



“The Commission shall also conduct a study of a transfer of Army National Guard AH-64 Apache aircraft from the Army National Guard to the regular Army.”

2015 NDAA, Section 1703(b)(1)

APACHE TRANSFERS AND RELATED ISSUES

Army aviation makes a substantial contribution toward the service’s warfighting capability. Apache helicopters (AH-64s) provide attack/reconnaissance capability in support of ground operations. Black Hawk helicopters (UH-60s) provide assault capability by transporting troops and

equipment into battle and supporting logistics activities and medical evacuation. Shadow and Gray Eagle unmanned aerial systems, teamed with Apache helicopters, are being integrated into Army aviation units to provide increased attack and reconnaissance capability. Other aircraft support Army

operations with heavy lift and general support.

Army aviation capability resides in all three Army components: the Regular Army, Army National Guard, and Army Reserve. While Army aviation provides substantial capability, it is also expensive: Army leaders stated that aviation accounts for the largest portion of Army funding for both training and modernization.

To respond to declining total budgets while maintaining critical aviation capability, the Army presented the Aviation Restructure Initiative (ARI) as part of its budget plan for fiscal year 2015. The initiative was supported by the Department of Defense (DoD) and became part of the President's plan. The ARI proposed numerous changes, including the transfer of all Apache helicopters out of the Army National Guard. Under the ARI, all Apaches would be operated in the Regular Army.

During discussions with the Commission, Regular Army leaders strongly endorsed the ARI as a way to accommodate budget limits while maintaining a reasonable level of wartime capacity and sustaining a modernization program for aviation forces. Specifically, the ARI permitted the Army to accommodate aviation budgets that, according to Army estimates, will decline by 40 percent between fiscal year 2012 and fiscal year 2020.

However, leaders of the Army National Guard expressed strong concerns about the ARI. They argued that the initiative eliminates a cost-effective portion of the Army National Guard force and leaves the Guard without full-spectrum combat capability. As an indication of the strength of their concern, the National Guard Bureau (NGB) formulated an alternative to the ARI that retained a number of Apache helicopters in the Army National Guard and altered other aspects of the plan. The NGB presented its plan to the Department of the Army and the Congress.

Faced with strongly conflicting views and alternative approaches, the Congress directed that the Commission review the Apache transfer and make specific recommendations regarding the transfer of all Apache helicopters to the Regular Army. That and related aviation issues are the focus of this chapter.

Photo on page 81

An AH-64E Apache rises from behind a hill during an exercise at the Yakima Training Center.

INFORMATION GATHERED

The Commission, working partly through its Aviation Subcommittee, gathered extensive information about the Apache helicopter transfer and other Army aviation topics, drawing on a wide variety of personnel with differing backgrounds and points of view. The Commission gathered information from several sources:

- Multiple discussions with Regular Army leaders about the ARI and the NGB Alternative;
- Multiple discussions with Army National Guard leaders about the NGB Alternative and the ARI;
- Multiple discussions with Army Reserve leaders about the ARI;
- Briefing on Army Aviation, including the ARI, from the Commanding General, U.S. Army Aviation Center of Excellence at Fort Rucker, Alabama;
- Briefings on the overall Army program from Army headquarters staff;
- Briefings on the overall aviation modernization program from Army headquarters staff;
- Briefings on the ARI from the Director of Cost Analysis and Program Evaluation (CAPE) in the Office of the Secretary of Defense;
- Discussions with a number of former senior Army leaders, including several with extensive aviation experience;
- Letters and communications from Members of Congress and discussions with Congressional staff members;
- Assistance from expert analysts at the Army's Training and Doctrine Command Analysis Center (TRAC), the Institute for Defense Analyses (IDA), and the Center for Army Analysis (CAA);
- Cost analysts at the RAND Corporation; and
- Experts on the Commission staff.

The Commission also heard from senior state leaders. Numerous Governors either discussed or provided written input to the Commission. These communications addressed the ARI and the Governors' concerns regarding the transfer of all Apaches out of the Army National Guard. Commissioners also held discussions with Adjutants General (TAGs) who expressed serious concerns about the ARI.

During its travels, Commissioners and staff held meetings with personnel in thirty-one aviation units: twelve Regular Army, sixteen Army National Guard, and three Army Reserve.

U.S. Army photo by Spc. Creighton Holub, CAB PAO, 4th Inf. Div.



An AH-64D Apache Longbow pilot with the 4th Infantry Division's Combat Aviation Brigade communicates with a crew chief before taking off on a mission in Camp Taji, Iraq.

During its public meetings, the Commission heard from sixty-six public witnesses; several addressed the ARI and alternatives.

CRITERIA FOR ASSESSING OPTIONS

Armed with this extensive information, the Commission formulated criteria to be used in assessing alternative aviation approaches. Overall, the Commission assessed alternatives based on their wartime capability because wartime capability remains the fundamental reason for maintaining a military force. Wartime capability requires forces at a high state of readiness and able to be deployed quickly, as future wars may begin with little or no notice. However, forces must also be scalable—that is, they must be able to expand reasonably rapidly should wartime conditions require.

