Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-437

AH-64E Apache New Build (AH-64E New Build)

As of FY 2015 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Common Acronyms and Abbreviations

Acq O&M - Acquisition-Related Operations and Maintenance
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
BA - Budget Authority/Budget Activity
BY - Base Year
DAMIR - Defense Acquisition Management Information Retrieval
Dev Est - Development Estimate
DoD - Department of Defense
DSN - Defense Switched Network
Econ - Economic
Eng - Engineering
Est - Estimating
FMS - Foreign Military Sales
FY - Fiscal Year
IOC - Initial Operational Capability
$K - Thousands of Dollars
LRIP - Low Rate Initial Production
$M - Millions of Dollars
MILCON - Military Construction
N/A - Not Applicable
O&S - Operating and Support
Oth - Other
PAUC - Program Acquisition Unit Cost
PB - President's Budget
PE - Program Element
Proc - Procurement
Prod Est - Production Estimate
QR - Quantity Related
Qty - Quantity
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
Sch - Schedule
Spt - Support
TBD - To Be Determined
TY - Then Year
UCR - Unit Cost Reporting

Program Information

Program Name

AH-64E Apache New Build (AH-64E New Build)

DoD Component

Army

Responsible Office

Responsible Office

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Date Assigned August 9, 2012

References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acqusition Program Baseline (APB) dated December 16, 2010

Approved APB

Component Acquisition Executive (CAE) Approved Acquisition Program Baseline (APB) dated July 2, 2013

Mission and Description

The AH-64E Apache New Build (AH-64E New Build) is the heavy attack helicopter of the current and the future force. It is a twin engine, four blade, tandem seat attack helicopter with 30-millimeter ammunition, 2.75-inch rockets, laser & Radio Frequency Hellfire missiles. AH-64E is the Army's network-centric, multi-role weapon system within the Future Modular Force (FMF). It will provide the capability to simultaneously conduct (or quickly transition between) close combat, mobile strike, armed reconnaissance, security and vertical maneuver missions across the full spectrum of warfare from Stability and Support Operations to Major Combat Operations when required in day, night, obscured battlefield and adverse weather conditions. AH-64E will enable the Joint Air/Ground Maneuver Team to dominate the battle space by providing air-ground synergy through real-time Intelligence, Surveillance and Reconnaissance (ISR) information and responsive precision fires. AH-64E will be linked to Joint and Combined Arms Air/Ground Maneuver Teams via Enhanced Digital Communications, Unmanned Aircraft Systems Data Links and Joint Networking waveforms.

The AH-64E is an Apache Attack Helicopter modified as required to effectively and efficiently integrate the Longbow Apache well into the 21st Century, by providing improvements to make it relevant in FMF operations. It provides a significantly enhanced warfighting capability over the AH-64A and AH-64D. It is capable of being employed day or night in adverse weather and obscurants, and can effectively engage and destroy advanced threat weapon systems on the AirLand battlefield. Tactically, the AH-64E provides significant war fighting advantages over the original AH-64D and multiplies the combat effectiveness of the entire fleet. It will be fully capable of employing the Longbow Fire Control Radar mission kit, the Modernized Target Acquisition Designation System/Modernized Pilot Night Vision System, the Longbow Hellfire missiles, and future improved munitions in addition to the normal complement of AH-64D munitions.

The AH-64E will be fully network-centric capable with current digitized forces and FMF equipped forces. This will enable interoperability with current and future Tactical Operations Center and Army Battle Command System forces. In addition, it will reduce the logistics footprint and enhance its deployability, reduce O&S costs, improve AH-64D model flight performance and provide a means to effectively utilize already funded technology insertions.

AH-64E will operate within the future force system-of-systems environment, where maximum combat power is delivered to units only in coherent packages of systems with synergistic interdependence. The FMF concept drives the demand for network-centric interdependence and Joint integration across the force to new levels. The AH-64E meets the challenge of providing and integrating Command and Control, ISR, and communications connectivity for attack/reconnaissance aviation within Brigade Combat Teams, Divisions and Corps.

