

[H.A.S.C. No. 113-42]

HEARING  
ON  
NATIONAL DEFENSE AUTHORIZATION ACT  
FOR FISCAL YEAR 2014  
AND  
OVERSIGHT OF PREVIOUSLY AUTHORIZED  
PROGRAMS  
BEFORE THE  
COMMITTEE ON ARMED SERVICES  
HOUSE OF REPRESENTATIVES  
ONE HUNDRED THIRTEENTH CONGRESS  
FIRST SESSION  
SUBCOMMITTEE ON TACTICAL AIR  
AND LAND FORCES HEARING  
ON  
**FISCAL YEAR 2014**  
**ARMY MODERNIZATION PROGRAMS**

HEARING HELD  
APRIL 26, 2013



U.S. GOVERNMENT PRINTING OFFICE

80-771

WASHINGTON : 2013

SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES

MICHAEL R. TURNER, Ohio, *Chairman*

FRANK A. LoBIONDO, New Jersey  
JOHN FLEMING, Louisiana  
CHRISTOPHER P. GIBSON, New York  
JON RUNYAN, New Jersey  
MARTHA ROBY, Alabama  
PAUL COOK, California  
JIM BRIDENSTINE, Oklahoma  
BRAD R. WENSTRUP, Ohio  
JACKIE WALORSKI, Indiana  
MAC THORNBERRY, Texas  
WALTER B. JONES, North Carolina  
ROB BISHOP, Utah

LORETTA SANCHEZ, California  
MIKE McINTYRE, North Carolina  
JIM COOPER, Tennessee  
JOHN GARAMENDI, California  
RON BARBER, Arizona  
DANIEL B. MAFFEI, New York  
JOAQUIN CASTRO, Texas  
TAMMY DUCKWORTH, Illinois  
WILLIAM L. ENYART, Illinois  
PETE P. GALLEG0, Texas  
MARC A. VEASEY, Texas

JOHN WASON, *Professional Staff Member*

DOUG BUSH, *Professional Staff Member*

JULIE HERBERT, *Clerk*

# CONTENTS

## CHRONOLOGICAL LIST OF HEARINGS

2013

	Page
HEARING:	
Friday, April 26, 2013, Fiscal Year 2014 Army Modernization Programs .....	1
APPENDIX:	
Friday, April 26, 2013 .....	25

### FRIDAY, APRIL 26, 2013

#### FISCAL YEAR 2014 ARMY MODERNIZATION PROGRAMS

##### STATEMENTS PRESENTED BY MEMBERS OF CONGRESS

Sanchez, Hon. Loretta, a Representative from California, Ranking Member, Subcommittee on Tactical Air and Land Forces .....	2
Turner, Hon. Michael R., a Representative from Ohio, Chairman, Sub- committee on Tactical Air and Land Forces .....	1

##### WITNESSES

Barclay, LTG James O., III, USA, Deputy Chief of Staff, G-8, U.S. Army .....	3
Phillips, LTG William N., USA, Military Deputy to the Assistant Secretary of the Army (Acquisition, Logistics, and Technology), U.S. Army .....	5

##### APPENDIX

##### PREPARED STATEMENTS:

Barclay, LTG James O., III .....	29
Phillips, LTG William N. ....	37

##### DOCUMENTS SUBMITTED FOR THE RECORD:

[There were no Documents submitted.]

##### WITNESS RESPONSES TO QUESTIONS ASKED DURING THE HEARING:

Mr. Barber .....	51
Mr. McIntyre .....	51
Ms. Sanchez .....	51

##### QUESTIONS SUBMITTED BY MEMBERS POST HEARING:

Ms. Duckworth .....	55
Mr. LoBiondo .....	55
Mrs. Roby .....	56
Mrs. Walorski .....	57



## **FISCAL YEAR 2014 ARMY MODERNIZATION PROGRAMS**

---

HOUSE OF REPRESENTATIVES,  
COMMITTEE ON ARMED SERVICES,  
SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES,  
*Washington, DC, Friday, April 26, 2013.*

The subcommittee met, pursuant to call, at 10:30 a.m., in room 2118, Rayburn House Office Building, Hon. Michael R. Turner (chairman of the subcommittee) presiding.

### **OPENING STATEMENT OF HON. MICHAEL R. TURNER, A REPRESENTATIVE FROM OHIO, CHAIRMAN, SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES**

Mr. TURNER. The Tactical Air and Land Forces Subcommittee meets today in open session to receive testimony on fiscal year 2014 Army modernization programs.

Before we get started on today's hearing, I just want to take the opportunity to thank the ranking member and all of the members of the subcommittee for their attendance and participation. In the hearings we have held to date we have had very good participation even though today is the last day before recess. So there are lots of conflicts on the Hill as everyone is trying to get additional meetings in. We have had just great support from the members of the subcommittee.

Members have been actively engaged on these important issues, as was demonstrated by the multiple rounds of questions that we have had at our hearings. Also members who are not able to attend today because of the multiple conflicts that are happening on Capitol Hill will have the ability to submit questions for the record.

At one of our hearings we learned about the challenges of reducing the weight burden of critical equipment that our soldiers and marines currently have to carry into combat, and Ms. Sanchez and Ms. Tsongas raised some concerns about providing body armor specifically designed for women. During this hearing we learned that the Army was making positive progress in this area and this is one of the many issues that I believe we will discuss in our subcommittee mark.

Turning to today's hearings, I know that the Army faces a number of significant modernization challenges based on the current budget environment. I was recently asked during a visit to a production facility in Arizona, "How does the Army choose between resetting its current equipment and modernizing for the future?" The answer, of course, is that we have to do both. The challenge based on threats and capabilities gaps is how do you prioritize and go forward with a balanced approach.

I have two short comments about the Abrams tank program and the Ground Combat Vehicle. Regarding Abrams, I know that the Army believes that the foreign military sales, FMS, alone is enough to keep the tank upkeep line viable until 2018. Congress over the last few years has taken the position that no funding for the upgraded line was an unacceptable level of risk to assume and that the Abrams upgrade line should include both FMS and minimum level of U.S.-based workload. I hope that you will work with Congress to sustain this unique and critical capability, and I look forward to further discussing this issue with you over the course of the next couple of months.

The Ground Combat Vehicle is one of the Army's top modernization programs. The program, which is just beginning development, will eventually replace the Bradley Fighting Vehicle. I think most of us on the subcommittee support the Army's need to modernize. Our oversight challenge is to ensure that the Army is executing an acquisition strategy that minimizes the risk to the Government and in turn to the taxpayer. I understand that the Army's recent plan is to down-select to one contractor at the beginning of the engineering, manufacturing and development phase, EMD, instead of funding two contractors all the way through EMD.

My concern is that one of the many lessons learned that has been reported by the Government Accountability Office is the issue of programs entering the EMD phase too early without enough knowledge can cause significant difficulty. Knowledge is defined by the combination of technology maturity and a thorough understanding of requirements and realistic cost estimates. In this case we need to ensure that the Army has enough knowledge before they downselect to one contractor in order to minimize the cost, schedule and performance risk to the Government and the taxpayer.

Before we begin, I would like to turn to my good friend and colleague, Loretta Sanchez, for any comments she would like to make.

**STATEMENT OF HON. LORETTA SANCHEZ, A REPRESENTATIVE FROM CALIFORNIA, RANKING MEMBER, SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES**

Ms. SANCHEZ. Thank you, Chairman Turner. You went to Arizona without me? Okay.

Welcome, gentlemen, and thank you for being before us today. The hearing today is for the fiscal year 2014 Army budget request for equipment, research, development, and procurement. After many years of additional billions of dollars of procurement funding through supplemental appropriations, the Army now faces the difficult task of doing modernization with very little OCO [Overseas Contingency Operations] funding and declining baseline budgets. I know it is a difficult thing to do, and I don't want to beat a dead horse, but there have been several Army programs one after the other that have been canceled due to cost overruns and changing requirements or shifting priorities. I think we all understand that.

So I think it is just difficult to have a lot of confidence in what is going on with the forward-looking programs that we have within the Army. I don't think it is completely the Army's fault. I know that years with different administrations, different Army leaders,

different visions, I know that before 9/11 the Army's focus was on rapid deployment and getting lighter to move faster, and then the realities of the wars in Afghanistan and Iraq pushed the Army to add armor, more weight, to have more platforms in order to make them more survivable against IEDs [Improvised Explosive Devices] and other threats. And due to advances in technology, the Army has faced dilemmas similar to the one it now faces. So one would ask how does the Army proceed?

I think it is a really soul-searching sort of, what does the next battle look like? What is the next war going to be? And I think that one of the things that we can do is to think of the Army's intention to focus modernization on the individual soldier such as the improved body armor. I think that is a good starting point. And I think no matter what kinds of wars are fought, troops will need excellent communications and intelligence. So the Army's effort to build a battlefield Internet down to the individual soldier I think is also a good idea.

One thing that the Army brings to the fight that no other service can is its huge fleet of helicopters. Again, regardless of the type of wars that we are going to be engaged in, I think we can say there is going to need to be a continued emphasis to have that.

But I am less comfortable with where the Army is heading in some of its other modernization plans. The Ground Combat Vehicle, as Mr. Turner suggested, is a very ambitious program. It could also prove to be very expensive. So I think we are definitely going to drill down on that, not only today but as we move and see it for the future.

So I am anxious to hear what you have to say and I will submit the rest of my comments for the record, Mr. Chairman.

Mr. TURNER. Thank you. I would like to welcome our witnesses, Lieutenant General James Barclay, Deputy Chief of Staff for the Army, G-8, and Lieutenant General William Phillips, Military Deputy to the Assistant Secretary of the Army, Acquisition, Logistics, and Technology.

Gentlemen, thank you for your service. We look forward to your message today.

General Barclay.

#### **STATEMENT OF LTG JAMES O. BARCLAY III, USA, DEPUTY CHIEF OF STAFF, G-8, U.S. ARMY**

General BARCLAY. Chairman Turner, Ranking Member Sanchez, members of the Subcommittee on Tactical Air and Land Forces, I want to thank you for this opportunity to discuss the Army's fiscal year 2014 President's budget request as it pertains to our modernization. On behalf of Secretary McHugh and General Odierno, I would also like to take this opportunity to thank you for your support and demonstrated commitment to our Army during the past decade of war.

As we all know, we have challenges ahead and our number one priority remains supporting our warfighters in Afghanistan. We owe these brave soldiers nothing less. But I do want to emphasize that we need your support now more than ever because we are entering an incredibly turbulent time for equipping our units.

Over the next 3 years we will continue to deploy and redeploy units to combat in Afghanistan and other locations. We are also going to start to retrograde of theater equipment that is in Afghanistan. We also have to keep Korea ready to fight and reestablish our global and regional response forces. At the same time we are also resetting the equipment that we are bringing home from a decade-plus of war. And all the while this, we have to remain prepared for the defense support to civil authorities and other homeland defense priorities, and we all have to do this with substantially less money than we had planned due to sequestration and other budget reductions. Failure to get this right will impact the equipment readiness of our units for years to come.

Throughout our history we have drawn down our Army after every war. What is different this time is that we are drawing down our Army before the war is over. The previous drawdowns have resulted in a less-than-ready and hollow force. Unfortunately, if we proceed with the full effects of sequestration we will once again have a less-than-ready and hollow force.

The effects on our equipment modernization will be dramatic because in the near term we cannot reduce force structure nor can we reduce the cost of the war quick enough to pay the Army's share of sequestration. Therefore, equipment modernization and readiness will be reduced twice, once for the proportional share and then again to pay for the continuing war costs and to meet other bills.

Sequestration will result in delays to every one of our modernization programs, to include the Ground Combat Vehicle, the network, our helicopters, and the Joint Light Tactical Vehicle, in most cases increasing the cost. It will also create an inability to reset our equipment employed in years of war resulting in a significant delay in equipment readiness of six divisions. All of these effects are in addition to the changes that we have already made in the fiscal year 2014 President's budget request that we are going to talk about today.

In the coming months the Administration will present to Congress the fiscal year 2014 overseas contingency operations funding request. While this request is not yet final, I want to thank the Congress for your previous support, providing us with the necessary funding to equip our young men and women going to war and for supporting the reset of their equipment upon return.

I would like to point out that the costs of war do not go down immediately as our soldiers return. In fact, we will need your support for funding the reset and replacement of our equipment for 3 years beyond 2014. Failure to do this would have a catastrophic effect to unit readiness. We are all aware of the strains on the Federal Treasury and the desire to reduce war funds as soon as our soldiers return home. I would ask that you support our future requests for the critical reset of our equipment.

In March of this year Secretary McHugh and General Odierno published their Army Equipment Modernization Strategy. This strategy focuses on our efforts on supporting our soldiers and small unit formations while maintaining our advantages to deter and defeat potential adversaries. We do this by identifying achievable requirements, applying best practices in acquisition and sustainment

and seeking incremental improvements, all while harnessing network enabled capabilities to solve near-term needs, and we are doing this while investing in military unique revolutionary and evolutionary technologies to solve future needs.

The key to this strategy is procuring equipment that is versatile and tailorable yet cost-effective and affordable. The centerpiece of our equipment modernization program is the soldier and the squad. Our investment plan provides our small units with a range of equipment, including individual and crew-served weapons, next-generation optics and night vision devices, body armor and advanced individual protection equipment providing lethality and force protection to the soldier and squad.