The military also deploys during periods of relative peace. To maintain readiness during peacetime periods, the military must have enough forces to allow units sufficient time to train and military personnel time to be with their families. The pace

of peacetime operations, therefore, constitutes another criterion for assessing alternatives.

Costs must be considered. The Commission heard testimony that, in large part, the ARI reflects a response to budget limits imposed in recent years. The budgetary effects of alternative approaches thus constitute an important criterion.

The Commission also considered how alternatives affect the integration of the Regular Army, the Army National Guard, and the Army Reserve. The Commission believes that this nation needs one Army, with units from all components training together where feasible and fighting together when necessary. How well alternatives support this goal constitutes a key criterion.

As it applied these general criteria to assess options, the Commission considered many qualitative factors and relied on its own judgments. The Commission also made use of some quantitative assessments.

- **Wartime capacity.** The Commission utilized assessments of the wartime capacity under a relevant DoD wartime scenario (see the NCFA Classified Annex for details). In that scenario, Army aviation units play a substantial role. The capacity assessments take into account numbers of units but also the time required to deploy and the need to rotate forces.
- **Surge capacity.** No one can be sure where U.S. military forces will be engaged in the future, nor can we know how much time will be available to prepare for war. Therefore, forces must have the depth and scalability that permits them to surge in time of war. As one measure relevant to the Apache surge capacity, the Commission considered the number of Apache pilots in the reserve components that have required training and are in units that have necessary equipment and command structure.
- **Peacetime deployment rates.** For Regular Army units in peacetime, the Army's goal calls for one cycle deployed followed by two equivalent cycles in non-deployed status. Stated another way, if a deployment lasts one year, the unit should spend two years in non-deployed status. For reserve components, the current goal requires that a one-year deployment should be followed by five years in non-deployed status.
- **Cost.** The law establishing the Commission directed that its recommendations be "consistent with available resources and anticipated future resources." For reasons noted earlier in this report, the Commission designed aviation options at levels of funding roughly consistent with the President's budget plan submitted with the fiscal year 2016 budget request (PB16). The Commission also

identifies high-priority initiatives that would require significant funding.

OPTIONS FOR APACHE TRANSFERS

Using these criteria and the information gathered from the sources noted above, the Commission carefully considered both the ARI and the NGB Alternative. The Commission also examined options that would keep varying numbers of Apache battalions in the Army National Guard along with approaches that would alter the number of aircraft in units and change numbers of aircraft available for maintenance and other activities. In its final analysis, the Commission focused on three options.

OPTION 1: AVIATION RESTRUCTURE INITIATIVE (ARI)

The Army proposed the ARI as part of the budget plan submitted for fiscal year 2015.

Description

Under the ARI, all Apache helicopters would be transferred to the Regular Army. Fully implemented, the Regular Army would have twenty manned Apache battalions and the Army National Guard would have none. Thus, compared with the force structure plan in place just before the ARI, the new initiative transfers six Apache battalions from the Army National Guard to the Regular Army. There would also be two unmanned Apache battalions in the Regular Army as part of the Korea equipment set. Each of these battalions would have twenty-four Apaches but no assigned personnel.

The ARI would also create four additional Black Hawk battalions in the Army National Guard. The aircraft required to create these four new battalions would be made available because of the inactivation of three aviation brigades in the Regular Army.

The ARI has made or will make other changes. Most notably, under the ARI all Kiowa Warrior armed reconnaissance helicopters (OH-58Ds) are retired and Lakota helicopters (UH-72As) become the primary training aircraft for initial rotary wing training. The ARI also will require some changes among facilities used to maintain Apache helicopters. Currently, five Army National Guard facilities—known as Theater Aviation Support Maintenance Groups (TASM-Gs)—provide intermediate-level depot maintenance for Apaches and other aircraft in the Army National Guard and the Regular Army. National Guard personnel provide all of the staff for these facilities and often deploy to provide maintenance capability. Under the ARI, the Army National Guard would

have no Apache helicopters to maintain. The TASM-G facilities may respond to the ARI by revising their business practices in order to provide maintenance for Apaches in the Regular Army. Alternatively, the Army will have to reconsider the size and role of the TASM-G facilities.

When it is fully implemented at the end of fiscal year 2019, the ARI would result in a net reduction of 798 Army rotary wing aircraft. Reductions will occur in all three Army components, including 687 fewer aircraft in the Regular Army, 104 fewer in the Army National Guard, and seven fewer in the Army Reserve.

Advantages of the ARI

The Commission concluded that the ARI is a well-crafted plan that holds down costs while maintaining a reasonable level of wartime capacity. The ARI also retains funds for a modernization program required to support future Army aviation forces.

Analyses performed by TRAC suggest that the ARI fares well in terms of wartime capacity, though it does lead to some shortfalls. TRAC concludes that under the ARI, aviation capacity would see modest shortfalls early in the wartime scenario used in the analysis and larger shortfalls later in the scenario. However, TRAC concluded that, overall, compared with the NGB Alternative discussed below, the ARI consistently provided the lowest risk in terms of wartime capacity. This TRAC conclusion represents a key advantage for the ARI.