Executive Summary

The Apache AH-64E New Build Program, previously known as Apache Block IIIB (AB3B), has gone through the appropriate process to change the Mission Design Series. On June 28, 2006 the Defense Acquisition Executive (DAE) conducted a successful Milestone (MS) B review of the Apache Block III (AH-64E) program. As a result, the DAE signed an Acquisition Decision Memorandum (ADM) dated July 10, 2006 approving MS B, authorizing the AH-64E program to enter System Development and Demonstration (SDD) and designating it as an Acquisition Category (ACAT) ID program. On July 14, 2006 the Apache Project Manager (PM) awarded an SDD contract to the Boeing Company to begin the development effort for AH-64E. A follow-on ADM was approved on March 7, 2007 authorizing an LRIP quantity of 59 aircraft and granting Army authority to procure long-lead items beginning in FY 2009. The APB Schedule milestones established for the Preliminary Design Review and the Critical Design Review were successfully completed on April 19, 2007 and January 30, 2008, respectively. The Limited User Test was successfully executed in November 2009.

The PM was directed to increase total procurement quantity by 56 aircraft. These 56 aircraft were Apache AH-64E New Build aircraft included in the FY 2011 PB at a total of $2.6 billion. This change was implemented to support an increase to the training base capacity and to establish a new heavy combat aviation brigade in the active component. The baseline program was a remanufacture production program. These additional aircraft procurements would be Apache AH-64E New Build aircraft at a unit cost significantly higher than the remanufacture unit cost. The addition of the Apache AH-64E New Build aircraft along with minor fact-of-life changes to the program since the beginning of the RDT&E phase caused a Nunn-McCurdy unit cost breach to the APUC which was reflected in the December 2009 SAR. The DAE supported a rapid Nunn-McCurdy process which was completed June 1, 2010 with an ADM certifying the program to move forward to MS C and separating the program into two Major Defense Acquisition Programs for cost and reporting purposes (Apache AH-64E Remanufacture and Apache AH-64E New Build).

A successful MS C Defense Acquisition Board (DAB) was completed on September 27, 2010. The Apache AH-64E DAB allowed the move into LRIP and advance procurement actions for Full Rate Production (FRP). An LRIP contract was awarded on October 22, 2010 procuring a total of 51 remanufactured AH-64E aircraft. The first Apache AH-64E Remanufacture production delivery occurred October 24, 2011 with a formal roll-out ceremony held November 2, 2011. The Initial Operational Test and Evaluation for the Apache AH-64E Remanufacture production aircraft was completed April 2012. A successful DAB was held on August 16, 2012 which approved FRP for the Apache AH-64E Remanufacture program and authorized up to twelve LRIP aircraft for the Apache AH-64E New Build program in FY 2013. The DAE issued an ADM that approved the designation of the Apache AH-64E Remanufacture and Apache AH-64E New Build programs as ACAT IC after approval of the AH-64E Remanufacture APB. The ADM also stated that once the AH-64E New Build program was designated as ACAT IC, the Army Acquisition Executive (AAE) would be responsible for the Apache AH-64E New Build APB and the subsequent Apache AH-64E New Build FRP decision as the Milestone Decision Authority. The APB was approved by the DAE on November 26, 2012. The Apache AH-64E New Build ADM was approved by the AAE on March 11, 2013 and authorized FRP for the Apache AH-64E New Build program.

The Remanufacture and New Build aircraft go through the same production line and are delivered in the same configuration with the same capabilities. It is important to understand the New Build aircraft are delivered in the same configuration and procured using the same contracts.

To-date, 51 LRIP Apache AH-64E Remanufacture aircraft have been delivered. Apache AH-64E First Unit Equipped and IOC milestones were successfully reached in May 2013 and November 2013, respectively, as planned. FRP contract negotiations are complete for both the Apache AH-64E Remanufacture and Apache AH-64E New Build Programs, and the first FRP Apache AH-64E New Build aircraft is scheduled to be delivered in

September 2014.