In order to provide our soldiers with unparalleled advantage, we intend to enhance our equipment with incremental improvement by integrating technologies and applications that empower, protect, and unburden soldiers and formations by improving our network in order to enable decisionmaking across the joint force, all the while improving our vehicle fleet capabilities by increasing lethality and mobility while optimizing survivability and sustainability, and improving our aviation platforms with digitization and additional procurement of unmanned aviation systems.

In conclusion, I have been the G-8 of the Army for almost a year now, and it is truly an honor for me to be here before you today representing the great men and women of our Army. Every day in peace and war our soldiers, along with our airmen, sailors, marines, and Coast Guard personnel defend our Nation and all that it stands for. The state of our Nation's finances as well as the financial struggles of our citizens is also on our minds. We know they are struggling financially, yet they steadfastly provide our soldiers with the resources we need and we are grateful.

Our commitment to you is that we spend each and every dollar wisely and only ask for that which we truly need. The Secretary and Chief have made this perfectly clear in their equipment modernization strategy as they have challenged us to be both cost-effective and affordable.

I look forward to answering your questions today and working with you in the future. Thank you.

[The prepared statement of General Barclay can be found in the Appendix on page 29.]

Mr. TURNER. General Phillips.

**STATEMENT OF LTG WILLIAM N. PHILLIPS, USA, MILITARY DEPUTY TO THE ASSISTANT SECRETARY OF THE ARMY (ACQUISITION, LOGISTICS, AND TECHNOLOGY), U.S. ARMY**

General PHILLIPS. Good morning, Chairman Turner, Ranking Member Sanchez, and distinguished members of the subcommittee. Thank you for this opportunity to testify on the Army's modernization and acquisition programs for fiscal year 2014. I respectfully request that my written statement be made part of the record for today's hearing.

On behalf of our Army, I thank you for the steadfast support to provide our courageous men and women in uniform the world-class weapons and systems and equipment. Our soldiers are the best

equipped in the world, thanks to your extraordinary commitment to our Army.

Up front I would also like to extend my sincere appreciation for your support of a number of critical acquisition efforts, to include the award of multiyear contracts. This action alone will save taxpayers over \$2 billion on the Chinook and Black Hawk helicopter programs.

Our Army and Army acquisitions face unprecedented fiscal and budget challenges. Sequestration is having a devastating effect on Army modernization. To best meet the fiscal challenges we face, the Army is focused on driving affordability and cost-effectiveness in every decision we make on every program.

We remain committed to our modernization strategy which begins with the soldier, the most effective weapon on the battlefield. The soldier and squad are the foundation of our Army and the centerpiece of our modernization program. We will equip our squads for tactical overmatch in all situations, we will connect soldiers to the network, and we will provide vehicles with improved mobility, lethality, and survivability, like Ground Combat Vehicle and Joint Light Tactical Vehicle.

We will provide the soldier and the squad with a range of equipment, including individual and crew-served weapons, next-generation optics, and night vision devices, and the world's best body armor. Our squad formations' tactical superiority will be enabled by a suite of small unit systems, including unmanned aerial systems, ground-based robots, counter-IED devices and the latest surveillance systems. We will connect the soldier to the Army's network to create a greater situational awareness and overwhelming synergy.

Our combat and tactical wheeled vehicle fleets are being developed to connect this more capable squad with the network. Our future vehicle fleets, again like Ground Combat Vehicle, will also provide increased lethality and mobility to squads while optimizing survivability through the use of armor packages that can be scaled to meet mission requirements.

Our modernization efforts are designed to prepare the entire force for a complex and uncertain battlefield by putting a squad with precise information and overmatch capability in the right place at the right time to execute the mission.

For Army aviation we will continue to successfully modify and upgrade and remanufacture existing platforms to extend the life of our aircraft and keep our air crews safe. We will continue to invest in science and technology at the same time to ensure the future fleet.

Mr. Chairman, I would like to briefly address the defense industrial base that you mentioned this morning. The upcoming end of combat operations and the changing fiscal environment are prompting the Army's commercial and organic industrial base to adjust to a new reality of reduced requirements and constrained resources. Of great concern to the Army are the likely long-term impacts, to include the loss of critical skills, the loss of suppliers at all tiers, and an increase in the number of single point failures in the supply chain. The Army is aggressively evaluating how best to identify and preserve critical industrial-based capabilities.

Mr. Chairman, the Army continues to prioritize sound program acquisition management that drives affordable and executable requirements and achievable acquisition strategies. We have taken specific steps to avert the leading cause of past cancellations.

In addition, the Army has fully embraced the Department of Defense better buying power initiatives to address cost and schedule risk in programs and achieve better value for the taxpayer. In 2012 alone we achieved \$370 million in "should cost" savings across 300 programs. During my 3 years in this position, we have made significant improvements to our acquisition system.

In closing, Mr. Chairman and distinguished members of the subcommittee, these are challenging and difficult times. I thank you again for your steadfast support of our outstanding soldiers, civilians, and the families of the United States Army, and we welcome the dialogue that we will continue with you over our modernization programs. Thank you, sir and ma'am, and I look forward to your questions.

[The prepared statement of General Phillips can be found in the Appendix on page 37.]

Mr. TURNER. Gentleman, thank you so much for your comments and specifically your comments that relate to the effects of sequestration. As you know, the Department of Defense having been restrained from planning for sequestration I think has inhibited congressional action to set aside sequestration because, since we weren't able to tell the public or even inform the rest of Congress what the effects of that even some of us foresaw, it made it very difficult. So the message now is very important, and I appreciate your including that.

Before I go to my first question, I want to recognize General Barclay for a moment. Many times when we are here at a hearing we ask for people's professional judgment, being unaware of the personal aspects of their insight. I had General Barclay and General Phillips in my office and I was very pleased to learn from General Barclay that he has one son who serves in the Army currently and another who has previously served. General Barclay's son, Captain Joe Barclay, was seriously wounded by an improvised explosive device in 2006 while serving in Afghanistan and he is currently medically retired. We appreciate his service and dedication. And you have another son, Chief Warrant Officer Bill Barclay, who is flying Black Hawk helicopters and will be returning from Afghanistan very soon.

I think it is important to recognize and acknowledge both your service and the service of your family because so many times when we get the professional opinion of those who testify before us, we know that it comes not only with just an insight and commitment to those in their command, but also their country and their family that they are dedicated to. So thank you for that service.

General BARCLAY. Thank you, sir.

Mr. TURNER. General Barclay, I also want to recognize you as an Army aviator and former Commandant of the Army Aviation Center at Fort Rucker. So I know that the subject matter of my question goes right to the background of your experience.

The Kiowa helicopter is in desperate need for enhancements in order to make it a safer helicopter to fly. Original the Army's plan

was to replace this helicopter with the Comanche helicopter, but that program was canceled. Then the plan was to replace the Kiowa with the armed reconnaissance helicopter, but that program was terminated. Unfortunately, as a result of these terminated programs, very little was done in regards to upgrading the Kiowa.

I understand that currently the Army is in the process of deciding whether they should conduct a comprehensive system life extension program or proceed with a full and open competition based on existing helicopter platforms that would have to be modified, called the Armed Aerial Scout Program. I believe that regardless of the decision that the Army makes, we need to ensure that we are making the Kiowa a safer aircraft to fly until a replacement is available.

General, would you please tell us what the Army's plans are to continue to upgrade the Kiowa until a replacement platform can be fielded and then provide an update on the current status of the AAS [Armed Aerial Scout] program?

General BARCLAY. Thank you, Mr. Chairman. You are correct, the Army is looking at the modernization and replacement of the current Kiowa Warrior. We are currently going through the process and hopefully by the late summer, mid-to-late summer, based on some of the outcomes of the fiscal guidance we get we will make a determination on the way ahead for an Armed Aerial Scout or whether there will be a service life extension program.

Those are the two options. But those are not currently what we still have to do with the current fleet, because either one of those we would not be able to get any of those into the field until the mid-to-late twenties, so we have to do something with the current fleet.

We currently have what is called the Cockpit and Sensor Upgrade Program, the CASUP program, and that is an obsolescence and safety enhancements to the current fleet in order to allow it to continue to do the mission that it has within the Army until we—regardless of the decision whether we do an Armed Aerial Scout or a service life extension program on the current fleet. That is our bridge to get us to that point in the future, sir.

Mr. TURNER. I appreciate your comment on having a need now, because we all know that this is an issue that we are very concerned of, those who operate that craft and the issue of safety.

General Phillips, I am very concerned about the Joint Systems Manufacturing Center in Lima, Ohio, and the BAE facility in York, Pennsylvania. As you know, there has been a zeroing out of the Ground Combat Vehicle and the Armored Multi-Purpose Vehicle programs with perhaps an overreliance on foreign military sales. I am very concerned that the assumption that these facilities can remain viable specifically of course relying on the foreign military sales is such that may need congressional action.

The last 2 years Congress has put funding back in because of a lack of belief that foreign military sales alone were sufficient or that these facilities could be turned on and off like a light switch. Just send everybody home and they will come back with the same level of skills and commitment.

We don't see in your budget any alternative plan. How is it that you think that the industrial base will be able to operate just on

foreign military sales? What is your backup plan if that is not the case? And do you also agree that these facilities cannot be abandoned and then turned back on again to their high level of manufacturing expertise?

General PHILLIPS. Mr. Chairman, I appreciate your question. The industrial base is very important to our Army. The JSMC [Joint Systems Manufacturing Center] Lima, Ohio, facility is also critically important, and it is not the Army's intent to shut down Lima, because it is critical to the industrial base. Having said that, the Army actually has more M1A2 [Abrams] tanks than it—it is buying more than it actually needs at this point.

If you look back to the fiscal year 2012 budget that we received, we still have 67 tanks that are being built and that production of those tanks will extend through December of 2014. In the last budget that we received from Congress was another \$181 million also with the potential for between 20 to 24 tanks that also would go into Lima as well. That takes us at about two to three per month out to about the middle of June, June 16, maybe toward the end of June 16.

When you couple that with foreign military sales, and I am talking about firm commitments we have from numerous nations, there are three nations in particular that have about 373 vehicles that will be produced at JSMC. And that is going to take production well into 2016 and potentially beyond. Those are three countries with firm commitments, either foreign military sales or through direct commercial sales of other vehicles, such as Israel and Emir. Beyond that, there is another 466 vehicles beyond 2016 that would potentially take production into 2017, 2018, maybe beyond.

We are also working the ECP [Engineering Change Proposal] upgrade for the Abrams tank, and the ECP upgrade will start about 2018 in terms of putting production back into JSMC.

So, sir, to wrap up my comments, we are very concerned about the industrial base. We are studying it. We are doing a deep dive with our PEOs [Program Executive Officers] and with A.T. Kearney, and we are committed to make sure we have the right level of workload within JSMC to keep it viable now and in the future.

Mr. TURNER. General, I just want to point out that the vehicles that you are talking about that there is funding for, we funded. They were not requested by the DOD [Department of Defense]. If they had not been funded by Congress, this facility would be at risk. If you continue to not fund something you are in essence shutting it down. And these are not facilities that can be reconstituted. They are Government-owned, contractor-operated. I mean the Government owns them. When we have responsibility for the industrial base there should be an understanding that our budgeting, our request for vehicles and transitions to new vehicles, should include making sure that that asset continues to be viable and operate.

We are going to continue to look at that. But as you cite, oh, we are doing fine, you are only doing fine because we intervened. We want you to continue to do fine, and we have very serious concerns that your projections are such that, again, if you don't fund it, it will shut down. And then we lose that capability. We don't have other facilities that have that capability. Again, they are Govern-

ment-owned so there is an inherent responsibility I think on the Government's side.

General PHILLIPS. Congressman, could I comment quickly. It is not the Army's intent to shut down JSMC. We are fully aware of what capability it has.

Mr. TURNER. Do you acknowledge though that but for Congressional funding that facility would be greatly at risk?

General PHILLIPS. Sir, I agree that it would be at risk, but with the foreign military sales that come into the facility, it certainly provides workload into 2016 and potentially beyond.

Mr. TURNER. One of the things that we are going to be looking at is a greater understanding from DOD as to its responsibility to manage its inventory acquisition so we don't have these spikes and peaks putting these facilities at risk that we own. I know we can work directly with you. I know you have a commitment to it, and I appreciate that.

I turn to my ranking member.

Ms. SANCHEZ. Thank you, Mr. Chairman.

Gentlemen, in fiscal year 2013 the Army asked to receive \$350 million to procure new JTRS [Joint Tactical Radio System] Radios. This is about the JTRS. The fiscal year 2014 budget includes about \$400 million more for new JTRS Radios. The Army's plans for buying these radios have changed quite a bit over the last few years. In general the Army has moved away from more competition conducted more often with the hope of encouraging innovation and driving down the cost.

I think that it is a good idea overall, but I am very concerned that the Army is almost a full year late in providing a report to Congress on exactly what the plans are to proceed with the various parts of JTRS. Specifically, last year the Army was tasked with providing this report by the end of July 2012, but we still haven't gotten that report. As I mentioned, the Army is asking for another \$400 million for this.

So why should this committee authorize any of this funding when you are a year late on a report that we asked for?