The Commission relied on TRAC analyses of aviation options because the general results were unclassified and were available at a level of detail sufficient to distinguish among the various aviation alternatives considered in this report. We also considered other analyses provided during the Commission's Comprehensive Analytic Review. The detailed results of these other analyses are described in the NCFA Classified Annex, but they generally corroborate the TRAC findings.

The ARI supports modernization of Army aviation assets. According to Army officials who briefed the Commission, the ARI maintains a substantial program of aircraft modernization, not just for major aircraft but also for critical enablers such as aviation rockets and missiles, aircraft survivability equipment, and avionics. The Army argues that the ARI accomplishes these goals while holding down costs. ARI costs are consistent with PB16, the baseline used by the Commission.

Disadvantages of the ARI

The initiative offers little help in reducing the high levels of peacetime operational tempo anticipated for Regular Army Apache units. The Army expects that, given current



Photo by Sgt. 1st Class David Wheeler (USFORA)

Chief Warrant Officer 2 Tristan Archambault with the Task Force Wolfpack of the 82nd Combat Aviation Brigade stands near her AH-64D Longbow Apache at Bagram Airfield in Afghanistan.

assumptions about future peacetime demands, Regular Army Apache units that deploy for one year will spend about twenty-three months (1.9 years) in non-deployed status. This projection falls slightly short of the goal of two years in non-deployed status, a shortfall that could grow in size if world events lead to greater demand for Apache helicopters. No Army National Guard Apache units would be available to deploy and help reduce this operational stress.

More important, the ARI provides no wartime surge capacity for Apache aircraft. In the period before ARI and other force changes, about 700 pilots serving in reserve components were trained to fly Apaches and had assigned aircraft and other equipment. In past conflicts, reserve component Apache pilots, and the units in which they serve, have provided surge capacity in time of war by deploying to wartime theaters, acting as trainers or handling other tasks. Under the ARI, the Army

would have no such depth. The Commission is concerned about the lack of wartime surge capacity.

The Army also would have no reserve component backup in case of peacetime problems. In 1999, for example, transmission problems led to the grounding of many Apache helicopters, and transmissions were taken from reserve component aircraft to maintain Regular Army units until needed rework could be accomplished. Under the ARI, this approach to resolving such an issue would not have been possible.

Finally, the Commission notes that the ARI exacerbates a problem highlighted in this report: the lack of unity between Regular Army and Army National Guard forces. The ARI will further reduce the “connective tissue” that binds the Regular Army and Army National Guard together. Under the ARI, Apaches will constitute an area where Regular Army and Army National Guard units cannot work closely together as one Army.

OPTION 2: NATIONAL GUARD BUREAU ALTERNATIVE

In response to the ARI, the National Guard Bureau formulated its own plan to restructure Army aviation, including a significantly different approach to shaping the Apache force.

Description

The NGB Alternative would provide twenty-four manned Apache battalions. Of these, eighteen are in the Regular Army (compared to twenty under ARI) and six are in the Army National Guard (compared to zero under ARI). Two of the six Army National Guard battalions would be in multicomponent aviation brigades that have one Apache battalion from the Regular Army and one from the Army National Guard.

The eighteen Regular Army Apache battalions and the two Army National Guard battalions in multicomponent brigades would be equipped with twenty-four helicopters. The other four Army National Guard battalions would be equipped with eighteen Apaches. When called to active duty, these four battalions would acquire Apache helicopters from other Army National Guard battalions, a procedure called cross-leveling that the Army National Guard commonly employs today.

In order to equip additional Apache battalions, the NGB Alternative makes use of forty-eight Apache helicopters involved in Korean rotational operations. Once ARI is fully implemented, the personnel associated with a Combat Aviation Brigade (including two Apache battalions) will rotate annually to Korea and operate helicopters already in place there as part of an equipment set. The forty-eight Apache helicopters at the stateside locations of these two battalions may not be actively used by operational units. The NGB Alternative would transfer these forty-eight helicopters to units that need them, a procedure that is employed today. When the Regular Army units rotate home, aircraft would be rotated back to their unit. This approach eliminates the need to purchase forty-eight additional new Apaches, though the NGB Alternative does call for procuring eleven new or remanufactured Apache helicopters.

The NGB Alternative also alters the Black Hawk helicopter force. Under the ARI, three Regular Army Combat Aviation Brigades (CABs) would be inactivated and the Black Hawks in these brigades would be used to create four additional Black Hawk battalions that would be added to the Army National Guard. Under the NGB Alternative, only two additional battalions would be added; the remaining Black Hawk helicopters would be retired. As a result, the NGB Alternative offers about 3 percent fewer operational Black Hawk helicopters compared with the ARI.

While the NGB Alternative makes significant changes in portions of the ARI, it leaves many ARI proposals intact. Most notably, the NGB Alternative does not alter the ARI proposal to retire all the Kiowa Warrior armed reconnaissance helicopters. The NGB Alternative also leaves in place the ARI proposal to utilize the Lakota helicopter as the primary training aircraft for initial rotary wing training.