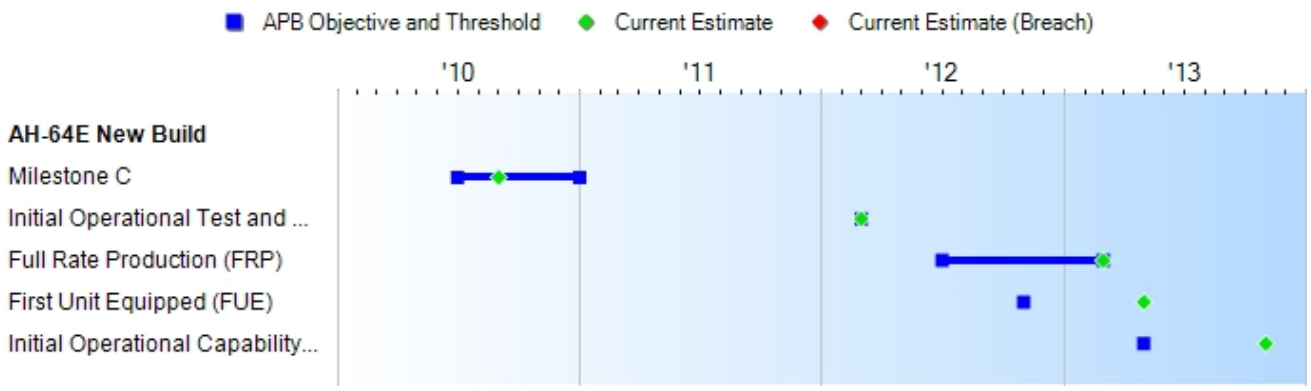
There are no significant software-related issues with this program at this time.

Threshold Breaches

APB Breaches		
Schedule		☐
Performance		☐
Cost	RDT&E	☐
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
O&S Cost		☐
Unit Cost	PAUC	☐
	APUC	☐

Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Schedule



Milestones	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate
Milestone C	JUL 2010	JUL 2010	JAN 2011	SEP 2010
Initial Operational Test and Evaluation (IOT&E)	MAR 2012	N/A	N/A	MAR 2012
Full Rate Production (FRP)	JUL 2012	JUL 2012	MAR 2013	MAR 2013
First Unit Equipped (FUE)	NOV 2012	N/A	N/A	MAY 2013
Initial Operational Capability (IOC)	MAY 2013	N/A	N/A	NOV 2013

Change Explanations

None

Acronyms and Abbreviations

FRP - Full Rate Production
FUE - First Unit Equipped
IOT&E - Initial Operational Test and Evaluation

Performance

Characteristics	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
Net Ready	Fully support execution of all operational activities.	Fully support execution of all operational activities.	Fully support execution of joint critical operational activities	Met Threshold	Fully support execution of all operational activities.
Performance					
6000' PA, 95F OGE Hover (lbs/payload)	4,100	4,100	3,400	Met Threshold	3,400
Mission Reliability					
MTBF (M) hrs					
Lot 1	22	22	15.3	Met Objective	15.3
Lot 4	22	22	17	TBD	17
MR for 3.5 hr. Flight (%)	85	85	80	Met Objective	80
Survivability					
Safe operation (minutes)	30	30	30	Met Objective	30
Survive Band IV MANPADS IR Missile Engagement	IAW JROCM 086-10	IAW JROCM 086-10	IAW JROCM 086-10	Met Objective	IAW JROCM 086-10
Force Protection					
Crewstation armor Survivability (mm)	IAW JROCM 086-10	IAW JROCM 086-10	IAW JROCM 086-10	Met Objective	IAW JROCM 086-10
Crewstation armor barrier survivability	IAW JROCM 086-10	IAW JROCM 086-10	IAW JROCM 086-10	Met Objective	IAW JROCM 086-10

Requirements Source

Capability Production Document (CPD) dated June 1, 2010

Change Explanations

None

Memo

Net Ready Key Performance Parameter compliance is achieved by meeting the information exchange capabilities required by the Integrated Architectures Operational View -1 and is demonstrated by achieving Joint Interoperability Certification, Army Interoperability Certification, and DoD Information Assurance and Accreditation

Process accreditation.

Demonstrated Performance based upon Director, Operational Test and Evaluation assessment of AH-64E Initial Operational Test and Evaluation.

Acronyms and Abbreviations

% - Percent
' - feet
F - Fahrenheit
hr - hour
hrs - hours
IAW - In Accordance With
IR - Infrared
JROCM - Joint Requirements Oversight Council Memorandum
lbs - pounds
MANPADS - Man Portable Air Defense Systems
mm - millimeter
MR - Mission Reliability
MTBF (M) - Mean Time Between Failure (Mission)
OGE - Out of Ground Effect
PA - Pressure Altitude