General PHILLIPS. Ma'am, I will take that on and then ask for General Barclay to join me as well. But we will get the report to you. In the interim, I know that my boss, Ms. Shyu, sent a series of updates to Congress on where we stood with the JTRS program.

Just a slight bit of history, OSD [Office of the Secretary of Defense] managed the program for many years. The Army took the program over about 4 years ago. And as we looked at the program and where it stood as we brought it into the Army and looked at the management of the program and what the official program of record was doing, we learned that commercial industry in many cases had actually passed the Army up in terms of capability meeting many of our requirements. So we purposely went after those programs that we thought we needed to cancel or terminate, and we did that in the case of the Ground Mobile Radio and also the Airborne Maritime/Fixed Station Radio. We canceled both of those programs and we are going forward with a strategy that we have reported to Congress in a number of letters that we are going to execute a full and open competition, because we know that indus-

try can produce these radios, they can do it cheaper, better, faster than we could have done under the official program of record.

Our intent this year is to issue three requests for proposals for three different types of radios within the JTRS family of radios under full and open competition so we can deliver them faster than what we would have done under the official program of record.

One other comment, too. The JTRS Radios are absolutely critical to our network and our network capability. They are the ones, ma'am, as you offered in your opening comments that connect the soldier. They go down to the soldier level through the Rifleman Radio connected up to the platoon and company through other series of JTRS Radio, all the way back to the battalion and brigade and then it gets back into higher levels of Army echelon from there. It is absolutely critical that we get those radios and we field them as a part of our overall network strategy which is most important for the Army.

General BARCLAY. Ma'am, I would just add that, as General Phillips has said and I made this in my opening remarks, that the soldier and squad are the centerpiece of our modernization strategy and it is critical that as we look at that and the mission command and the network, and he has already stated it, it includes the Nett Warrior, the Rifleman Radio, the Manpack Radio, the Joint Battle Command Platform, and then the backbone of the tactical network, which is WIN-T [Warfighter Information Network-Tactical]. All of that has to be linked, because that then gives the soldier and the squad the power they need with the equipment they have and the vehicles and survivability and mobility to do the missions that we think we are going to have. So it is a critical part of our strategy in the future for the Army.

General PHILLIPS. Ma'am, if I could add, I didn't answer your question completely and I apologize. We will get you the report. The reason we haven't got it to you is we are working the AMF [Airborne/Maritime/Fixed] strategy I mentioned earlier. The acquisition strategy is going forward to the defense acquisition executive and we will get that to you as soon as we get the acquisition strategy approved by Mr. Kendall at OSD.

Ms. SANCHEZ. Okay. Well, I have several things to say about this. First of all, I have worked both as a consultant on the outside and as a Government person on the inside, so when we talk about a competition, there are always ways to narrow the people who can go after a contract. If we are going to take the time to do a full and complete competition, and I don't have a dog in this fight, I don't have any of these companies, but they are around on the Hill and they are talking to everybody, I just want to make sure that we get a good piece of equipment probably coming out of the commercial sector, as we have learned, for a good price. And I want to make sure that the type of competition you do allows us to get as good a piece of equipment that we need for as reasonable a price as possible. I also don't like it when people undersell what they make. Companies are in the business to make a profit.

So I will just say that we have been watching this for a while. The fact that this report has not been turned in honestly makes me pretty angry because you can tell me, well, things are fluid and things are changing and everything, but, you know, if I ran my

campaign like that, things change all day long, I would never get elected. So you must have a plan. You must have a plan.

General PHILLIPS. Ma'am, we do.

Ms. SANCHEZ. You are the Army. You should have a plan. And we oversee that. So I would like to see it sooner rather than later.

General PHILLIPS. Ma'am, we will bring the plan. It includes full and open competition. One thing, we are learning a lot from industry. We do an industry day for every RFP [Request for Proposal] that we put forward, and industry is coming and sharing. Probably many of the things they are sharing with you they are sharing with us. The one comment that we have heard from them is that NSA [National Security Agency] certification for these radios is critical. So we work with industry and we are going to refine our proposals to allow more time for industry to get that certification. That is one of their concerns.

Your comment is well taken, because we learn a lot from competition. We also drive down costs. On the average for these radios we will get them cheaper than 20, 25 percent, maybe more, than what the original program of record could have done. So there is a lot of goodness in the strategy we have. We owe you the report, ma'am. We will get that to you.

[The information referred to can be found in the Appendix on page 51.]

Ms. SANCHEZ. Thank you. I have one other question, Mr. Chairman, if you don't mind.

In the fiscal year 2014 budget the Army has asked for \$608 million for 42 Apache attack helicopters. However, the committee has been given some information that concerns me. To be exact, it appears that the Army has been paying for some Apache helicopters that are missing their transmissions and that can't fly.

Specifically as of today I am told that there are seven Apache helicopters that the Army has already paid more than \$8 million for that are sitting under tarps at the factory waiting for a new transmission to get installed. The information given to this committee says that this apparent disconnect between building the aircraft and having enough transmissions won't be fixed until September of 2014.

So I have several questions. Could you please explain why the Army would take delivery of a helicopter and pay for a helicopter that can't fly? Why not just tell the contractor no, we aren't signing for any incomplete helicopters and make them wait to get paid until the entire helicopter is finished? And who made this decision to pay for incomplete helicopters?

General PHILLIPS. Ma'am, first of all, the Army did not make that decision in isolation. We worked closely with our counterparts in OSD to come to that conclusion that the right strategy for the Army was to accept the aircraft. Let me go back also, there is an article—

Ms. SANCHEZ. So who are your counterparts at OSD and who from the Army procurement? Who? I would like names. You don't have to name them today, but we would like a list.

General PHILLIPS. Ma'am, we will provide that to you. But the Army acquisition executive and the defense acquisition executive.

[The information referred to can be found in the Appendix on page 51.]

General PHILLIPS. But most importantly, that article is inaccurate, the article that I saw a couple of days ago that talked about the transmission. The Army is accepting aircraft that come off the production line with full equipment inside those aircraft. Part of the reason we are taking this strategy is we are allowing Boeing to take assets from other transmissions as a rotatable pool to get the aircraft into flight test. When you get them into flight test it takes about 20 days. I used to do flight test at Boeing-Philly on Chinook aircraft and you do a full-up inspection, inside-outside the aircraft, and then a series of test flights to get the aircraft accepted.

Every aircraft that we accept from Boeing has transmissions, has full equipment, full mission equipment packages when we accept the aircraft. We allow Boeing in some cases to take that transmission out and put it back into the production line as we work with Northstar, who is the manufacturer of the transmission, to get as many of those transmissions as we can to Boeing so we can limit the number of aircraft that on the ramp.

Seven is about right. The other day I heard that there were six aircraft that were still on the ramp. By the way, we will be well in December of 2013. We could have more aircraft accepted in this manner beyond December 2013, but it depends on one thing. We are accepting these aircraft and getting transmissions into them as quickly as possible in order to get the first unit equipped. That unit is on the rotation schedule to go into Afghanistan. We want as many aircraft available for that unit as quickly as possible so they can train and get ready.

The other reason that we made this is very important as well and it gets back into the industrial base question. When you look at the Apache supply chain, there are 41 States and over 300 manufacturers that provide parts to Boeing. Boeing is simply a place where they build the aircraft. All of the other parts come from other parts of the Nation and around the world. If we shut down the production line with Boeing it would impact supply operations in 41 States and over 300 companies and it would also cost us more money. So the best decision for the Army and for OSD and for the Apache fleet itself is to accept a complete aircraft and then allow Boeing to take those transmissions back in.

The last comment I would have is we withhold about \$900,000 from Boeing. In doing this, it costs the Government nothing, it costs the Army nothing in terms of the strategy we have in place, but it does allow us to get the max number of aircraft to that unit so they can train and deploy in combat and it sustains the critical industrial base.

Mr. TURNER. Jon Runyan.

Mr. RUNYAN. Thank you, Chairman, and gentlemen. Again, thank you for your service and thanks for being here today.

Not only sitting on this committee but chairing the Veteran's Affairs Subcommittee on Disabilities and Memorial Affairs and in my past career in the NFL [National Football League], obviously TBI [Traumatic Brain Injury] is something near and dear to my heart. As a matter of fact I received an email from a former teammate

of mine in his mid-forties and has ALS [Amyotrophic Lateral Sclerosis] to the point where he barely communicate with another human being at this point.

My question probably is directed more to General Phillips. From a material solutions perspective what is the DOD doing to try to mitigate exposure to TBI?

General PHILLIPS. Go ahead.

General BARCLAY. Sir, I will let Bill add some to it. I just wanted to add from our modernization and how we are looking strategy to that. We have made great efforts to make sure as we have learned over the last 10–11 years of war the impacts of what TBI does to our force. And it is not just at the incident and point of impact, it is long-reaching. It is something that you have got to ensure that you not only address immediately, but also have a plan for the future to do that.

So within our strategy we have got several different initiatives that we are looking at. We are doing the helmet sensors inside which record data for blast effects. We are also equipping vehicles with sensors inside the vehicle which gives the pressure, over-pressure and concussion effects on soldiers that go through one of those incidents.

That data then, it helps us not only with future vehicle changes, but it also helps us with the medical side of then tracking those soldiers. For instance, that helps record the number where a soldier may have had one, two, maybe it is his third incident. And then that helps us look at how we are going to treat them in the future and it will look at the medical aspects of what we need to do to take care of our force and our soldiers.

Then another initiative, and I am sure you are aware of this, the Army is teaming with the NFL now because they have the same issues we have with TBI, and it is very important that we leverage what they are doing and they can leverage what we are doing as we try to move forward, because as I said, this is not just an event that happens 1 day and 1 or 2 days later you are over it. It is something that could affect you for the rest of your life. So it is very important for the Army, and as we move forward we are teaming with the NFL to try to get at this.

General PHILLIPS. Sir, I would just add that I am a big NFL fan. I was watching the NFL draft last night on ESPN and it was good to see that the NFL recognizes our wounded warriors, and we have teamed very effectively, as General Barclay just said, with the NFL on this.

I would just add one thing. We have a JTAPIC, is what we call it, a Joint Trauma Analysis for Prevention in Combat. It works under our Medical Command. That data that comes back that Jim just described is analyzed by that team and then we try to figure out better ways to improve our equipment to try to prevent trauma, a greater trauma. So it is something that we are very serious about in doing the right things for our soldiers.

Mr. RUNYAN. Thank you both for that, because I think prevention there, as we see our health care costs grow exponentially, the more we can prevent through research, and I know we are probably a long way off from figuring it really out, because whether you are

talking ALS, Alzheimer's dementia, they all trace back to TBI at some point. So thank you all for that.

I yield back, Chairman.

Mr. TURNER. Thank you. To give everyone an understanding of the order, we have Duckworth, Wenstrup, Garamendi and then Gibson. That is probably just enough time to finish the people who are currently in their seats before votes if we stick to the 5 minutes. So we will go to Duckworth next.

Ms. DUCKWORTH. Thank you, Mr. Chairman. Gentleman, thank you so much for being here this morning.

Over the course of the last several weeks the Secretary of Defense, the Secretary of the Army, and the Chief have all testified in front of this committee as to their commitment to maintaining the National Guard and Reserves as an operational force. In looking at your modernization strategies, I just want to throw down as an example the Black Hawk helicopter. Can either one of you speak to your plans for modernization of "Alpha" model [UH-60A] Black Hawk helicopters in the Guard and Reserve fleets, mostly the Guard?

General BARCLAY. Yes, ma'am, thank you for that question. As you know, and you stated that the Secretary and Chief have made a commitment, and it is not just about COMPO 1 [Active Component], COMPO 2 [National Guard], COMPO 3 [U.S. Army Reserve], it is about a total Army and a total force. We are committed, especially on the aviation side, not only with the Black Hawks, and I know as a Black Hawk pilot, I am a Black Hawk pilot—

Ms. DUCKWORTH. Air assault. Just an example. It is what I know, so it is what I am focusing on. All the other systems as well.

General BARCLAY. It is critical to all of us. I mean the 47s [CH-47 Chinook], the new 47s, the new "Mike" model Black Hawks [UH-60M], the new "Echo" model [AH-64E Apache]. And I tell you, you know, the first Mike model battalion was a Guard battalion, so we are committed to doing that. But as we look at the fielding across Black Hawks, Chinooks, and Apaches, all of those fielding schedules are going to slow down.

Now, it is intermixed among all three COMPOs as we are doing that fielding. We are not pushing to the Active because we understand the importance and the past 10 years has taught us that we have to rely on the National Guard and Reserves, especially in the aviation community where half of our aviation fleet is in the Reserve Component.

Ms. DUCKWORTH. I am sorry to interrupt, but since we have a limited amount of time before votes. What is the mix? Say over the next 3 years, how much of the Active say Alpha model Black Hawk inventory or any Black Hawk inventory is being upgraded vis-à-vis the Alpha model inventory in the Guard and Reserve? My understanding is that you are pushing the Guard and Reserve modernization to 2025, is that correct?

General BARCLAY. We are pushing all to 2025, not just the Guard and Reserve. Because of sequestration, all models are being extended out to 2025, 2026. Some will get pushed into 2030. Some of the Apaches will be even into the thirties. So all of those are getting pushed. Chinooks not as far because we are closer on filling that.