Advantages of the NGB Alternative

The NGB Alternative provides a significant wartime surge capacity for the Apache force. Approximately 420 Apache pilots would remain in the Army National Guard in a trained status with equipment, which would enhance the depth and scalability of the force. These pilots, and the units in which they serve, could be made available during a war, whereas no Army National Guard pilots would be available under the ARI. In the Commission's view, this wartime surge capacity constitutes a significant advantage.

The NGB Alternative might be able to reduce the stress on Regular Army Apache forces during peacetime. Under current plans, an Army National Guard Apache battalion that deployed for one year would be in non-deployed status for five years. Thus, the six battalions could provide an average of one deployed battalion each year, which would more than offset the loss of deployed capacity associated with two fewer Regular Army battalions. This favorable outcome would require a decision to deploy the Army National Guard Apache battalions on a regular basis along with the funding needed to implement that decision.

Notably, the NGB Alternative would also permit the Regular Army and Army National Guard Apache units to continue to work together, training together in peacetime where feasible, and fighting together in war if necessary. The plan would contribute to maintaining one Army that draws as needed on the capabilities of the Regular Army and the reserve components.

Disadvantages of the NGB Alternative

The NGB Alternative provides less wartime capacity than the ARI, based on TRAC analyses of capacity during a wartime scenario. Shortfalls early in the conflict are greater because, even with limited warning, Regular Army units can be available in the first few weeks of a conflict, and the NGB Alternative maintains two fewer Regular Army Apache battalions. The NGB Alternative also provides less wartime capacity later in a conflict. The six Army National Guard Apache battalions in the NGB Alternative do not fully offset the loss of the two Regular Army battalions because some of the Guard battalions have fewer aircraft and because Guard units are available in theater for shorter periods. As a result, TRAC concludes that,

compared with the ARI, the NGB Alternative increases the risk of not having sufficient aviation capacity.

In addition to adding to wartime risks, the NGB Alternative increases costs. The DoD established a Tiger Team to examine ARI and NGB Alternative costs. The Tiger Team, which included analysts from CAPE as well as Regular Army and Army National Guard experts, concluded that the NGB Alternative would add between about \$90 million and \$175 million a year to the aviation operating costs compared to costs budgeted in PB16. The range depends on assumptions about the amount of training required after mobilization. These cost estimates reflect the net effect of adding six Army National Guard Apache battalions, eliminating two Regular Army Apache battalions, and adding two fewer Black Hawk battalions compared to the ARI. The NGB Alternative would also involve between \$220 million and \$420 million in one-time costs to provide an additional eleven Apache helicopters. The range depends on whether the additional eleven Apaches are new or remanufactured aircraft.

These added costs are a small percentage of total Army and DoD funding. However, finding offsets for these added costs in order to comply with limits on defense funding imposed by law would be challenging.

OPTION 3: ARI MODIFIED TO MAINTAIN FOUR NATIONAL GUARD APACHE BATTALIONS

The Commission examined numerous additional options to determine if any offered more advantages or fewer disadvantages compared with the ARI and the NGB Alternative. The Commission determined the option below best meets that test.

Description

Option Three would maintain twenty-four manned Apache battalions. Of these twenty-four battalions, twenty would be in the Regular Army (same as under the ARI) and four would be in the Army National Guard (compared to zero under the ARI). All the Regular Army battalions would be equipped with twenty-four aircraft. The four Army National Guard battalions would be equipped with eighteen aircraft and thus would have to cross-level helicopters before deploying.

To hold down costs, Option Three assumes that only two Black Hawk battalions are added to the Army National Guard (compared with four under the ARI). This approach, which is also used by the NGB Alternative, would result in a reduction in operational Black Hawk aircraft by about 3 percent.

Option Three proposes that the Army commit to use the Army National Guard battalions regularly—mobilizing them and deploying them in peacetime. Army National Guard

REGULAR ARMY COMBAT AVIATION BRIGADE

A Combat Aviation Brigade (CAB) is designed to be modular and is organized to support offensive, defensive, and stability operations in support of ground maneuver forces or in defense support to civil authorities. A CAB comprises the following:

- a headquarters and headquarters company;
- an attack reconnaissance squadron of AH-64 Apaches and RQ-7 Shadow unmanned aerial systems (UAS);
- an attack reconnaissance battalion of Apaches and MQ-1C Gray Eagle UAS;
- an assault helicopter battalion of UH-60 Black Hawks;
- a general support aviation battalion with Black Hawks for support missions and medical evacuation, and CH-47 Chinook heavy lift helicopters; and,
- an aviation support battalion (maintenance).

personnel told the Commission that they wanted to be mobilized and deployed on a regular basis. They would be less willing to stay in the Army National Guard if they cannot periodically participate in meaningful military missions. Army National Guard leaders agreed with this assessment in testimony before the Commission. To make regular deployments feasible, the costs for Option Three include funds to pay for mobilization and employment of Army National Guard units. Cost estimates assume the current deployment policy, which requires that a Army National Guard unit deployed for one year would spend five years in non-deployed status. Costs would be slightly higher if deployments are more frequent.