Track to Budget

Procurement

Appn		BA	PE
Army	2031	01	0210100A

Line Item	Name
A05133	Apache Longbow Block IIIB New Build

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2010 $M			BY2010 $M	TY $M		
Appropriation	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Prod Est	Current APB Production Objective	Current Estimate
RDT&E	0.0	0.0	--	0.0	0.0	0.0	0.0
Flyaway	--	--	--	0.0	--	--	0.0
Recurring	--	--	--	0.0	--	--	0.0
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	0.0	--	--	0.0
Procurement	2307.0	2003.3	2203.6	2095.5	2510.4	2562.6	2638.8
Flyaway	--	--	--	1872.2	--	--	2349.1
Recurring	--	--	--	1832.1	--	--	2299.1
Non Recurring	--	--	--	40.1	--	--	50.0
Support	--	--	--	223.3	--	--	289.7
Other Support	--	--	--	167.8	--	--	218.6
Initial Spares	--	--	--	55.5	--	--	71.1
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	2307.0	2003.3	N/A	2095.5	2510.4	2562.6	2638.8

Confidence Level for Current APB Cost 50% -

This estimate, like all previous Cost Analysis Improvement Group (CAIG) and Cost Assessment and Program Evaluation (CAPE) estimates, is built upon a product-oriented work breakdown structure; is based on historical actual cost information to the maximum extent possible; and, most importantly, is based on conservative assumptions that are consistent with actual demonstrated contractor and government performance for a series of acquisition programs in which the Department has been successful.

It is difficult to calculate mathematically the precise confidence levels associated with life-cycle cost estimates prepared for Major Defense Acquisition Programs (MDAPs). Based on the rigor in methods used in building estimates, the strong adherence to the collection and use of historical cost information, and the review of applied assumptions, we project that it is about equally likely that the estimate will prove too low or too high for execution of the program described.

Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E	0	0	0
Procurement	56	56	63
Total	56	56	63

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2015 President's Budget / December 2013 SAR (TY$ M)

Appropriation	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
RDT&E	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Procurement	396.8	142.0	0.0	0.0	0.0	0.0	75.0	2025.0	2638.8
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2015 Total	396.8	142.0	0.0	0.0	0.0	0.0	75.0	2025.0	2638.8
PB 2014 Total	455.4	0.0	0.0	0.0	0.0	0.0	75.0	1954.1	2484.5
Delta	-58.6	142.0	0.0	0.0	0.0	0.0	0.0	70.9	154.3

Quantity	Undistributed	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	12	4	0	0	0	0	0	47	63
PB 2015 Total	0	12	4	0	0	0	0	0	47	63
PB 2014 Total	0	10	0	0	0	0	0	0	46	56
Delta	0	2	4	0	0	0	0	0	1	7

Cost and Funding

Annual Funding By Appropriation

Annual Funding TY$
2031 | Procurement | Aircraft Procurement, Army

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2012	--	71.6	--	--	71.6	--	71.6
2013	12	294.6	--	--	294.6	30.6	325.2
2014	4	142.0	--	--	142.0	--	142.0
2015	--	--	--	--	--	--	--
2016	--	--	--	--	--	--	--
2017	--	--	--	--	--	--	--
2018	--	--	--	--	--	--	--
2019	--	75.0	--	--	75.0	--	75.0
2020	7	267.1	--	50.0	317.1	38.9	356.0
2021	7	312.7	--	--	312.7	37.6	350.3
2022	7	258.8	--	--	258.8	31.3	290.1
2023	7	259.8	--	--	259.8	31.3	291.1
2024	7	266.4	--	--	266.4	32.1	298.5
2025	7	241.4	--	--	241.4	43.4	284.8
2026	5	109.7	--	--	109.7	44.5	154.2
Subtotal	**63**	**2299.1**	**--**	**50.0**	**2349.1**	**289.7**	**2638.8**

Annual Funding BY$
2031 | Procurement | Aircraft Procurement, Army

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2010 $M	Non End Item Recurring Flyaway BY 2010 $M	Non Recurring Flyaway BY 2010 $M	Total Flyaway BY 2010 $M	Total Support BY 2010 $M	Total Program BY 2010 $M
2012	--	67.2	--	--	67.2	--	67.2
2013	12	270.8	--	--	270.8	28.1	298.9
2014	4	128.0	--	--	128.0	--	128.0
2015	--	--	--	--	--	--	--
2016	--	--	--	--	--	--	--
2017	--	--	--	--	--	--	--
2018	--	--	--	--	--	--	--
2019	--	61.3	--	--	61.3	--	61.3
2020	7	213.9	--	40.1	254.0	31.1	285.1
2021	7	245.5	--	--	245.5	29.5	275.0
2022	7	199.2	--	--	199.2	24.1	223.3
2023	7	196.0	--	--	196.0	23.7	219.7
2024	7	197.1	--	--	197.1	23.7	220.8
2025	7	175.1	--	--	175.1	31.5	206.6
2026	5	78.0	--	--	78.0	31.6	109.6
Subtotal	**63**	**1832.1**	**--**	**40.1**	**1872.2**	**223.3**	**2095.5**