Just for example, I will tell you in the Reserve, in fiscal year 2014 to fiscal year 2015 there is another battalion set going from 142 to 172, 172 to 211 and 16. So we are looking about a battalion's worth every fiscal year in the Guard or Reserve moving. And on the Active side they are going at the same pace. We go from 507 to 542. So the numbers are equal. So we are not putting more into the Active Component. It is an equal spread.

Our concern though is, as you have mentioned, it is going to affect all COMPOs, the effects of sequestration and the fiscal constraints, because we are going to have to extend all these programs out to the right.

Ms. DUCKWORTH. So let's build on that. I want to commend the Army for establishing a firm requirement for the Improved Turbine Engine Program and for the successful completion of the material development decision. I think that what you have done to develop and integrate the engine provides a heck of a lot more engine power, I think 50 percent more power, a lot more fuel savings, and it is really a significant combat multiplier and good for cost savings as well.

Can you please explain the benefits that this engine as an example looking out into the future will bring to the current and next-generation aircraft, especially in support of the air-sea doctrine and the pivot to the Asia-Pacific region?

General BARCLAY. Yes, ma'am, we are committed to the new ITEP [Improved Turbine Engine Program] engine. As you mentioned, it is going to get us somewhere between a 20- to 30-percent fuel savings, which is huge when you look at the burn rate that the platforms, rotor wing platforms do. But it also brings us close to a 40-percent decrease in sustainment costs. So when you combine the fuel savings and the sustainment costs to the added power that you get, that we have been flying airplanes, the one you flew, very underpowered because we kept adding on to them, this now brings the power back.

The goal is to put the ITEP engine into the current Apache and Black Hawk fleet and it will bring them back to their full capabilities. But also it is linked to the future and the future vertical lift medium because that is an engine that can take us to that next level as we are looking into the late thirties-early forties of the next variants that are going to possibly come in and replace our aging lift and attack platform.

So we see that as a bridging gap, but again it is the close in savings we will get with the energy savings and sustainment savings that are very important to us.

Ms. DUCKWORTH. Well, I actually flew the oldest flying Black Hawk in the Army inventory, a 1976 model, fourth off the production line. It is still in Kuwait flying today. So I understand the long-term lifespan of the aircraft.

In the military equipment there is some great equipment. I just want to make sure that as we modernize, we are keeping an emphasis in doing it across the force in order to maintain the operational force in the Guard and Reserve.

Thank you, gentlemen.

Mr. TURNER. Thank you.

Dr. Wenstrup.

Dr. WENSTRUP. Thank you, Mr. Chairman. Thank you gentlemen for being here today.

A little question on the personal protection. We had conversations about lightening the load. I just wondered if you could bring me up-to-date on where we are with some of the modernization as far as personal protection equipment. I know that when I deployed, midway through the tour we got new SAPI [Small Arms Protective Insert] plates because they were newer and better and lighter, and I just wondered where we are with that. And maybe in relation to Mr. Runyan's question too about TBI, have we made changes within the helmet recently?

General PHILLIPS. Sir, that is a great question. I will take that and ask General Barclay to add his comments. But we have made tremendous strides in personal protective equipment, and probably the greatest stride has been in body armor. We have made to date about 16 improvements to body armor, the last one being female body armor that I will talk about in a second. But we have made significant improvements to enhance protection, at the same time trying to reduce the load that is on the soldiers that are out there that are wearing this equipment, and tied that into sensors that soldiers now have in their helmets, the Advanced Combat Helmet. We are gaining a lot of knowledge on how to improve helmets. We are working with the Marine Corps on an enhanced combat helmet. It is under development still, but we think it is going to be a few ounces lighter and go beyond what we have today, which is 9 millimeter protection within an Advanced Combat Helmet. It will increase that level of protection at the same or lower weight. Also we think it is going to protect more importantly against trauma, trauma to the head. So we are working those pieces very hard.

One thing that we have done is pelvic protection. We have bought about 250 outer garments and inner garments that soldiers wear today, especially down south in Kandahar where the fighting is mostly on the ground, and in RC-East [Regional Command-East] as well. But we have had tremendous stories from soldiers that have worn the pelvic protection system on how it has saved their lives.

I got some information from an EOD [Explosive Ordnance Disposal] sergeant recently who was wearing it and it probably saved his life. He thinks it did. He lost part of his legs, but it saved it from going up into his renal artery where he probably would have bled out. It is important that we continue to improve protection.

If I can mention female body armor for a second, we have really made great strides. We have given 17 of those sets to the 101st and 3rd ID [Infantry Division] soldiers. Many of them are in combat operations today. It is one of the world's best body armor.

I want to quote Second Lieutenant Chelsie Adams from 3rd ID, and I quote her. "It is awesome. I have actually got full mobility. I am not sure if it is a late birthday present or a pre-Christmas present, but it is the best gift ever." So we are going to work hard for Chelsie Adams and for all our soldiers to improve body armor.

I just met Julie Herbert, who is a part of this committee, this morning. We had Army Day here yesterday on the Hill and she actually put on and was wearing the female body armor, but before that she put the male body armor on. And the comments that she

just gave us about how it allows you freedom of motion and action is exactly what we are doing for our female soldiers.

So, sir, thank you for supporting our program with protective equipment.

Dr. WENSTRUP. Thank you. I yield back.

Mr. TURNER. Mr. Garamendi.

Mr. GARAMENDI. Thank you, Mr. Chairman, and Generals, thank you for your service and for the testimony today.

I have been focusing on ISR [Intelligence, Surveillance, and Reconnaissance] and the priorities that you laid out are directly related to the ISR systems. It seems to me as though there is a lack of coordination across the various departments, with the Air Force abandoning some pieces of equipment that appear to be necessary for some of the things you are doing. So my concern here is the integration of these systems, if your priority is to provide these networkings, the squad communications systems and the like, and how does it all work together, and are you in communication with the Air Force with its UAVs [Unmanned Aerial Vehicle] or manned and satellites and all of that. Are we coordinated?

General BARCLAY. Sir, we are coordinated, but, again, there is two separate missions. The Army UAVs, UASs [Unmanned Aircraft System], again, those are at the operational tactical level and we are focused at the division commanders' assets which are the Gray Eagles. You have the Shadow assets which are the brigade commanders and the tank commanders can use that. And then down at the company battalion we have the handheld launched Raven. And we look at it from a reconnaissance, surveillance, target acquisition, and they are also linked into our network architecture, which has all the ISRs. So while they are out there doing it, they are doing several different missions, but our main focus is reconnaissance, surveillance, target acquisition.

In the Air Force again they have made some decisions on some of their other platforms, and I won't question them on that. But, again, our perspective on how we look at integrating those, it is very important to us that we do that.

We also, because of our manned-unmanned, we are working very hard now with a manned-unmanned teaming to where we have both control and hand-offs with our rotor wing platforms in the Apache and Kiowa Warrior where they can control a hand-off. They can even do firing. You can fire off a UAV directed by a manned platform. But it is that manned-unmanned teaming where we are seeing great synergy and it brings a lot to the operational and tactical commander.

Mr. GARAMENDI. How dependent are you on the Air Force assets?

General BARCLAY. Sir, these are all Army assets ourselves. At the higher level where you are doing the intelligence aspect of that, we are in a joint environment. And if we deploy in, that division commander comes in with his Gray Eagle assets, if those Gray Eagle assets are not in a direct fight, they are available to be used by the joint, so the Air Force could use ours just like we can use theirs. So, yes, we are integrated, and it is a joint fight. But, again is the priorities of missions, how you allocate those. And if they are in the theater, they are available.

Mr. GARAMENDI. I am not at all sure that they are integrated. The Air Force is shutting down some of its platforms, some of the Global Hawks [RQ-4 surveillance unmanned aerial vehicle].

General BARCLAY. Sir, from an Army perspective, ours are integrated. They are available to be used in the theater they are in by the commanders based on the priorities set by the commanders, from an Army's perspective. I can't answer to the Air Force's perspective on the decisions they are making, sir.

Mr. GARAMENDI. Well, their decisions may be of utmost importance to you if you are depending upon those particular pieces of equipment to provide ISR; for example, the Global Hawks or the satellites and the U-2s ["Dragon Lady" reconnaissance aircraft] or whatever the other assets are. I am concerned about that because the Air Force is shutting down some of those systems that have been critical for the Army's operations. So I am going to pursue this a little further.

One other question, General Phillips. In answer to the chairman's question about tanks, you said there are more tanks than you need. Could you expand on that?

General PHILLIPS. Sir, very quickly, the Army has already met or will by June of 2013 have met what we call the Army Acquisition Executive for tanks. And we have done great work at JSMC to deliver the Army's tanks. The average age is 3 to 4 years. So the Army really has the two best tanks in the world, the M1A2 SEP [System Enhancement Package] and the M1A1 AIM [Abrams Integrated Management] tank, both just absolutely world class. We have met our full commitment to the Army's requirements. That was the reason for my comment, sir, in June of this year I should have stated.

Mr. GARAMENDI. Thank you. I yield back.

Mr. TURNER. Mr. Gibson.

Mr. GIBSON. Thank you very much. Appreciate it, Chairman, and the gentlemen for their leadership and family sacrifices.

My question has to do with the individual carbine. I have read the report. I see where we are with that. I guess what I am looking for is assurances that our noncommissioned officers are engaged in this process. This was such an emotional issue for—as an infantry leader for many years, and I am looking for your assurances that we are getting their input on this and then when the ultimate decision is made that there will be a commitment to match “ammo” [ammunition] whatever individual carbine that we design.

General PHILLIPS. Sir, I can assure you that our soldiers are absolutely involved in the process, and through our PEO Soldier and our PM [Project Manager] within that organization who is running this, they are making sure that they have a holistic review of all the potential weapons that could be the next individual carbine, but we take that competition very seriously. The Army is still considering the way forward with the individual carbine as we look and analyze what industry could potentially provide. So, sir, there is more to come on the final decision.

Mr. GIBSON. And I appreciate that, and you know, given how emotional this topic can be, you know, I appreciate your deliberative nature and the way you are approaching this and how engaged

it is, and how important it is to get our enlisted personnel involved in this.

And then do you care to comment at all about—and it may very well be outside purview, but just the match ammunition that would go with whatever decision you make.

General PHILLIPS. Sir, I am not exactly sure what you mean by that, but I could add this comment that we have the M855A1, essentially a brand-new 556 [5.56mm] ammunition that we currently use, is in the fight today in Afghanistan. It provides incredible increased lethality over the normal 855 round, and the amount of lethality that it provides gets it very close to a 762 [7.62mm ammunition] in terms of capability.

Since the early days of the Iraq war when you used to hear about through and throughs and they would pull the trigger and someone would fall down or not fall down, they would keep coming, with this round that essentially stops that. When you hit someone with this round, they essentially go down, and the feedback we get from our soldiers time and time again in combat that are using this new round is exactly that. It is providing great lethality for our soldiers and our squads on the ground, sir.

Mr. GIBSON. I thank you for that, and I yield back, Mr. Chairman.

Mr. TURNER. Thank you.

Mr. Barber.

Mr. BARBER. Thank you, Mr. Chairman, and thank you both, Generals, for being here this morning. I grew up in an Air Force family, but in fact last 7 years I have had an opportunity to work closely with our men and women in the Army down at Fort Huachuca, an incredible facility as I think you probably know, where we do a lot of the UAF [United States Air Force] training, and Congressman Garamendi asked a question that I also am concerned about, and that is whether the United States Air Force is really the responsible party, if you will, for both acquiring, managing and making available UAS or UAVs, how is that going to fit in to your strategy to make sure that our combat commanders have what they need? For example, you know, the UAS that is the Global Hawk is a very valuable tool at a high altitude and low as well. As we go forward and we downsize and get out of Afghanistan and we have to maintain this capability, how do we make sure that the branches are talking to each other or collaborating to make sure that we have the capability going forward for our ground troops, the men and women that you are responsible for?

General PHILLIPS. Sir, I will take the first part of that and ask General Barclay to weigh in as well.

The Army owns really four key UAVs. I will add a fifth one to it as well, but the Gray Eagle, which is critical for an ISR capability plus an attack capability as well. The Shadow UAV, the Hunter UAV, the Raven UAV, and we have actually brought some Pumas made by AeroVironment as well. They make the Raven also that are going downrange. The Army owns all of those UAVs, and we operate them as a part of the joint force. And we work, as General Barclay said earlier, with the joint force, with OSD in various forums to make sure that we have an integrated strategy going forward.

The decision for Global Hawk that the Air Force may make is simply an Air Force decision. We may have some level of equities in those decisions, but at the end of the day it is the Air Force, and I would just state that they would have to answer to what they are trying to do with that system in particular.

General BARCLAY. Sir, as I stated, the UASs are a critical part of our operational aspect of how we are going to fight in the future. It is also how we fight today. We have the first manned/unmanned teaming unit, aviation unit with 101st in theater in Afghanistan, where we are teaming the Shadows with the Apache. I mean, they are doing that now, working out the tactics, techniques and procedures on how we are going to do that in the future.

So again, all these platforms are very important to how we see us operating in any theater or any environment, but again, they are divisional organic assets that belong to that division commander, brigade commander and battalion commander. You know, they are not—their first priority is because it is part of their organic table of organization and equipment that belongs to that unit for them to use in the fight. So it is a very important aspect of our fight in the future.