To equip the Army National Guard units retained in Option Three, the option assumes use of the forty-eight Apache aircraft left at home station when unit personnel rotate to Korea. This approach was described above in the NGB Alternative. Option Three also assumes the remanufacture of an additional twenty-four Apache helicopters to convert them from D models to E models. The E model provides greater capability to work with unmanned reconnaissance assets and has a new drive train and rotors for improved aircraft performance, significantly enhancing safety and combat performance.

Option Three also proposes changes to aviation forces in Korea. Once the ARI is fully implemented, personnel

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Photo by 4th Brigade Combat Team, 25th Infantry Division Public Affairs



An Apache crewmember with the 1st Cavalry Division prepares the helicopter for take-off in Iraq.

from aviation units (including Apache units) would rotate from stateside locations and serve roughly nine months in Korea, using equipment that is pre-positioned there. The personnel from these units would then return and be replaced with personnel from other stateside units. Based on the experience of commissioners and discussions with senior Army leaders, the Commission concludes that these short-term rotations will not permit aviation units the time needed to properly mitigate risks posed by the threat situation in Korea, which features a volatile military environment and the potential for no-notice hostilities. Specifically, rotating units will not have time to master the geographic and environmental conditions well enough to operate effectively and safely in the region. Rotating units also will make building and retaining enduring relationships with our Korean allies more difficult, relationships critical to warfighting success.

Rather than rotating a Combat Aviation Brigade, Option Three calls for a CAB to be forward stationed in Korea, which is the current practice. This would mean that the CAB would remain while individual soldiers rotate, providing a more stable fighting force. Forward stationing has disadvantages. It would increase costs by a net amount of about \$40 million a year, largely because of added costs for permanent-change-of-station moves and personnel allowances. Additionally, with forward stationing, a stateside Army division would not have an assigned CAB and would have to work with other stateside aviation units to provide needed training capability. Nevertheless, greater stability for the fighting force in Korea argues for accepting these disadvantages.

Finally, Option Three calls for the Army to review its emerging requirements for aviation in Europe, taking into account recent Russian adventurism. The Commission concluded that it makes sense to rotate aviation units to

Europe, but these units must have an appropriately resourced mission command element to ensure mission success.

Consistent with its charter and its time constraints, the Commission focused on the issue of Apache transfers and did not make recommendations regarding other aspects of the ARI, including retirement of all Kiowa Warrior armed reconnaissance helicopters and use of Lakota helicopters for initial training. For costing purposes, Option Three assumes implementation of the ARI proposals regarding retirement of all the Kiowa Warrior armed reconnaissance helicopters and using Lakota helicopters for initial rotary wing training.

Advantages of Option Three

According to TRAC analyses provided to the Commission, Option Three would offer more wartime capacity compared to the ARI. Capacity early in the war would be similar to the ARI because both maintain the same number of Regular Army Apache units. Later in the conflict, the four Army National Guard battalions would be mobilized and would provide added capacity. Classified analyses considered during the Comprehensive Analytic Review generally corroborate these findings (see NCFA Classified Annex for details).

Option Three also provides wartime surge capacity by maintaining approximately 280 Apache pilots and associated helicopters and equipment in the Army National Guard. These pilots and their units would be available to surge during wartime. This is less than the NGB Alternative's 420 pilots, but significantly more than the zero level of surge capacity offered under the ARI.

Option Three would also help with peacetime operational tempo. The forward stationing of an aviation brigade in Korea significantly reduces the number of deployed units because forward-stationed units are not considered to be deployed under Army counting rules. Primarily for this reason, the peacetime operational tempo for Regular Army Apache battalions improves significantly. Nevertheless, forward-stationed units could be away from their families and experience many of the stresses associated with deployments. Even if forward-stationed units were counted as deployed units, however, routine call-up and use of the Army National Guard Apache battalions provided under this option would permit Regular Army units to slightly exceed the goal that calls for units deployed for one year to spend two years in non-deployed status. The added peacetime capacity available under Option Three would be particularly useful if world events in Europe or elsewhere increase the demand for Apache units.

Finally, assessments by the CAA suggest that Option Three would be more cost effective than the ARI. The CAA analysis considers the time to deploy Regular and Army Guard units in a wartime scenario and the average annual costs of keeping

and using them in both the Regular Army and Army National Guard. CAA did not attempt detailed budgetary analyses and did not consider all operational impacts. However, based on average annual costs, CAA concludes that options with Apaches in the reserve components would be more cost effective than the ARI.

Disadvantages of Option Three

Option Three would add to costs, a significant disadvantage. However, the Commission offers an illustrative proposal to offset those added costs.

Under Option Three, operating costs would increase by a net of about \$165 million a year. This figure reflects the added costs of four Army National Guard Apache battalions (including costs to deploy them on a regular basis) and costs to forward station a CAB in Korea. These additional operating costs are partially offset by savings from foregoing the operation of two Army National Guard Black Hawk battalions.

In addition, Option Three would result in one-time costs of about \$420 million to remanufacture twenty-four Apache helicopters from the D to E models. These remanufactures would likely occur at some time beyond the next five years.

These added operating and procurement costs are small compared to the total defense budget. The Administration or the Congress may therefore be able to offset added costs through savings in budgets outside of the Army or in the non-aviation portions of the Army budget. In earlier chapters, the Commission offered some alternatives for offsetting costs.