Cost Quantity Information
2031 | Procurement | Aircraft Procurement, Army

Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned with Quantity) BY 2010 $M
2012	--	--
2013	12	338.0
2014	4	128.0
2015	--	--
2016	--	--
2017	--	--
2018	--	--
2019	--	--
2020	7	226.8
2021	7	255.9
2022	7	199.9
2023	7	196.1
2024	7	195.7
2025	7	196.5
2026	5	95.2
Subtotal	**63**	**1832.1**

Low Rate Initial Production

The LRIP contract phase will only apply to the AH-64E Remanufacture program. The AH-64E New Build program began in March 2013.

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost $M	Memo
India		22	937.0	
Qatar		24	1966.0	
Indonesia	8/31/2013	8	498.0	Implemented.
Korea	4/30/2013	36	1790.0	Implemented.
Saudi Arabia	11/13/2011	12	1402.0	Fully Implemented.
Saudi Arabia	8/25/2011	24	2731.0	Fully Implemented.
Saudi Arabia	12/22/2009	12	510.0	Fully Implemented.
Egypt	10/5/2009	10	488.0	Delivery of aircraft currently delayed until State Department approval is received.
Taiwan	12/22/2008	30	1912.0	Delivery of aircraft to begin in Calendar Year 2012. Support equipment is also being procured for these aircraft using Contract W58RGZ-10-C-005.

India Projected Letter of Offer and Acceptance (LOA) Signature Date of this Direct Commercial Sales (DCS) Case (Airframe) and Supporting Case is March 2014.
Qatar Projected Letter of Offer and Acceptance (LOA) Signature Date February 2014.

Nuclear Costs

None

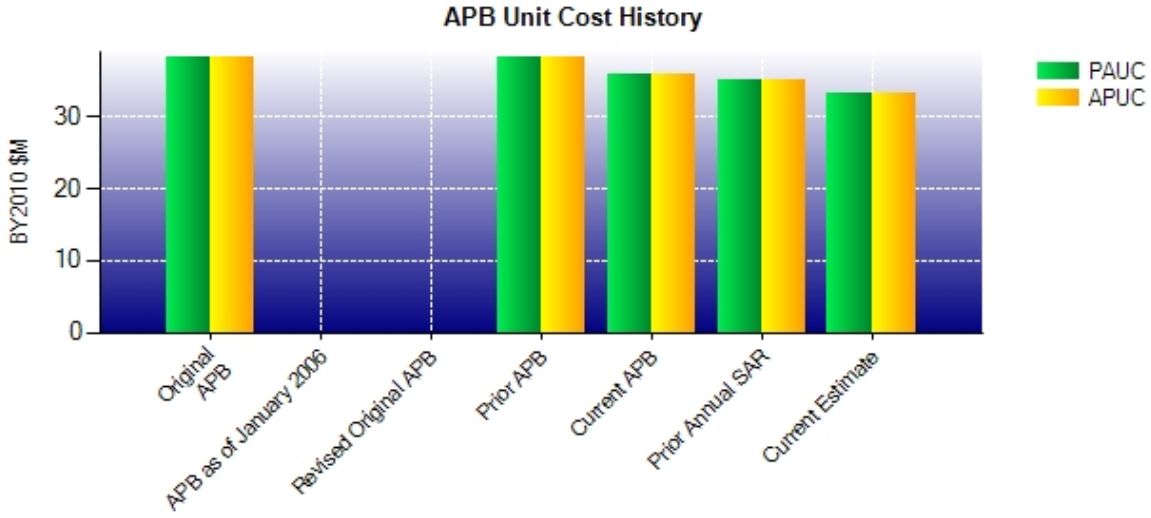
Unit Cost

Unit Cost Report

	BY2010 $M	BY2010 $M	
Unit Cost	**Current UCR Baseline (JUL 2013 APB)**	**Current Estimate (DEC 2013 SAR)**	**BY % Change**
Program Acquisition Unit Cost (PAUC)			
Cost	2003.3	2095.5	
Quantity	56	63	
Unit Cost	35.773	33.262	-7.02
Average Procurement Unit Cost (APUC)			
Cost	2003.3	2095.5	
Quantity	56	63	
Unit Cost	35.773	33.262	-7.02

