40s and R-2s), and the author's own projections for how reductions could be phased in. Unless otherwise noted, it assumes that aircraft retirements would be phased in over three years, from fiscal year (FY) 2021 to FY 2023, and it projects the savings over the next future years defense program (FYDP), which runs from FY 2021 through FY 2025. All costs are in then-year dollars, and the inventory and mission capable rates are current as of the end of FY 2018. A year-by-year breakdown of the estimated savings for all aircraft analyzed is include on page 6.



What does it do? The KC-10 is an aerial refueler that can carry up to 356,000 pounds of fuel, almost twice as much as the KC-135 tanker. Unlike most KC-135s, the KC-10 can refuel aircraft using a boom or drogue.

What is its status? The Air Force currently has 59 of these aircraft, all of which are in the active component. The average age of the KC-10 fleet is 35 years. The Air Force already plans to retire the KC-10 by FY 2024 as they are replaced by KC-46As.

What would the impact be? If the KC-10 retirement is accelerated before KC-46As are available to replace them on a one-for-one basis, United States Transportation Command (USTRANSCOM) could face a temporary shortage of tanking capacity.

How much could it save? Accelerating the retirement of the KC-10s to be completed by FY 2022 could save approximately \$2.0 billion over the FYDP.



What does it do? The B-1B is a long-range heavy bomber with a payload capacity of 75,000 pounds. It is the fastest bomber in the inventory, with a top speed of Mach 1.2. It is not designed to penetrate sophisticated air defenses, but it can carry a wide range of standoff weapons.

What is its status? There are currently 62 B-1Bs in the active component, with an average age of 32 years and a mission capable rate of 52 percent, one of the worst in the inventory. The Air Force plans to begin retiring the aircraft in the latter part of the 2020s as the B-21 bomber becomes available.

What would the impact be? Early retirement of the B-1B would result in a temporary reduction in the number of available bombers and strike capacity for the Air Force. The B-1B is no longer nuclear capable, so its retirement would not affect the nuclear deterrence mission.

How much could it save? A phased-in retirement of the B-1 over the next three years could save approximately \$4.8 billion over the FYDP.



What does it do? The B-2 is the U.S. military's only long-range, stealthy strike aircraft. It has a payload capacity of 40,000 pounds.

What is its status? The Air Force currently maintains 20 B-2s in the active component with an average age of 25 years and a mission capable rate of 61 percent.

What would the impact be? Retiring the B-2 would leave the military without a long-range strike aircraft capable of penetrating adversary air defenses. It would

also affect the nuclear deterrence mission because the B-2 is certified to carry nuclear weapons.

How much could it save? Retiring the B-2 fleet by FY 2023 could save roughly \$2.9 billion over the FYDP.



What does it do? The A-10 is a subsonic, highly maneuverable attack aircraft primarily used for close air support (CAS) of ground forces.

What is its status? There are 281 A-10s in the inventory (141 in the active force, 85 in the Air National Guard, and 55 in the Air Force Reserves). It has an average age of 38 years and a mission capable rate of 73 percent. The fleet is currently being re-winged to extend its service life.

What would the impact be? The A-10 is highly optimized for CAS, but these missions have been supported in recent years by other aircraft, such as the B-1B and the MQ-9.

How much could it save? A phased-in retirement of the A-10 fleet by FY 2023 could save approximately \$6.7 billion over the FYDP.



What does it do? The E-8C Joint Surveillance Target Attack Radar System (JSTARS) is used as an airborne platform for battle management and command and control (BMC2) of forces. It is equipped with a Ground Moving Target Indicator (GMTI) radar to detect, identify, and track targets on the ground.

What is its status? There are 16 of these aircraft in the active component with an average age of 18 years and a mission capable rate of 67 percent. The Air Force plans to retire the E-8C later in the 2020s and transition to an Advanced Battle Management System (ABMS).

What would the impact be? Early retirement of the E-8C could create temporary gaps in GMTI and BMC2 capability until ABMS is operational.

How much could it save? Retiring the E-8C by FY 2023 could save an estimated \$2.7 billion over the FYDP.