However, the Commission recognizes that some or all of the offsets required to pay for this Apache option may have to come from within Army aviation. Therefore, the Commission proposes an illustrative approach to offsetting the added costs of Option Three from within aviation funds. The Commission did not attempt to create a detailed, time-phased budget plan; instead, these illustrative savings examine a five-year period when all changes are in place.

A portion of the added costs in Option Three could be offset by maintaining two fewer Black Hawk battalions in the Army National Guard. Another offset could be the savings from personnel cuts designed to leave Army National Guard personnel at the level of 335,000 planned in PB16. The remaining offsets could be achieved through a modest slowdown in the procurement program for Black Hawk helicopters. Option Three makes no change in the L-to-V conversion program for Black Hawks, a program that produces a fully digitized Black Hawk and, according to Army aviation leaders, a highly capable aircraft. However, buys of new Black Hawks (UH-60M) could be slowed. To offset the added costs of Option Three, the Army would probably have to buy five to ten fewer new Black Hawks per year. Based on information

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South Carolina National Guard photo by U.S. Air Force Tech. Sgt. Jorge Intriago



U.S. Army AH-64D Apache assigned to the 1-151 Attack Reconnaissance Battalion, South Carolina Army National Guard, conducts close air support operations during a joint exercise bringing together National Guard and active duty components with a focus on air-ground integration at Fort Bragg, N.C.

available to the Commission, in most years the Army should be able to adjust the annual buys so as not to undermine the multiyear contract for Black Hawks. It should be noted that reductions in buys of new Black Hawks would need to continue beyond the next five years in order to offset operating costs and provide funds needed to remanufacture twenty-four Apache helicopters.

Eliminating two Army National Guard battalions of Black Hawks and slowing the pace of new buys does have drawbacks. As has been noted, the Army will have about 3 percent fewer operational Black Hawk helicopters even though the Black Hawks are heavily used in wartime. Buying fewer new Black Hawks each year would also modestly slow efforts to modernize the Army National Guard's fleet. The Commission recognizes the important role of the Black Hawk and urges the Administration and Congress to examine other possible offsets.

However, if costs must be offset within Army aviation, the Black Hawk changes should be considered. The 3 percent reduction in operational Black Hawks would match the percentage reduction in operational Apaches under this option,

leaving the reductions in the two fleets balanced. (If the Kiowa Warrior armed reconnaissance helicopter is included in the count of "shooter" helicopters, then the reduction in shooters equals about 35 percent compared with the 3 percent reduction in Black Hawks.) Also, the modest reduction in Black Hawks does not significantly affect the TRAC or other assessments of wartime capacity. Finally, the slowdown in buys of new Black Hawks should not delay the date for completion of modernization of the fleet because of the reduction in the overall size of the Black Hawk fleet by sixty helicopters.

Figure 11 summarizes the descriptions and effects of the three options.

Overall, Option Three offers significant advantages. The option provides greater wartime capacity than the ARI or the NGB Alternative, a key advantage. Peacetime operating tempo also improves compared to the ARI and NGB Alternative approaches. Wartime surge capacity (measured by trained pilots in units) is higher than under the ARI. Option Three also improves aviation capabilities in Korea. Added costs under Option Three are significant, but could be offset by

Figure 11

DESCRIPTION AND ASSESSMENT OF OPTIONS

	OPTION #1: AVIATION RESTRUCTURE INITIATIVE (ARI)	OPTION #2: NATIONAL GUARD BUREAU ALTERNATIVE PROPOSAL	OPTION #3: NCFA RECOMMENDATION
DESCRIPTIONS			
<u>AH-64 APACHES</u>			
Regular Army battalions	20 ^a	18	20
National Guard battalions	0	6	4
Total aircraft	690	701	714
<u>UH-60 BLACK HAWKS</u>			
Regular Army battalions	10 ^a	10	10 ^a
National Guard/Army Reserve battalions	20	18	18
Total aircraft	2135	2075 ^b	2075
ASSESSMENTS			
Wartime capacity (compared to ARI)	- - -	Less than ARI	More than ARI
Wartime surge (Apache pilots in ARNG)	0	420	280
Peacetime deployment (BOG:Dwell) for Regular Army Apache battalions	1:1.9	1:2	1:3.2/1:2:2 ^c
COST (ABOVE PRESIDENT'S FY 2016 BUDGET PLAN)			
Increased annual operating	0	\$89M to \$176M ^d	0 ^e to + \$165M ^f
Increased one-time procurement	0	\$220M to +\$420M ^d	0 ^g to + \$420M ^h

^aDoes not include Korea equipment set battalions

^bAssumes NGB Alternative results in force structure reduction

^cNumber in italics assumes that forward-stationed units count as deployed

^dAccording to OSD-CAPE report to Congress ("Independent Cost Analysis of the ARI and the NGB Alternative")

^eAssumes offsets in Black Hawk program and other changes

^fIncludes about \$40 million in added costs to forward station a CAB in Korea

^gAssumes remanufactured Apaches and offsets in Black Hawk program along with other changes

^hAssumes remanufactured Apaches and no offsets

either modest changes in the Black Hawk fleet or other offsets identified by the Administration or Congress. Perhaps most important, Option Three maintains Apaches in the Army National Guard and assumes a commitment to regular use of those forces, therefore contributing to a key Commission goal of achieving one Army that works and trains together in peacetime and, if necessary, fights together in war.