Mr. BARBER. And obviously it has been a great asset in the current wars that we have been fighting. I want to speak specifically, though, to Gray Eagle, which I acknowledge has been an incredibly useful tool for combat commanders. I observed that in the acquisition plans you have reduced by four the number of Gray Eagles that you are going to be acquiring. Can you say why that is the case, unless I misunderstood the plan?

General PHILLIPS. Sir, I will start that. I am not sure what you are referring to in terms of the number of four reductions. We will do our research on that and get back to you, but I would like to talk to the value of the Gray Eagle. We bought 100 systems to date. Of those 100 systems, 20 of those are operating in combat today and doing a tremendous job in terms of intelligence, surveillance, reconnaissance, and attack in support of Army forces, and not just Army, but joint forces on the ground. Gray Eagle is absolutely critical. You may know that we just passed an initial operational test and evaluation with Gray Eagle. It is the first UAS—in all of OSD, the first UAS to have been defined as effective and suitable. And so we are very proud of what this aircraft is doing. We are looking forward to a full-rate production decision. A milestone is coming up, and we are going to continue to procure them and outfit them within all 10 divisions. General Barclay just said that is a key divisional asset that will be with our forces.

Mr. BARBER. Just in the time I have left, just let me clarify what I meant to say in regards to the Gray Eagle. It is a reduction over what you purchased last year, and as I think about—obviously we are winding down, but these aircraft, like any asset, have wear and tear, so going forward, is that really what you think you need to make sure we are ready for any contingency?

General PHILLIPS. Sir, what I would just state that what we need is a full contingent of Gray Eagles that would outfit our 10 divisions with maybe some spare assets available as necessary. But the reduction, I don't know, I have to research this. Some of that reduction might be due to sequestration.

[The information referred to can be found in the Appendix on page 51.]

General PHILLIPS. I will give you an example with Apache aircraft. We were going to buy 48 this year. Now we are down to 42. As we look at the impacts of sequester on every modernization program, and it impacts every one, some to a lesser extent, some more, some of those buys are going to have to be scaled back because of the impact of sequestration.

Mr. TURNER. Gentlemen, you need to conclude, please.

Mr. BARBER. Thank you, gentlemen. I yield back. I have exceeded my time.

Mr. TURNER. Thank you. Mrs. Roby.

Mrs. ROBY. Thank you, Mr. Chairman. And it is a pleasure to be here with you today, and thank you for coming. And I just on behalf of my family, I want to thank you both for your service and sacrifice, but that of your families as well, so we appreciate all that you do.

General Barclay, I haven't—I came right after you, but I know Fort Rucker is near and dear to your heart and I, you know, appreciate all of the focus on Army aviation and how important it is for what we are doing now and what we are going to be doing in the future, and your successors there have helped me understand the challenges, and I know even now today with the sequester that you were just talking about, it even presents greater challenges on what the future vertical lift program might look like.

But from what I have learned, and this is for both of you, what I have learned in my course of spending time down at Rucker and seeing, you know, these challenges firsthand, we have an opportunity with the future vertical lift program to potentially replace about 90 percent of our medium lift. Am I right about that?

General BARCLAY. Yes, ma'am. It is close. Somewhere between the 75 and 80 percent, you know, but with the Apaches and the Black Hawks, that is really—

Mrs. ROBY. Right.

General BARCLAY. That medium variant, both attack and lift.

Mrs. ROBY. And so what I keep hearing is that that needs to be refocused. We have other challenges with other aircraft that may be close to the end of their life, but if we are going to really hone in and focus on the future of Army aviation and what it looks like, then we need to be investing those dollars now. And I know you all touched on those with some of the other comments that Ms. Duckworth had, so I don't want to repeat, but I just—I want to really know the Army's commitment to the future vertical lift because of how high that percentage is.

General BARCLAY. Ma'am, we are committed to future vertical lift. As you know, it is a joint program. It is not just an Army program, so it has all the other Services' buy-in, too. So this is a joint program. It is important, as you mentioned, it will replace about 70—between 75, 80 percent of our fleet in the future.

The timeline, though, is in the out years. Again, we are currently fielding new Echo model Apaches. We are fielding new Mike model Black Hawks, and as we look to the future and have a chance to look at technology and develop and get something, which is truly a leap ahead, not just a little bit of added power or a little bit more

endurance but truly a leap ahead on how we plan on operating, we are looking somewhere probably in the mid to late '30s before that would come on board, and that then is tied to our current modernization plan because with aviation, you know, we look out really, we are looking somewhere between 40 and 50 years out because you look at the lifespan and then you have to look at your fleets as you are sequenced in, so it is a strategy that is stretched out long term. But to answer the bottom question, we are committed to the future vertical lift.

Mrs. ROBY. And I am glad to hear you say that. I think our challenge here in the House of Representatives and on this committee, is to convince our colleagues about the importance of these dollars today because of the link of the amount of time that it takes to develop this. And when you are dealing with all of these fiscal restraints, including the sequester and the heavy hit to our military, we have got a challenge on our end related to convincing our colleagues about how important this is.

General PHILLIPS. Ma'am, if I could just add. As Congresswoman Duckworth just said, we have a material development decision already made. We have an approved requirements document for future vertical lift. It is a joint program. We are going forward for a milestone A decision. We have significant science and technology funds invested in the future of vertical lift. The Army is committed to future vertical lift, as General Barclay just stated.

Mrs. ROBY. Well, I hope we all can stay committed to that because of the importance. Again, thank you both for being here and thank you for your service, and I yield back.

Mr. TURNER. Excellent points.

Turning to Mr. McIntyre.

Mr. MCINTYRE. Thank you. Thank you, gentlemen, for your service. I have a very specific question I want some help in understanding, and I think the committee will benefit from. The Abrams tank power train has been identified by the Army as one of the critical upgrades required to extend the life of the Abrams tank to 2045.

Two years ago, the Secretary of the Army testified that 60 percent of the maintenance cost for the Abrams tank is related to the engine and transmission and that improving the power train, in improving it, the Army would achieve 17-percent improvement in fuel efficiency. In fiscal year 2012, this committee supported a \$47.8 million reprogramming request from the Army that adopted commercial-based improvements to insert a new dual centrifugal compressor that would be integrated within the existing total integrated engine revitalization program. This committee understands that this upgrade will provide the Army \$1.6 billion in maintenance and fuel savings as well as drive additional workload into Anniston Army Depot.

What is the funding status of this program in the fiscal year 2013 enacted budget and in the fiscal year 2014 proposed Administration's budget?

General PHILLIPS. Sir, I don't know the answer to that. We will have to get back with you with specifics. What I would add is that the ECP program that we have for Abrams is critically important to the Army, and it is really buying back space, weight and power

and cooling. So I am confident that that is a part of the enhancements that we will make to Abrams where we want to put that work back into not only Anniston but JSMC Lima, Ohio, as well in around the 2018/2019 timeframe. I will get you specifics. We will get you specifics on that in particular.

[The information referred to can be found in the Appendix on page 51.]

General BARCLAY. Sir, again, it is included in the engineering change proposals and incremental improvements. I just don't have the dollars amounts in front of me by own individual programs, but we will take that for the record and get it back to you, sir.

Mr. MCINTYRE. That would be great. It would be for the 2013 enacted budget and the 2014 proposed budget. So we will see where that is and make sure we are getting those savings.

Thank you. Thank you, Gentlemen. Thank you, Mr. Chairman.

Mr. TURNER. Gentlemen, thank you so much. I appreciate your work with the committee so that we can both understand the issues that we have before us and also help us in formulating, as we move forward, on the subcommittee's mark.

Thank you again. We will be adjourned.

[Whereupon, at 11:45 a.m., the subcommittee was adjourned.]

---

---

# **A P P E N D I X**

APRIL 26, 2013

---

---



---

---

**PREPARED STATEMENTS SUBMITTED FOR THE RECORD**

APRIL 26, 2013

---

---



RECORD VERSION

STATEMENT BY

LIEUTENANT GENERAL JAMES O. BARCLAY III  
DEPUTY CHIEF OF STAFF OF THE ARMY, G-8

BEFORE THE

SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES  
COMMITTEE ON ARMED SERVICES  
UNITED STATES HOUSE OF REPRESENTATIVES

ON

ARMY GROUND SYSTEMS AND ROTORCRAFT MODERNIZATION AND  
ACQUISITION PROGRAMS

FIRST SESSION, 113<sup>TH</sup> CONGRESS

APRIL 26, 2013

NOT FOR PUBLICATION UNTIL RELEASED BY THE  
COMMITTEE ON ARMED SERVICES

### **Introduction**

Chairman Turner, Congressman Sanchez, distinguished Members of the Subcommittee on Tactical Air and Land Forces, I thank you for this opportunity to discuss the Army's Fiscal Year 2014 (FY 14) President's Budget (PB 14) request as it pertains to Army Modernization. I am pleased to represent U.S. Army leadership and the more than one million courageous men and women in uniform who have served our Nation over the past ten-plus years of conflict. On behalf of our Secretary, the Honorable John McHugh, and our Chief of Staff, General Ray Odierno, I would like to take this opportunity to thank the members of this committee for your steadfast support and commitment to our Soldiers.

### **Army Equipment Modernization Strategy**

The Army for the future will feature regionally aligned and mission-tailored forces designed to respond to combatant commander requirements. These units will be ready to prevent conflict, shape the strategic environment and, when necessary, win decisively. The Army equipment modernization goal is to build outwards from the Soldier and Squad and to sustain our advantages in mobility; logistics; and command, control, communications, computers and intelligence (C4I) at the tactical, operational and strategic levels.

To prevail in all domains, the Army must maintain the technological edge over potential adversaries. The Army modernization effort goes beyond materiel and equipment solutions. It is a comprehensive strategy that leverages doctrine, organizations, training, leadership, personnel and facilities. At the heart of the strategy is the use of mature technologies and incremental upgrades to existing equipment, while balancing research investments between evolutionary and disruptive technologies. Our modernization strategy includes a risk-based assessment to identify programs for divestiture.

The Army Equipment Modernization Strategy (AEMS) focuses on equipment programs over 30 years that are versatile and tailorable, yet affordable and cost effective. This allows the Army to transition current capabilities to future threats, informing the innovation required to modernize. Simultaneously, the AEMS remains flexible to cope with both strategic and fiscal uncertainty. As such, we remain committed to balancing existing capabilities with innovation.

We will implement our equipment modernization strategy by taking advantage of government and commercial technologies, using commercial off-the-shelf systems to buy and integrate mature incremental improvements. Through this approach, we will become more efficient, pursuing smaller procurement objectives, leveraging the results of experiments and demonstrations such as the Network Integration Evaluations, and divesting older systems or niche capabilities that carry significant sustainment costs. The Army is currently scrutinizing its equipping programs to validate their contributions to our core competences and required capabilities. The strategy balances modernization risks with force size, readiness, and operational requirements.

#### **Priority Army Programs in FY 14**

The centerpiece of our equipment modernization program is the Soldier and the Squad. The Army Network connects Soldiers across the Joint Force. It is designed to provide the right information from a myriad of sensors and data sources, enabling Soldiers to make sound tactical decisions. The network also provides the squad connectivity to other Army and Joint assets, allowing access to multiple firepower, intelligence and combat support systems in the most demanding physical terrain and complex human environments. Combat and tactical wheeled vehicles, combined with aviation improvements are key to making Soldiers more lethal, more mobile, and more surviveable.

The Soldier portfolio focuses on equipment vital for squad mission success by empowering them with improved lethality, situational awareness and protection. The portfolio also includes resources to develop leaders and train Soldiers to take

advantage of our improved capabilities. Planned improvements for dismounted Soldiers include a mission command system that allows Soldiers to see each other's positions, collaboratively mark hazards and on-the-move broadband voice, data and video. This unprecedented situational awareness, coupled with advanced sensors and lightweight small arms systems, will ensure that our Soldiers are unmatched on the battlefield.

Critical to unprecedented situational awareness are two critical network modernization programs, the Warfighting Information Network – Tactical (WIN-T) and Distributed Common Ground System – Army (DCGS-A). WIN-T funding was increased in PB 14 to acquire additional quantities needed to support testing and networking on-the-move capability. WIN-T also aids our homeland defense operations, allowing the Army to establish the Joint Incident Site Communications Capability as an Acquisition Program. This program will also enhance the ability of the National Guard to communicate with first responders during domestic response operations.

Funding for DCGS-A was increased in PB 14 to leverage server/cloud technology and architecture to accelerate the fielding of the Command Post Computing Environment. DCGS-A program is largely based on commercial off the shelf software capabilities obtained from an ever expanding pool of industry partners and addresses a wide range of Warfighter intelligence needs on the ground. The Army restructured DCGS-A program to conduct a full and open competition for a link analysis tool that meets Army requirements. Other priority network programs are Nett Warrior, Family of Networked Tactical Radios and Joint Battle Command-Platform (JBC-P).

The Army's priority combat and tactical vehicle programs are the Ground Combat Vehicle (GCV), the Armored Multipurpose Vehicle (AMPV), and the Joint Light Tactical Vehicle (JLTV). We will continue to make the necessary adjustments in the GCV program -- particularly as budget uncertainty continues -- to ensure that we deliver an effective and affordable replacement for the aging Bradley Infantry Fighting Vehicle. We will select one contractor in the Engineering and Manufacturing Design phase of the GCV program, saving significant Army Research, Development, Test, and Evaluation

(RDTE) resources that we will reinvest in other modernization programs. In the case of AMPV, it is a model program – utilizing mature technologies, strict cost limits, and rigorous analysis of requirements. Replacing our Vietnam-era M113 Personnel Carrier is crucial to our ability to close with and destroy our enemies. In the case of the JLTV, the Army is pursuing a joint solution with the Marine Corps to meet requirements for both services with one procurement effort. These programs exemplify the Army's commitment to capable, cost-effective solutions for our Soldiers and the Joint Force.