What does it do? The RC-135V/W Rivet Joint is used for airborne signals intelligence collection, analysis, and dissemination, while the RC-135S Cobra Ball and RC-135U Combat Sent provide optical and electronic reconnaissance capabilities.

What is its status? There are currently 25 RC-135s in the active component with an average age of more than 56 years.

What would the impact be? The Air Force has discussed including the capabilities currently provided by the RC-135 in the next-generation ABMS. If the RC-135 is retired before ABMS is operational, it could create a temporary gap in theater and national-level electronic and signals intelligence collection capabilities.

How much could it save? Retiring the entire fleet of RC-135s by FY 2023 could save approximately \$3.5 billion over the FYDP.



What does it do? The E-3B/C/G fleet is an airborne warning and control (AWACS) and BMC2 system used to provide all-altitude and all-weather surveillance of the battle space.

What is its status? The current fleet of 31 E-3s in the active component has an average age of 39 years, and the E-3G has a reported mission capable rate of 66

percent. The Air Force is currently modernizing the existing fleet of E-3s.

What would the impact be? Retirement of the E-3 before a potential replacement capability (like ABMS) is fielded could create a gap in airborne BMC2 and airborne warning capabilities.

How much could it save? Retirement of the E-3 fleet by FY 2023 could save \$5.0 billion over the FYDP.



What does it do? The U-2 is a high-altitude Intelligence, Surveillance, and Reconnaissance (ISR) platform that provides imagery, electronic, and signals intelligence.

What is its status? There are currently 27 aircraft in the inventory with an average age of 37 years and a mission capable rate of 77 percent.

What would the impact be? The U-2 is a highly utilized platform, flying an average of more than 600 hours annually per aircraft. The RQ-4 can perform many of the U-2's missions, but the RQ-4 is also in heavy demand, averaging nearly 1,000 annual flying hours per aircraft.

How much could it save? Retiring the entire fleet of U-2s by FY 2023 would save approximately \$2.2 billion over the FYDP.

Other Potential Savings

This analysis only examines the savings that could be achieved by eliminating entire fleets of aircraft. Retiring entire fleets saves more because the fixed costs of aircraft-specific maintenance and training are a substantial portion of overall sustainment costs, and these savings are not realized until all aircraft in a fleet are retired.

In addition to retiring whole fleets of aircraft, the Air Force could retire partial fleets to generate additional

savings. For example, it could retire some fourth-generation fighter aircraft, such as the F-16 or F-15, before new F-35As are fielded to replace them. It could also retire part of the MQ-9 fleet in response to the Trump Administration's plans to reduce U.S. military operations in the Middle East.⁴

However, the savings achieved from these partial fleet reductions would be minimal compared to the savings from eliminating whole fleets. Moreover, aircraft like the MQ-9 are among the newest (average age of 6 years), have the lowest flying hour cost (less than \$800 per hour), and have the highest mission capable rate (90 percent) of any aircraft in the Air Force's inventory. The Air Force could instead invest in upgrading the capabilities of its existing large fleets to cover the missions currently being conducted by the small fleets it plans to retire.

The savings that can be achieved from retiring aircraft are also highly sensitive to the phase-in period. This analysis assumed that retirements would be phased in over three years, except for the KC-10 because it is already planned for retirement by FY 2024. If retirements are phased in over a longer period, the savings would be substantially smaller. In addition to retiring aircraft, the Air Force could also look at operating efficiencies and

eliminating lower-priority acquisition programs. However, the record from previous attempts to achieve savings from operating efficiencies suggests that the savings realized could be minimal.⁵

Summary

The Air Force's announcement that it plans to shift some \$30 billion over the FYDP to invest in future capabilities is a strong indication that it is committed to implementing the National Defense Strategy. While \$30 billion is a significant down payment, it is less than three percent of the Air Force's total projected budget over the FYDP.⁶ Nevertheless, generating savings of this magnitude will require significant tradeoffs and risks. Retiring all of the aircraft included in this analysis would save a total of \$29.7 billion over the FYDP. These savings, however, would come at the expense of current capabilities and could increase risks in some mission areas. For example, retiring the B-2 would leave the nation without a long-range penetrating strike aircraft and would weaken the airborne component of the nuclear triad. For the Air Force to achieve the savings it desires, it must balance the strategic consequences of proposed cuts with the strategic value of the new investments it plans to make. ▶