	BY2010 $M	BY2010 $M	
Unit Cost	**Original UCR Baseline (DEC 2010 APB)**	**Current Estimate (DEC 2013 SAR)**	**BY % Change**
Program Acquisition Unit Cost (PAUC)			
Cost	2134.6	2095.5	
Quantity	56	63	
Unit Cost	38.118	33.262	-12.74
Average Procurement Unit Cost (APUC)			
Cost	2134.6	2095.5	
Quantity	56	63	
Unit Cost	38.118	33.262	-12.74

Unit Cost History



		BY2010 $M		TY $M	
	Date	PAUC	APUC	PAUC	APUC
Original APB	DEC 2010	38.118	38.118	41.539	41.539
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	DEC 2010	38.118	38.118	41.539	41.539
Current APB	JUL 2013	35.773	35.773	45.761	45.761
Prior Annual SAR	DEC 2012	35.025	35.025	44.366	44.366
Current Estimate	DEC 2013	33.262	33.262	41.886	41.886

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)

Initial PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
44.829	0.906	1.871	4.702	0.000	-10.484	0.000	0.062	-2.943	41.886

Current SAR Baseline to Current Estimate (TY $M)

Initial APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
44.829	0.906	1.871	4.702	0.000	-10.484	0.000	0.062	-2.943	41.886

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	N/A	N/A	N/A
Milestone C	N/A	N/A	JUL 2010	SEP 2010
IOC	N/A	N/A	MAY 2013	NOV 2013
Total Cost (TY $M)	N/A	N/A	2510.4	2638.8
Total Quantity	N/A	N/A	56	63
Prog. Acq. Unit Cost (PAUC)	N/A	N/A	44.829	41.886

Cost Variance

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	--	2510.4	--	2510.4
Previous Changes				
Economic	--	+68.8	--	+68.8
Quantity	--	-7.0	--	-7.0
Schedule	--	+238.0	--	+238.0
Engineering	--	--	--	--
Estimating	--	-455.8	--	-455.8
Other	--	--	--	--
Support	--	+130.1	--	+130.1
Subtotal	--	-25.9	--	-25.9
Current Changes				
Economic	--	-11.7	--	-11.7
Quantity	--	+438.7	--	+438.7
Schedule	--	+58.2	--	+58.2
Engineering	--	--	--	--
Estimating	--	-204.7	--	-204.7
Other	--	--	--	--
Support	--	-126.2	--	-126.2
Subtotal	--	+154.3	--	+154.3
Total Changes	--	+128.4	--	+128.4
CE - Cost Variance	--	2638.8	--	2638.8
CE - Cost & Funding	--	2638.8	--	2638.8

Summary Base Year 2010 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Prod Est)	--	2307.0	--	2307.0
Previous Changes				
Economic	--	--	--	--
Quantity	--	-0.2	--	-0.2
Schedule	--	-3.9	--	-3.9
Engineering	--	--	--	--
Estimating	--	-412.4	--	-412.4
Other	--	--	--	--
Support	--	+70.9	--	+70.9
Subtotal	--	-345.6	--	-345.6
Current Changes				
Economic	--	--	--	--
Quantity	--	+313.7	--	+313.7
Schedule	--	+76.7	--	+76.7
Engineering	--	--	--	--
Estimating	--	-155.7	--	-155.7
Other	--	--	--	--
Support	--	-100.6	--	-100.6
Subtotal	--	+134.1	--	+134.1
Total Changes	--	-211.5	--	-211.5
CE - Cost Variance	--	2095.5	--	2095.5
CE - Cost & Funding	--	2095.5	--	2095.5