Due to FY14 funding reductions, Army Aviation programs will be impacted. This will delay procurement as well as Research and Development for up to one year. We were able to make some trades within the Aviation portfolio to protect higher priority modernization efforts. Our priority aviation improvements include the Cockpit and Sensor Upgrade Program (CASUP) on the aging Kiowa Warrior to meet the Army's continuing requirement for a light, armed helicopter for manned, armed aerial reconnaissance, surveillance and light attack missions. It is a priority Army aviation program due to the persistent high operational demand for this capability and the need to modernize 1970s platforms. I would like to thank the Congress for recently approving the multi-year procurement of our Chinook (CH-47) helicopters. These platforms have been instrumental in both theaters. They greatly enhance our battlefield capabilities while also reducing overall costs to the taxpayer.

#### **Major Program Changes in FY 14**

Fiscal realities have caused the Army to make tough choices in almost 100 of our acquisition programs. Nevertheless, we remain committed to maintaining the most capable Army in the world with the resources provided. We will continue to revalidate the requirements and reexamine programs to determine if there are alternatives that can meet the need, and assess their affordability. We believe that with the changes we have made to our programs, we will still have balance in our equipping strategy. However, further funding reductions run the risk of upsetting that balance and will force us to take increased risk for the Army of the future.

Among the changes in our PB 14 request is the restructure of over 35 programs, primarily due to refined requirements or availability of off-the-shelf items. These include Enhanced Medium Altitude Reconnaissance and Surveillance system (EMARSS), EQ-36 Radars, Family of Medium Tactical Vehicles (FMTV), and Joint Light Tactical Vehicle (JLTV). We have accepted risk in 50 programs by slowing deliveries of systems. These include Heavy Expanded Mobility Tactical Trucks (HEMTT), Lightweight Countermortar Radar, Chinook (CH-47F), Hellfire Missiles and re-manufacture of existing Apaches to the AH-64E model instead of new aircraft. This will preclude replacing AH-64E combat losses and achieving the original acquisition objective. Finally, funding will cease for some programs in future years such as the Lakota Light Utility Helicopter (UH-72A) program which curtails Active Component buys in favor of fully fielding the Army National Guard before terminating the program.

We have also accelerated 11 critical programs to provide new capabilities to our Soldiers faster. Among those programs are: Improved Target Acquisition System for Soldiers, Patriot PAC-3 Missiles, and Medical Combat Communications for Casualty Care (MC4).

#### **Closing Comments**

The goal of our Equipping Modernization Strategy is to ensure Soldiers are equipped for the current fight as well as future contingencies. Although we are a force in transition during a period of declining resources, we must continue to provide the Army with the best equipped, most modernized, and most capable Force that will prevail on any battlefield against any enemy. In some cases this requires the modernization of priority capabilities, in others it may require the reset of existing systems as they return from Operation Enduring Freedom.

These continue to be challenging times for our Nation and for our military. We can assure the members of this Subcommittee the Army's senior leaders are working hard to address current challenges and to meet the needs of the Nation now and into the future.

Mr. Chairman, members of the Subcommittee, I thank you again for your steadfast and generous support of the outstanding men and women of the United States Army, Army Civilians and their Families. I look forward to your questions.



**Lieutenant General James O. Barclay III**  
**Deputy Chief of Staff, G-8**

Lieutenant General James O. Barclay III became the Deputy Chief of Staff, G-8 on 27 July 2012. Prior to assumption of this position, he served as the Army's Assistant Deputy Chief of Staff, G-3/5/7 United States Army, Washington, DC.

LTG Barclay received his commission in 1978 from the United States Military Academy at West Point in the Armor Branch. He is a 1990 graduate of the Army Command and General Staff College, where he earned a Master of Military Arts and Sciences Degree, and a 1998 graduate of the United States Naval War College where he earned a Master of Arts from in National Security and Strategic Studies.

LTG Barclay has held numerous command positions. His command assignments include: Commanding General, United States Army Aviation Center of Excellence and Fort Rucker; Commander, Aviation Brigade, later Chief of Staff, 4th Infantry Division (Mechanized), Fort Hood, Texas and OPERATION IRAQI FREEDOM, Iraq; 3d Battalion, 25th Regiment, re-designated 2d Battalion, 10th Aviation, 10th Mountain Division (Light), Fort Drum, New York; and Headquarters and Headquarters Company, 101st Aviation Battalion, 101st Airborne Division (Air Assault), Fort Campbell, Kentucky.

Previously, he was the Director, Joint Center for Operational Analysis-Lessons Learned, United States Joint Forces Command, Suffolk, Virginia; Assistant Division Commander (Maneuver), 1st Infantry Division, United States Army Europe and Seventh Army, Germany; Assistant Division Commander (Maneuver), 42d Infantry Division, OPERATION IRAQI FREEDOM, Iraq; Executive Officer to the Commander, Multi-National Force-Iraq, OPERATION IRAQI FREEDOM, Iraq; Executive Officer to the Vice Chief of Staff, United States Army, Washington, DC; and Executive Officer to the Deputy Chief of Staff, G-8, United States Army, Washington, DC.

LTG Barclay's awards and decorations include the Distinguished Service Medal, Defense Superior Service Medal, the Legion of Merit (with oak leaf cluster), the Bronze Star Medal (with oak leaf cluster), the Defense Meritorious Service Medal (two oak leaf clusters), the Meritorious Service Medal (with 5 Oak Leaf Clusters), Army Commendation Medal (with oak Leaf Cluster), and the Army Achievement Medal. MG Barclay is a Master Army Aviator and has earned the Master Aviator Badge, the Senior Army Aviator Badge, and the Army Staff Identification Badge.

LTG Barclay is a native of Scottsboro, Alabama. He and his wife, Deborah, have three children, Mary Margaret; James O. Barclay IV; and William, a Warrant Officer in the United States Army.

37

RECORD VERSION

STATEMENT BY

LIEUTENANT GENERAL WILLIAM N. PHILLIPS  
PRINCIPAL MILITARY DEPUTY TO THE ASSISTANT SECRETARY OF THE ARMY  
FOR ACQUISITION, LOGISTICS AND TECHNOLOGY AND  
DIRECTOR, ACQUISITION CAREER MANAGEMENT

BEFORE THE

SUBCOMMITTEE ON TACTICAL AIR AND LAND FORCES  
COMMITTEE ON ARMED SERVICES  
UNITED STATES HOUSE OF REPRESENTATIVES

ON ARMY GROUND SYSTEMS AND ROTORCRAFT MODERNIZATION AND  
ACQUISITION PROGRAMS

FIRST SESSION, 113<sup>TH</sup> CONGRESS

APRIL 26, 2013

NOT FOR PUBLICATION UNTIL RELEASED BY THE  
COMMITTEE ON ARMED SERVICES

### **Introduction**

Chairman Turner, Representative Sanchez, and distinguished Members of the Subcommittee on Tactical Air and Land Forces we thank you for this opportunity to discuss the Fiscal Year 2014 (FY14) budget request as it pertains to Army Ground and Aviation Systems Acquisition and Modernization as well as your steadfast support and shared commitment in this endeavor on behalf of the Secretary of the Army, the Honorable John McHugh and the Army Chief of Staff, General Ray Odierno. I would also like to thank you for help in providing the Army the means to award multi-year contracts through the passage of the Appropriations bill which funds the Department of Defense through the rest of the Fiscal Year. This alone will save the Taxpayer over two billion dollars in cost avoidance. We are pleased to represent U.S. Army leadership, members of the Army Acquisition workforce, and the more than one million courageous men and women in uniform who have deployed to combat over nearly twelve years, who have relied on us to provide them with world-class weapon systems and equipment to ensure mission success.

### **Army Equipment Modernization Strategy**

As we look to the future, our priority is to maintain the best equipped Army in the world and to ensure we are postured to fight and win the next conflict. We recognize the need to shape the Army with an understanding of both our national security obligations, the strategic rebalancing to the Asia-Pacific region, and current fiscal constraints. The theme of our Equipment Modernization Strategy is “versatile and tailorable, yet affordable and cost-effective.”

The centerpiece of this strategy is the Soldier and Squad, ensuring that we continue to maintain asymmetric advantages in mobility, logistics, command and control, and intelligence. The Soldier and Squad must be enabled through the Network, facilitating decision-making across the Joint Force, and delivering this capability with focused investments in key enabling technologies. The Soldier and Squad Investment Plan provides our small units with a range of equipment including individual and crew-served

weapons, next generation optics and night vision devices, body armor and advanced individual protection equipment, providing lethality and force protection to the Soldier on the ground. Our combat and tactical vehicle fleets are also being developed to network this more capable squad, provide increased lethality and mobility, while optimizing survivability through the use of armor packages that can be scaled to meet mission requirements. In the same manner, aviation improvements will provide our forces with greater mobility and responsiveness.

This approach helps achieve the optimal balance between obsolescence of existing capabilities, innovation, and overmatch capabilities through new technologies and weapon systems. As a result, our approach must be agile and strategic moving forward, reflecting the need to modernize equipment in key portfolios, leveraging mature capabilities where appropriate, and addressing the needs of the Industrial Base. Maintaining technological advantage over our adversaries will be paramount, so our strategy must include a balanced investment between mature technologies for system upgrades, and research investments between evolutionary and disruptive technologies.

To achieve this strategy within our fiscal constraints, we must make focused investments in capability. As such, we are engaged in a detailed assessment of our various equipment portfolios to determine our future investment, sustainment, and divestiture posture. This will be the first time we have projected out 30 years, ensuring that we understand the threat and associated capability gaps, and from that developing our investment strategy across Science and Technology and Acquisition Programs of Record. Alignment across this process, as well as affordability, will be key. Maintaining critical Industrial Base sectors and preserving the capacity to surge when the need arises will also be a priority.

Our approach must consider rapid changes in technology, and where our traditional process does not suffice, we must institutionalize new processes for rapid acquisition that allow us to be responsive to the threat and agile in delivering new capability. We will leverage the government, academic and commercial sectors to deliver this

capability, and will continue to execute efforts like the Network Integration Evaluations. These evaluations ensure a holistic approach to integration that assesses the latest, innovative technologies while creating efficiencies across our test programs.

Key principles within our Equipment Modernization Strategy include:

- Fostering competition to reduce cost and improve quality
- Reducing complexity to the Soldier to use and maintain equipment, thus reducing our training requirement
- Emphasizing interfaces and interoperable standards with our joint and coalition partners
- Divesting equipment as a means to modernize with limited resources
- Balancing modernization with changing threats, missions and technologies, as we manage impacts on training and sustainment

#### **Priority Army Programs in FY14**

The President's Budget for FY14 supports the 2013 Army Equipment Modernization Plan, which identifies the Army's highest modernization priorities, listed below. Nearly half of them are associated with the network, which the Army is committed to developing and fielding as a single entity. Network Modernization seeks to provide the same basic capabilities from home station to the lone dismounted Soldier in theater. The Army is also striving to become hardware agnostic by focusing on software applications that meet our unique needs. These applications must be able to operate on existing hardware, and meet requirements for interoperability with other applications.

A major contributor to the successful development of new network capabilities is the Network Integration Evaluation (NIE), conducted on a semi-annual basis at Fort Bliss, Texas. The NIE provides an operational venue to evaluate and integrate new commercial technologies and network capabilities for possible inclusion into the network before it is fielded to operational units, thereby relieving those units of the integration

burden. Resources have been added to the FY14 budget request to allow procurement of commercial products evaluated and recommended for fielding based on NIE results.

Warfighter Information Network-Tactical (WIN-T) WIN-T provides a secure and reliable broadband network that supports tactical communications (voice, data, and video), enabling mission command while on-the-move. It features the latest technology to plan, manage, fight and defend the network. This capability will be delivered in incremental stages. WIN-T Increment 1 fielding was completed in FY12 and the budget request supports planned technology upgrades to enhance interoperability with subsequent increments. WIN-T Increment 2, which delivers a mobile network capability from Company level to theater, is currently being fielded to deploying units. The budget will procure WIN-T Increment 2 equipment for 4 Brigade Combat Teams and 2 Division Headquarters. The budget request supports WIN-T Increment 3 continued development of the full networking capability, including additional connectivity via employment of an airborne tier.

Family of Network Tactical Radios The Family of Network Tactical Radios, to include the former Joint Tactical Radio System (JTRS) and the Mid-Tier Networked Vehicular Radio (MNVR) programs, is the future deployable mobile communications family of tactical radios, providing advanced joint tactical end-to-end networking data and voice communications to dismounted troops, aircraft, and watercraft platforms. The FY14 budget request provides an interoperable family of advanced single and dual-channel radios in CS-14 providing Soldiers, sensors and platforms with tactical, lower tier networking communications capability.