Recommendation 57: Congress, the Department of Defense, and the Army should implement the Commission's plan (Option Three) for distribution of the Apache fleet. The Commission's plan maintains twenty-four manned Apache battalions including twenty in the Regular Army equipped with twenty-four aircraft each and four in the Army National Guard equipped with eighteen aircraft each. The plan adds only two Black Hawk battalions to the Army National Guard. The Army should commit to using the four Army National Guard Apache battalions regularly, mobilizing and deploying them in peacetime and war.

Recommendation 58: The Army should maintain a forward-stationed Combat Aviation Brigade in Korea.

MULTICOMPONENT UNITS

Multicomponent units combining Regular Army, Army National Guard, and Army Reserve soldiers, can improve readiness and, importantly, force integration. Multicomponent aviation units could also improve readiness by exploiting the differing strengths of Regular Army and reserve component units. Training together would help integrate the Regular Army with the Army National Guard and Army Reserve and so move toward greater adherence to the Army's desire for Total Force integration. To achieve this goal, multicomponent units should be co-located so that they can train together in peacetime.

The U.S. Air Force makes substantial use of multicomponent approaches to achieve these goals. For example, the Air Force has associate unit programs that pair Air National Guard or Air Force Reserve units with active-duty units. These associate units share equipment, train together, and conduct missions and maintenance activities together. The Air Force believes that initiatives like the associate program provide better training and leverage the skills and experience of different components. The associate program also helps integrate active and reserve component units.

The Army has begun limited use of multicomponent approaches in aviation units with fixed-wing C-12 aircraft. Some Army National Guard and Regular Army units operating C-12s will be co-located and will train and potentially deploy together. Other co-located units—such as Black Hawk and Chinook (heavy lift) helicopters in some states—permit units from different components to train together.

The Commission concludes that the Army should try to make greater use of multicomponent aviation units in order to improve readiness and better integrate Regular Army, Army National Guard, and Army Reserve forces.

Recommendation 34: The Army should develop a substantial pilot program to test multicomponent approaches. Options could include the following:

- Appending an existing Army National Guard or Army Reserve aviation company to a Regular Army aviation battalion. The Commission strongly recommends that units be co-located so that they can train together.
- Applying the shared-equipment approach used in Air Force associate units to Army general support aviation. General support aviation units fly fewer multiple-aircraft missions and so might be able to share equipment. Multicomponent units should be co-located so that they can train together.
- Assigning Regular Army pilots to Army National Guard or Army Reserve units, or vice versa, in order to leverage the unique skills and experience present in different components. This approach could be used for all types of Army aircraft.
- Other approaches proposed by Army experts.

The Army should complete a detailed design for a pilot program within one year after publication of this report and fully implement the pilot program within one year after completion of the design work.

Some of the above approaches would not work for all Army aircraft and missions. The specific structure of the Air Force reserve associate program, and especially the sharing of equipment, would not work well for some types of Army aviation units (including Apache units) in which pilots routinely fly the unit's assigned aircraft simultaneously in collective training missions involving multiple helicopters. Appending a co-located reserve component unit to a Regular Army unit would probably not work for Apaches because it would be difficult to find Regular Army and Guard Apache units that are located close together. However, some of the above approaches, or others identified by the Army, should permit use of multicomponent units for many types of Army aircraft.



U.S. Army National Guard photo by 1st Lt. Aaron Decapua

Soldiers and UH-60 Black Hawks from the 40th Combat Aviation Brigade, California National Guard, take part in an air assault exercise at the Combined Arms Collective Training Center at Camp Roberts, California.

The multicomponent approach does have potential disadvantages that would have to be considered during design of the pilot program. To avoid adding to costs, the pilot program should use existing units that already have equipment and operating funds. Units would have to be chosen at locations that offer enough space for appended companies to train. Design of the pilot program will have to consider how best to integrate reserve component weekend training with Regular Army training, and how to avoid adverse effects on promotion opportunities for participating personnel. Importantly, multicomponent units should be designed so that the Regular Army units can deploy effectively without their affiliated reserve units if that is required to meet military needs. Some of the proposals noted above (such as appending reserve component units) should help the Army achieve this goal. While these challenges are potentially significant, the Army should strive to overcome

them in order to achieve the overarching goal of better integration of Regular Army, Army National Guard, and Army Reserve forces.

ADDITIONAL RECOMMENDATIONS

The recommendation regarding Apache transfers is intended to be generally consistent with the funding proposed in the President's budget plan submitted along with the fiscal year 2016 budget request. The Commission also identified other high-priority aviation initiatives that would require significant funding.

If current funding limits remain in place, the Army would need to identify offsets in order to pursue these initiatives. However, the Commission believes that significant threats to national security may eventually lead to defense funding that substantially exceeds the funding recommended in PB16.