Table of Estimated Savings

Aircraft Type	Savings Type	FY21	FY22	FY23	FY24	FY25	Total
KC-10	O&S	\$0.13B	\$0.84B	\$0.99B	\$0.00B	\$0.00B	\$1.96B
B-1	O&S	\$0.21B	\$0.43B	\$1.24B	\$1.27B	\$1.30B	\$4.46B
	Procurement	\$0.08B	\$0.07B	\$0.11B	\$0.06B	\$0.00B	\$0.33B
	RDT&E	\$0.03B	\$0.01B	\$0.01B	\$0.00B	\$0.00B	\$0.05B
B-2	O&S	\$0.05B	\$0.10B	\$0.76B	\$0.78B	\$0.79B	\$2.47B
	Procurement	\$0.04B	\$0.06B	\$0.06B	\$0.15B	\$0.00B	\$0.31B
	RDT&E	\$0.05B	\$0.05B	\$0.03B	\$0.01B	\$0.01B	\$0.15B
A-10	O&S	\$0.21B	\$0.43B	\$1.77B	\$1.81B	\$1.85B	\$6.06B
	Procurement	\$0.14B	\$0.13B	\$0.14B	\$0.09B	\$0.00B	\$0.49B
	RDT&E	\$0.02B	\$0.02B	\$0.02B	\$0.02B	\$0.02B	\$0.12B
E-8	O&S	\$0.03B	\$0.06B	\$0.84B	\$0.86B	\$0.87B	\$2.66B
RC-135	O&S	\$0.04B	\$0.08B	\$0.88B	\$0.89B	\$0.91B	\$2.81B
	Procurement	\$0.21B	\$0.20B	\$0.21B	\$0.09B	\$0.00B	\$0.70B
U-2	O&S	\$0.01B	\$0.02B	\$0.54B	\$0.55B	\$0.56B	\$1.67B
	Procurement	\$0.11B	\$0.13B	\$0.08B	\$0.07B	\$0.00B	\$0.39B
	RDT&E	\$0.02B	\$0.02B	\$0.02B	\$0.02B	\$0.02B	\$0.10B
E-3	O&S	\$0.08B	\$0.16B	\$0.85B	\$0.87B	\$0.89B	\$2.86B
	Procurement	\$0.23B	\$0.26B	\$0.29B	\$0.35B	\$0.38B	\$1.50B
	RDT&E	\$0.17B	\$0.14B	\$0.10B	\$0.12B	\$0.12B	\$0.65B

Note: All values are in then-year dollars.

Notes

1. Courtney Albon, "Goldfein: Air Force to shift \$30B over FYDP to build 'irreversible momentum' for digital architecture," Inside Defense, November 6, 2019, <https://insidedefense.com/daily-news/goldfein-air-force-shift-30b-over-fydp-build-irreversible-momentum-digital-architecture>.
2. Todd Harrison, The Air Force of the Future: A Comparison of Alternative Force Structures (Washington, D.C.: CSIS, October 2019), https://csis-prod.s3.amazonaws.com/s3fs-public/publication/191029_Harrison_AirForceoftheFuture_WEB_v4.pdf.
3. Valerie Insinna, "Stayin' alive: No retirement in sight for the A-10 and U-2," Defense News, May 23, 2017, <https://www.defensenews.com/congress/budget/2017/05/23/stayin-alive-no-retirement-in-sight-for-the-a-10-and-u-2/>.
4. Anthony Capaccio and Glen Carey, "U.S. Sends More Forces to Mideast While Trump Vows Withdrawal," Bloomberg, October 11, 2019, <https://www.bloomberg.com/news/articles/2019-10-11/u-s-expected-to-announce-new-troop-deployment-to-middle-east>.
5. Government Accountability Office, "Defense Efficiency Initiatives: Observations on DOD's Reported Reductions to Its Headquarters and Administrative Activities," September 24, 2018, <https://www.gao.gov/assets/700/694681.pdf>.
6. The total Air Force budget includes both Air Force "blue" funding and the pass-through funding that goes to other agencies.

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