Joint Battle Command-Platforms (JBC-P) JBC-P will provide a foundation for achieving information interoperability on current and future battlefields and will be the principal Command and Control/Situational Awareness system for the Army and Marine Corps at the brigade-and-below level. JBC-P leverages our investment in 88,000 Force XXI Battle Command Brigade and Below (FBCB2) systems (all maneuver formations) with improved situational awareness capabilities. The FY14 budget request provides

funding for JBC-P program products that will distribute accurate digital Command and Control and Situational Awareness at all echelons down to the platform level, populate the tactical Common Operating Picture, and reduce the risk of fratricide.

Distributed Common Ground System-Army (DCGS-A) DCGS-A provides integrated intelligence, surveillance, and reconnaissance processing, exploitation, and dissemination of data from airborne and ground sensor platforms. It assembles information from over 600 sources so analysts can detect patterns and offer actionable intelligence to our units, including enemy target identification. DCGS-A is designed to provide commanders with improved situational awareness, as well as the ability to rapidly shift focus to meet current and emerging battlefield threats. Funding in FY14 will provide Research, Development, Test and Evaluation (RDT&E) funding for the design and development of the future software release. The budget request will also provide funding to modernize and procure components for the DCGS-A fixed Sites, Data Centers, mobile variants, and DCGS-A enabled Program of Record (POR) systems, setting the conditions for the Army's Intelligence, Surveillance, and Reconnaissance (ISR) component of the Command Post Computing Environment (CPCE).

Nett Warrior Nett Warrior provides an integrated situational awareness system to the dismounted leader which allows for fast and accurate decisions in the tactical fight. Funding in FY14 will provide maneuver capability to BCTs in support of deploying Soldiers and continue requisite testing to support a Full Rate Production decision.

Ground Combat Vehicle (GCV) GCV is the Army's replacement for Infantry Fighting Vehicles in Armored Brigade Combat Teams (ABCTs). Modernization imperatives include improved protection, mobility, capacity for a full nine Soldier infantry squad, and sustainment; built-in growth capacity; and network integration. The FY14 budget request will allow the refinement of the GCV requirements set, close out the Technology Development phase, and allow the awarding of an Engineering and Manufacturing Development (EMD) contract.

Armored Multi-Purpose Vehicle (AMPV) The AMPV program is an essential element of the Army's Combat Vehicle Modernization Strategy to replace an aging M113 fleet that lacks protection, mobility, and the ability to accept future upgrades. The AMPV will provide required protection, mobility, and networking capabilities for five critical enablers (mortars, medical evacuation and treatment, mission command, and general purpose) of the combined arms team. The budget request supports the evaluation of vendor proposals in preparation for Milestone B and subsequent entry into the Engineering and Manufacturing Development (EMD) phase.

Paladin Integrated Management (PIM) The PIM program replaces the current M109A6 Paladin and M992A2 Field Artillery Ammunition Supply Vehicle by incorporating Bradley common drive train and suspension components with a new chassis design. PIM addresses a long-standing capability gap in the self-propelled artillery portfolio brought about by an aging fleet and the termination of prior modernization efforts. The budget request supports continued PIM Developmental Testing and Low Rate Initial Production of 18 PIM systems and non-recurring costs for the production contract.

Joint Light Tactical Vehicle (JLTV) JLTV provides Army and Marine Corps Warfighters more payload, protection, and network capability than the High Mobility Multipurpose Wheeled Vehicle (HMMWV), and more fuel efficiency than the HMMWV or Mine Resistant Ambush Protected (MRAP) vehicles. Funding in the FY14 budget request supports the continuation of the EMD phase of the program and allows the test community to observe non-EMD vendor tests and to include those vendors in Limited User Tests.

#### **Rotorcraft Acquisition and Modernization**

The past decade of conflict has identified challenges faced by rotary wing aircraft conducting operations in high, hot conditions, limits to aircraft/passenger survivability, and high operational costs. The Army's recent aviation modernization investments maximize AH-64 and UH-60 fleet performance.

OH-58D/F Kiowa Warrior The OH-58D Kiowa Warrior provides essential aerial reconnaissance and security of ground maneuver forces and has the highest operational demand of any Army rotary wing aircraft. The budget request supports the OH-58F Cockpit and Sensor Upgrade Program (CASUP) and continues OH-58D fleet upgrades to include manned-unmanned teaming, weight reduction, and resolution of current obsolescence issues. To address long-term obsolescence in the Kiowa Warrior, the OH-58F CASUP improves avionics through modernization of: interoperability; Aircraft Survivability Equipment (ASE); armament and sensors; digital cockpit display, improved processor; navigation guidance; and communication and identification. The OH-58F CASUP capability improvements are largely centered on the Nose-Mounted Sensor (NMS), which will replace the much less capable Mast-Mounted Sensor (MMS). Additionally, CASUP will fully integrate several aircraft systems that are currently federated, redesigns, and replace the entire aircraft wiring harness, and add a capability to integrate future digital weapon systems.

Improved Turbine Engine Program (ITEP) ITEP is the next generation engine being developed to reduce fuel usage, increase performance, improve reliability, and lower maintenance. If the ITEP capability goals are achieved, it may lead to a 25 percent specific fuel consumption decrease, 35 percent production and maintenance cost decrease, 65 percent horsepower to weight increase with 20 percent engine life design increase, and may incorporate a Condition Based Maintenance plus (CBM+) package.

CH-47F/MH-47G Chinook The Army is fully committed to the procurement of 533 Army CH-47F Chinook and U.S. Special Operations Command (SOCOM) MH-47G aircraft, which are meeting or exceeding all expectations in theater. The Army plans to sign a second 5-year multi-year contract to procure the CH-47F Chinook, which will yield a cost avoidance of 19.2 percent, or \$810M.

UH-60L Black Hawk The Black Hawk program continues to move forward with continued investments in modernization to keep the Blackhawk fleet relevant through 2035. Current modernization efforts include cockpit digitization and development and

integration of the Improved Turbine Engine. The Army awarded the 8-year multi-year contract for Black Hawk, which has realized a cost avoidance of 15 percent, or \$1.4B.

As budgets decline, we recognize that it will be difficult to resource Army Aviation at the same level in the future. We continue to successfully modify, upgrade, and remanufacture existing platforms to extend the life of our aircraft and keep our aircrews safe.

#### **Defense Industrial Base (DIB)**

The timeline to end combat operations, coupled with a changing fiscal environment, will prompt the Army's Commercial and Organic Industrial Base (OIB) to adjust to a new reality of constrained resources and reduced requirements. Of great concern to the Army are the likely long-term impacts of the current fiscal environment including the loss of critical skill sets, the loss of suppliers at all tiers, and an increase in the number of single point failures in the supply chain affecting Army logistics and OIB operations. The Army is evaluating how to preserve needed capabilities in the OIB by modernizing facilities through new technology, training, and plant equipment. We continue to work with the Office of the Secretary of Defense (OSD) on the Sector by Sector – Tier by Tier (S2T2) Survey to evaluate impacts on all DIB sectors. We intend to address critical impacts within our equipment portfolios through planning for ongoing and future modernization efforts.

The Army continues to produce Industrial Base Baseline Assessments that provide leadership with assessments of current operations, risks, and issues in the Army Industrial Base. The Army has implemented long-range facilities and construction planning for arsenals and ammunition plants, which include modernization projects to upgrade facilities, and modernizing equipment and manufacturing processes. Phase 1 of the S2T2 Survey is complete, with initial data from the Army Industrial Base under review to determine critical impacts to skills, manufacturing capabilities, and expertise the Army needs.

The Army is also conducting a comprehensive Combat Vehicle Portfolio Industrial Base Study through A.T. Kearney, a global management consulting firm. The 21-week study, expected to be completed in June 2013, is assessing the commercial and organic combat vehicle industrial base, viable strategic alternatives, and sustainment of the combat vehicle industrial base in a constrained fiscal environment.

#### **Acquisition Transformation**

The Army continues to prioritize affordability, sound program management, and achievable requirements in our acquisition efforts. The Army has taken specific steps to address and avert the leading causes of program cancellations in the past.

Requirements and acquisition strategies in our major programs (GCV, Nett Warrior, and JLTV) have been carefully tailored to mitigate risk and facilitate achievable results. An Army blue ribbon panel review in 2010 recommended long-term improvements to our processes over the long term. Implementation is nearly complete on this effort (55 of 63 recommendations have been implemented to date). The Army has also embraced OSD Better Buying Power initiatives designed to address cost and schedule risk in programs and achieve better value for the taxpayer.

Ongoing improvements include revising our requirements development process to facilitate cost-informed decisions on a collaborative and timely basis. The Army is also revising requirements approval processes to focus on truly "must-have" capabilities in an effort to control costs. We are also expanding the use of multi-year contracts to achieve efficiency, increasing our emphasis on mature technologies, and improving the availability of analytic research in acquisition decisions to achieve best value for the Army.

The Stryker program is one example of the effective application of "should-cost" estimates, incentivizing efficiency, and lower overall costs. The Army achieved considerable savings combining the Double-V-Hull and the Nuclear, Biological, Chemical Reconnaissance Vehicle buys, while pursuing efficiencies gained in test

methodology. Existing test data was effectively utilized and test events were also combined to achieve efficiency.

**Closing Comments**

These are challenging times for the nation and our Army. The next several years will be pivotal for Army Ground Systems and Rotorcraft. The resources provided to the Army to conduct on-going operations while modernizing and posturing for the next generation of Warfighter capabilities will determine our continued ability to accomplish our mission and meet future commitments. To execute these plans, we need your continued advice and support.

We can assure the Members of this Subcommittee that your Army's senior leaders remain focused and are working hard to address current challenges and the needs of the Army now and in the future. We will do this with affordability as our watchword as we endeavor to remain good stewards of our nation's resources.

Mr. Chairman, Members of the Subcommittee, we thank you again for your steadfast and generous support of the outstanding men and women in uniform, our Army Civilians, and their Families.



## United States Army

### LIEUTENANT GENERAL WILLIAM N. PHILLIPS

Principal Military Deputy  
Assistant Secretary of the Army  
(Acquisition, Logistics and Technology) and  
Director, Acquisition Career Management



LTG William N. (Bill) Phillips became the Principal Military Deputy to the Assistant Secretary of the Army (Acquisition Logistics and Technology) and Director, Acquisition Career Management on 1 February 2010. In his previous assignment, he was the Commanding General, Joint Contracting Command-Iraq/Afghanistan in Baghdad, Iraq from February 2009 to January 2010. Prior to that assignment, LTG Phillips served as Commanding General, Picatinny Arsenal, New Jersey; Program Executive Officer Ammunition; and Commander, Joint Munitions and Lethality Life Cycle Management Command from May 2007 to January 2009. He also served as Deputy Program Executive Officer, Aviation, Redstone Arsenal, Alabama.

Commissioned a Second Lieutenant of Field Artillery on 28 May 1976, LTG Phillips entered Active Duty at Fort Sill, Oklahoma serving with 3rd Battalion, 18th Field Artillery. In 1979, he completed Rotary Wing Aviation Training at Fort Rucker, Alabama and was assigned to 25th Infantry Division, Schofield Barracks, Hawaii. He was later assigned to United States Army Aviation Center, Fort Rucker joining the Aviation Branch. In 1986, LTG Phillips completed a Training With Industry tour with McDonnell Douglas Helicopter Company in Mesa, Arizona and was assigned to Army Aviation Systems Command as the Contracting Officer for AH-64 Apache, AH-1, UH-1 aircraft, and Assistant Program Manager for Longbow Apache. He deployed as Chief of Contracting, Joint Task Force Bravo, Honduras. In 1991 he was assigned as Aviation Brigade S1, 2<sup>nd</sup> Infantry Division, Korea. In 1992, LTG Phillips was assigned as Chief of Flight Operations, Defense Plant Representative Office (DPRO), Boeing Helicopters, Philadelphia. From July 1994 to June 1996, he commanded DPRO McDonnell Douglas, Huntington Beach. In June 1997, LTG Phillips was assigned as Director for Information Management for the Assistant Secretary of the Army (Research, Development and Acquisition) and managed the Army's Procurement Information Systems. He commanded Defense Contract Management San Francisco from September 1999 to June 2001. From July 2001 to August 2004 he served as Director, Unit Set Fielding and Acting Director of Integration for the Army G-8.

LTG Phillips holds a Bachelor of Science Degree from Middle Tennessee State University, Master of Science Degree in Procurement and Materials Management from Webster University, and Masters of Personnel Management, Troy State University. He is a graduate of Command and General Staff College, Defense Systems Management College, and Industrial College of the Armed Forces.

His awards include the Defense Superior Service Medal, Legion of Merit (3 OLC), Bronze Star Medal, Defense Meritorious Service Medal (1 OLC), Army Meritorious Service Medal (2 OLC), Army Commendation Medal (2 OLC), Joint Service Achievement Medal, Iraq Campaign Medal, and Army Staff Identification Badge. In 2001, he was named the Army's Acquisition Commander of the Year.

LTG Phillips is a native of Bell Buckle, Tennessee and is married to the former Marilyn Hopkins of Shelbyville, Tennessee.

---

---

**WITNESS RESPONSES TO QUESTIONS ASKED DURING  
THE HEARING**

APRIL 26, 2013

---

---



#### **RESPONSES TO QUESTIONS SUBMITTED BY MS. SANCHEZ**

General BARCLAY and General PHILLIPS. The Army's strategy for acquiring Joint Tactical Radio System (JTRS) Handheld, Manpack and Small Form Fit (HMS) radios under full and open competition has taken time to properly develop and coordinate within the Department of the Army and Department of Defense, as well as with industry partners. However, I can affirm the Army's commitment to compete the procurement of these critical radios among all possible vendors.