Potential efficiencies identified in the “Fiscal Challenges” chapter of this report (see page 43), may also free up funding. Added funding is not certain and, even if it eventually occurs, might not materialize for several years. Nevertheless, because the Commission is charged with a long-term look at the future of the Army, it determined that identifying high-priority initiatives is appropriate even though they require substantial funding.

The Commission places a high priority on efforts to retain eleven Combat Aviation Brigades in the Regular Army. Considering all types of Army units, the demand for aviation forces is among the highest, and the addition of an eleventh CAB would help meet this strong demand.

The eleventh CAB would be used in Korea. Under the current ARI plan, the CAB located in Korea will inactivate in fiscal year 2019, and personnel from stateside CABs would rotate to Korea and operate helicopters already in place in the region. If an eleventh CAB is retained, the CAB in Korea would remain fully manned, and rotational units would not be needed.

An eleventh CAB offers important advantages. Peacetime operational tempo for Regular Army Apache units would meet the Army’s BOG-to-dwell goals because the CAB would be permanently stationed in Korea rather than deploying to the region. Most wartime capacity shortfalls, including some early shortfalls identified by TRAC analyses discussed above, would be eliminated. Importantly, the nation would have a stable force of Army aviation in Korea rather than the rotating force planned under the ARI. As noted above, stability would be a major advantage in a region that is volatile and could become involved in combat with little or no notice.

Retaining an eleventh Regular Army CAB would, however, add substantially to costs. Compared to those under the Commission’s recommended Apache transfer option, annual operating costs would increase by between about \$185 million and \$450 million a year. The range depends on whether other force structure changes are made to offset the added personnel required to retain the CAB. Procurement costs would grow by even more. For aircraft other than Apaches, the eleventh CAB would draw from the equipment set already planned for Korea. For Apaches, however, the Commission’s Apache transfer recommendation uses the forty-eight stateside Apaches belonging to units that would rotate to Korea. If an eleventh CAB is added to this plan, and units no longer rotate, then forty-eight additional Apaches would have to be purchased to outfit stateside units. The one-time cost to purchase forty-eight new Apaches—the most expensive Army helicopters with a per-aircraft cost of about \$40 million—would total roughly \$1.9 billion. A combination of higher defense budgets, efficiencies, and

internal Army offsets would be needed to pay this bill. In earlier chapters the Commission offered some alternatives to help offset these added costs.

Recommendation 17: The Army should retain eleven Combat Aviation Brigades in the Regular Army.

The Commission learned from senior Army leaders that the current level of flying hours for the Regular Army (an average of about eleven hours per pilot per month) permits typical aviation units to maintain platoon- to company-level proficiency, whereas collective proficiency at the battalion level is appropriate and requires an average of about 14.5 hours per pilot per month. Aviation units in the reserve components typically maintain individual- to team-level proficiency using about seven hours per pilot per month for mission aircraft, whereas platoon-level proficiency is appropriate and requires about eight hours per pilot per month. Some of these shortfalls can be offset with Overseas Contingency Operations money, but that type of funding is becoming less available.

Without additional flying hours, individual and collective training proficiency will decline, contributing to further declines in readiness and possible increases in accident rates. According to Army data, the rate of serious aviation accidents in fiscal year 2015 stood about 16 percent above the average level in the fiscal years from 2006 to 2010 (these results are based on Army aviation accidents in Classes A, B, and C and so include serious and less serious accidents). Last year aviation units stood down because of concerns stemming from a series of serious accidents. Many factors influence accident rates, such as operational tempo and the introduction of new aircraft models. But the relatively low level of training flight hours could be one cause of the increase in accident rates, a trend that is worrisome to the Commission.

The Army should determine the exact level and composition of the increase in flying hours. However, an increase of about two hours per pilot per month in the Regular Army, Army National Guard, and Army Reserve may be appropriate. Such an increase would apply to all types of Army rotary wing aircraft and, compared to the PB16, would add between \$250 million and \$300 million a year in costs.

Recommendation 59: The Army should consider increasing flying hours available for peacetime training.



Photo by Sgt. 1st Class Sadie Bleistein

A CH-47 Chinook door gunner with Task Force Destiny of the 101st Combat Aviation Brigade surveys the ground on a flight from Kandahar Airfield, Afghanistan, to Forward Operating Base Tarin Kowt.

The Commission heard from Army aviation officials who believe that modernization is key to maintaining aviation capability, given the reductions in force size. The Army should pursue a robust science and technology effort designed to offset evolving threats and ensure the survivability of helicopters flying in hostile environments (the NCFA Classified Annex contains some additional detail about this important issue). The Army should also consider a program to develop a future armed reconnaissance helicopter. Finally, the Army should continue to place a high priority on development of technologies for future vertical lift.

In the nearer term, added modernization funds could be used to offset reductions to the Black Hawk procurement program discussed as part of the Commission's Apache transfer recommendation, and perhaps even accelerate the Black Hawk modernization. Added modernization funds could also be used to buy more Apache helicopters, thereby avoiding the need to equip Army National Guard battalions with only eighteen aircraft under the Commission's approach.

Recommendation 60: The Army should implement a more aggressive modernization program for its aviation forces.