The Army is currently coordinating the technical radio acquisition strategy with the Under Secretary of Defense (Acquisition, Technology, and Logistics). Upon approval of the acquisition strategy, the Army will submit written certification to the congressional defense committees that the acquisition strategy for full rate production of the JTRS HMS radios includes full and open competition in accordance with National Defense Authorization Act for Fiscal Year 2012. [See page 12.]

General BARCLAY and General PHILLIPS. The Defense Acquisition Board (DAB) review held in August 2012 was briefed on the Northstar bankruptcy and resulting transmission delay issue. This DAB was chaired by Ms. Katrina McFarland and attended by the principal staff members supporting the Under Secretary of Defense for Acquisition, Technology and Logistics. The decision to work with the prime and subcontractors to use a rotatable pool and a payment withhold was made within the Project Management and Program Executive Officer leadership with Assistant Secretary of the Army, Acquisitions, Logistics and Technology concurrence, to preclude a production disruption and a significant cost increase for U.S. and foreign Apache procurements. The Army, in coordination with OSD, made the right decision to sustain this important industrial base capability consisting of over 300 industry partners and thousands of workers. [See page 12.]

---

#### **RESPONSE TO QUESTION SUBMITTED BY MR. BARBER**

General BARCLAY and General PHILLIPS. The Army had requested 19 aircraft and associated ground support equipment in the Fiscal Year 2013 (FY13) President's Budget (PB) request. The Appropriations Act funded the 15 aircraft and associated ground support equipment. The FY14 President's Budget requests 15 aircraft and associated support equipment. With the late appropriation, the Army did not have an opportunity to modify the PB14 request to adjust for the loss of four aircraft and associated ground support equipment from the FY13 Appropriation. During the budget briefings to the Professional Staff Members, the Army requested committee support to permit the Army to purchase four additional aircraft with FY14 funding by shifting some other requirements into FY15. The House Armed Services Committee has supported that request. These adjustments will allow us to complete our purchase of 152 aircraft and associated ground support equipment that supports the Chief of Staff, Army's equipping strategy. [See page 21.]

---

#### **RESPONSE TO QUESTION SUBMITTED BY MR. MCINTYRE**

General BARCLAY and General PHILLIPS. The Fiscal Year (FY) 2011 reprogramming request of \$47.8 million to start an Abrams tank Fuel Efficiency Improvement (FEI) effort was supported by the House Armed Services Committee. However, the request was never implemented because it was denied by the Senate Armed Services Committee as a new start.

Current Status of the Abrams FEI: The Abrams FEI is not currently an approved or funded program.

The Product Manager for Abrams is actively supporting an Army Capabilities Integration Center (ARCIC)-led cost/benefit analysis (CBA) for a more fuel-efficient Abrams power train. The alternatives currently being considered are Transmission FEI only; Full Turbine Power Train (engine and transmission) FEI; General Dynamics Land System diesel power train (for potential Ground Combat Vehicle [GCV] commonality); BAE Hybrid Electric Diesel (for potential GCV commonality); L3 1790

Diesel; and the Common Aviation Turbine program. The CBA is expected to be completed in the Fourth Quarter of FY 2013.

The Army is keenly aware of the benefits of an Abrams FEI effort and will review opportunities to pursue an executable FEI program once the ARCIC CBA is complete. [See page 23.]

---

---

**QUESTIONS SUBMITTED BY MEMBERS POST HEARING**

APRIL 26, 2013

---

---



#### **QUESTIONS SUBMITTED BY MR. LOBIONDO**

Mr. LOBIONDO. An article was published last week stating the Army is accepting incomplete Apaches off the Boeing production line. How can this be reasonable? Can you comment on this situation and if this is not the case, provide an update on where the Apache program sits with production?

General PHILLIPS. I am familiar with the article you mentioned. The article was not accurate. It is true, however, that the Army withholds approximately \$900,000 per aircraft from Boeing and allows them to remove the improved drive system (the transmission) to support subsequent production. Boeing pays for all the extra labor and the storage costs of the aircraft. This process is a temporary one that supports the recovery of drive system supply caused by the Northstar bankruptcy in June 2012, after several years of financial difficulties. Northstar is Boeing's supplier of the improved E-model drive system and owns the process methods for manufacturing split face gears, which is a critical technology that has never been employed in any prior aircraft. We believe that it is in the best interest of the Army to work with Boeing and Northstar during this recovery period. Had the Army not developed this temporary adjustment to the final delivery process, the AH-64E production line would have stopped last year. This work-stoppage would have far reaching impacts on other suppliers, impacting the industrial base across 41 states, resulting in ~400 layoffs within Boeing alone and an estimated 20 percent workforce reduction across the entire Apache supply base. This would have had a significant impact to the cost of future U.S. and foreign Apache procurements and would have resulted in production impacts to Boeing, Lockheed Martin, Longbow Limited and Northrop Grumman. It is important to note that we do not accept incomplete Apaches. Each AH-64E Apache that comes off the Boeing production line is entirely complete and goes through a series of tests in accordance with the government Acceptance Test Procedures (ATP). The Army only accepts aircraft that have successfully completed all of the ATP. The Army is meeting all AH-64E fielding requirements and met First Unit Equipped within the program threshold in May 2013.

#### **QUESTIONS SUBMITTED BY MS. DUCKWORTH**

Ms. DUCKWORTH. Recognizing the importance of an Operational Reserve force, can you speak to how you will implement concurrent modernization of Guard and Reserve equipment inventories at the same rate as Active Duty?

General BARCLAY and General PHILLIPS. In accordance with Department of Defense Directive 1200.17 Managing the Reserve Components as an Operational Force, the Army ensures both the Army National Guard (ARNG) and United States Army Reserve (USAR) forces meet operational readiness requirements as identified by the President and the Secretary of Defense. Army leadership recognizes that the reserve components play a critical role in meeting Army force requirements and that the reserve components are an essential part of the Total Force; as such, the reserve components are modernized in accordance with the Army's modernization strategy.

The pace and scope of equipment modernization for the Army is defined by the Army Equipment Modernization Strategy, and equipment programming priorities are addressed by the Army as a total force, factoring in overall equipment age, interoperability, and employment needs, regardless of component. The Army ensures reserve component equipping requirements are addressed in all equipment distribution and modernization plans.

Over the past ten years as a result of following the Army Equipping Strategy, the reserve components have attained near parity for equipment on hand (EOH) and equipment modernization levels as the active component (AC). The EOH levels for individual components as of December 2012 are: the AC 91 percent, ARNG 89 percent, and the USAR 86 percent. The modernization levels for the individual components are the AC 72 percent, ARNG 71 percent, and the USAR 65 percent.

Ms. DUCKWORTH. I would like to commend the Army for establishing a firm requirement for the Improved Turbine Engine Program (ITEP) and for successful completion of the Material Development Decision. Developing and integrating an engine that provides a 50-percent increase in engine power and a 25-percent fuel savings

is a significant combat multiplier. The additional benefits of longer useful life, improved maintainability and reduced costs for the Army's current and next-generation vertical lift aircraft is a significant endeavor. Can you please explain the benefits this engine will bring to the current and next generation fleet of helicopters in support of Air Sea doctrine and the pivot to Asia Pacific region?

Value/Operational Benefits: With a declining defense budget, particularly in the Research & Development accounts, I am concerned we are mortgaging the Army's future requirements and capabilities to address short-term needs. The Improved Turbine Engine Program (ITEP) seems like one program where the investment is leveraged to address the both current Black Hawk and Apache helicopter requirements and the next-generation Future Vertical Lift helicopter. Can you please explain the value the ITEP engine brings to meet current and future operational requirements?

General BARCLAY and General PHILLIPS. The Improved Turbine Engine Program (ITEP) engine provides a 3000 shaft horsepower (shp) turbo shaft to improve lift, increase range, minimize fuel consumption, and decrease maintenance costs for Black Hawk and Apache rotary-wing aviation platforms. The goals of the Science and Technology project are: 1) a 25-percent reduction in Specific Fuel Consumption at 3000 shp; 2) a 65-percent improvement in shp to weight (shp/wt); 3) a 20-percent improvement in design life; and 4) a 35-percent reduction in production and maintenance cost. Traditionally, aircraft gain 77 pounds a year in weight, and the current fleet is expected to operate until 2060. The ITEP engine ensures that the aircraft maintain current flight capability and achieve improved performance in high/hot operations. The largest operational impact is that aircraft equipped with an ITEP engine will be able to operate where the altitude is over 6,000 feet and the temperature is above 95 degrees, while retaining a 500 feet per minute vertical climb capability.

---

#### QUESTIONS SUBMITTED BY MRS. ROBY

Mrs. ROBY. The Army is already planning a force structure drawdown to meet budget reduction targets. General Odierno recently testified that he anticipates the Army may need to reduce its numbers by another 100K soldiers if sequestration is not avoided. As you bring troops and equipment back from theatre, you have a unique opportunity to shape force structure in a way that best meets mission requirements, but also leverages assets that can reduce the burden on your O&M budgets.

Will your Aviation Modernization plan include a fleet mix analysis the gives weight to fleet structure that maximizes efficiency and budgetary impacts?

General BARCLAY and General PHILLIPS. Our Aviation Modernization Plan will continue to provide for a fleet mix that balances current and future approved aviation force structure requirements with available resources to provide needed capabilities and maximize efficiency.

Mrs. ROBY. The Abrams Tank power train has been identified by the Army as one of the critical upgrades required to extend the life of the Abrams tank to 2045. Two years ago, the Secretary of the Army testified that 60% of the maintenance costs for the Abrams tank is related to the engine and transmission and that improving the power train, the Army would achieve 17% improvement in fuel efficiency. In Fiscal Year 2012, this committee supported a \$47.8 million reprogramming request from the Department of Army that adopted commercial-based improvements to insert a new dual centrifugal compressor that would be integrated within the existing Total Integrated Engine Revitalization program. The committee understands this upgrade will provide the Army \$1.6 billion in maintenance and fuel savings as well as drive additional workload into Anniston Army depot.

What is the funding status of this program in the FY 2013 enacted budget and the FY 2014 proposed President's budget?

General BARCLAY and General PHILLIPS. The FY 2011 reprogramming request of \$47.8 million to start an Abrams tank Fuel Efficiency Improvement (FEI) effort was supported by the House Armed Services Committee. However, the request was never implemented because it was denied by the Senate Armed Services Committee as a new start.

Current Status of the Abrams FEI: The Abrams FEI is not currently an approved or funded program.

The Product Manager for Abrams is actively supporting an Army Capabilities Integration Center (ARCIC)-led cost/benefit analysis (CBA) for a more fuel-efficient Abrams power train. The alternatives currently being considered are Transmission FEI only; Full Turbine Power Train (engine and transmission) FEI; General Dynam-

ics Land System diesel power train (for potential Ground Combat Vehicle [GCV] commonality); BAE Hybrid Electric Diesel (for potential GCV commonality); L3 1790 Diesel; and the Common Aviation Turbine program. The CBA is expected to be completed in the Fourth Quarter of FY 2013.

The Army is keenly aware of the benefits of an Abrams FEI effort and will review opportunities to pursue an executable FEI program once the ARCIC CBA is complete.

---

**QUESTION SUBMITTED BY MRS. WALORSKI**

Mrs. WALORSKI. The Abrams Tank power train has been identified by the Army as one of the critical upgrades required to extend the life of the Abrams tank to 2045. Two years ago, the Secretary of the Army testified that 60% of the maintenance costs for the Abrams tank is related to the engine and transmission and that improving the power train, the Army would achieve 17% improvement in fuel efficiency. In Fiscal Year 2012, this committee supported a \$47.8 million reprogramming request from the Department of Army that adopted commercial-based improvements to insert a new dual centrifugal compressor that would be integrated within the existing Total Integrated Engine Revitalization program. The committee understands this upgrade will provide the Army \$1.6 billion in maintenance and fuel savings as well as drive additional workload into Anniston Army depot. What is the funding status of this program in the FY 2013 enacted budget and the FY 2014 proposed President's budget?

General PHILLIPS. The FY 2011 reprogramming request of \$47.8 million to start an Abrams tank Fuel Efficiency Improvement (FEI) effort was supported by the House Armed Services Committee. However, the request was never implemented because it was denied by the Senate Armed Services Committee as a new start.

Current Status of the Abrams FEI: The Abrams FEI is not currently an approved or funded program.

The Product Manager for Abrams is actively supporting an Army Capabilities Integration Center (ARCIC)-led cost/benefit analysis (CBA) for a more fuel-efficient Abrams power train. The alternatives currently being considered are Transmission FEI only; Full Turbine Power Train (engine and transmission) FEI; General Dynamics Land System diesel power train (for potential Ground Combat Vehicle [GCV] commonality); BAE Hybrid Electric Diesel (for potential GCV commonality); L3 1790 Diesel; and the Common Aviation Turbine program. The CBA is expected to be completed in the Fourth Quarter of FY 2013.

The Army is keenly aware of the benefits of an Abrams FEI effort and will review opportunities to pursue an executable FEI program once the ARCIC CBA is complete.