Previous Estimate: December 2012

Procurement	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	-11.7
Adjustment for current and prior escalation. (Estimating)	+3.7	+3.8
Revised cost estimate to reflect FY 2012 actuals. (Estimating)	-12.0	-12.7
Total Quantity variance resulting from an increase of seven AH-64Es from 56 to 63. (Subtotal)	+160.4	+224.3
Quantity variance resulting from an increase of seven AH-64Es from 56 to 63. (Quantity)	(+313.7)	(+438.7)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+76.7)	(+107.3)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-230.0)	(-321.7)
Acceleration of procurement buy profile. (Schedule)	0.0	-49.1
Revised cost estimate to reflect increases in material costs and labor hours based upon Lot 3 and 4 contract negotiations. (Estimating)	+82.6	+125.9
Adjustment for current and prior escalation. (Support)	+0.4	+0.6
Support costs decreased in accordance with guidance on allocation distributions. (Support)	-100.7	-126.6
Decrease in Initial Spares. (Support)	-0.3	-0.2
Procurement Subtotal	+134.1	+154.3

(QR) Quantity Related

Contracts

General Contract Memo

AH-64E New Build advance procurement contract was awarded in third quarter FY 2012.

Appropriation: Procurement

Contract Name	**FRP**
Contractor	The Boeing Company
Contractor Location	5000 E McDowell Road Mesa, AZ 85215-9707
Contract Number, Type	W58RGZ-12-C-0055, FPIF
Award Date	June 29, 2012
Definitization Date	May 26, 2014

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price at Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
N/A	35.5	9	N/A	35.5	9	35.5	35.5

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this FPIF contract.

General Contract Variance Explanation

Earned Value Management waiver package was submitted for this contract on March 19, 2014.

Deliveries and Expenditures

Delivered to Date	Plan to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	0	0	63	0.00%
Total Program Quantity Delivered	0	0	63	0.00%

Expended and Appropriated (TY $M)			
Total Acquisition Cost	2638.8	Years Appropriated	3
Expended to Date	51.5	Percent Years Appropriated	20.00%
Percent Expended	1.95%	Appropriated to Date	538.8
Total Funding Years	15	Percent Appropriated	20.42%

The above data is current as of 1/31/2014.

Operating and Support Cost

AH-64E New Build

Assumptions and Ground Rules

Cost Estimate Reference:
The O&S cost estimate is based upon the Office of the Secretary of Defense (OSD) Cost Assessment and Program Evaluation (CAPE) Independent Cost Estimate (ICE) dated August 15, 2012. The estimate was updated on September 17, 2013 and again on February 24, 2014 for fact-of-life changes. The 2.0 Maintenance Costs were adjusted to reflect the Army Reimbursable rates for Class IX repair parts costs per Flying Hours as of September 17, 2013.

Sustainment Strategy:
The AH-64E Apache is maintained by a mix of soldier and civilian maintainers. The strategy assumes the fielding of 56 New Build aircraft, each flying 203.4 hours per year. The estimate is based on a 20-year service life. The Mean Time Between Failure goal for the aircraft system is 22 hours at maturity once total program reaches 50,000 operational hours.

Antecedent Information:
The antecedent to the AH-64E Apache is the AH-64D. The AH-64D will be in service until FY 2027. There are currently 630 AH-64Ds in operation. The AH-64D will have a total of 12,342 Fleet Years of Operational Tempo. 12,342 * 3,157 = 38,963.7 (BY 2010 $M); the 38,963.7 (BY 2010 $M) translates to 40,955.8 TY $M.

Unitized O&S Costs BY2010 $K		
Cost Element	**AH-64E New Build Average Annual Cost per Aircraft**	**Longbow Apache (Antecedent) Average Annual Cost per Longbow Apache Aircraft**
Unit-Level Manpower	1267.000	1267.000
Unit Operations	211.000	211.000
Maintenance	1021.000	1148.000
Sustaining Support	275.000	275.000
Continuing System Improvements	18.000	18.000
Indirect Support	238.000	238.000
Other	0.000	0.000
Total	3030.000	3157.000

Unitized Cost Comments:
56 Helicopters * 20 Years Operational Life * 3030 Unitized Cost = $3393.6 (BY 2010 $M)

	Total O&S Cost $M			
	Current Production APB Objective/Threshold		Current Estimate	
	AH-64E New Build		AH-64E New Build	Longbow Apache (Antecedent)
Base Year	3538.1	3891.9	3393.6	38963.7
Then Year	0.0	N/A	5195.8	40955.8

Total O&S Costs Comments:

The AH-64E New Build TY cost changed to reflect changes in the planned operational fleet schedule resulting from recent contract changes with the systems Prime Contractor as of February 24, 2014.

O&S Cost Variance		
Category	**Base Year 2010 $M**	**Change Explanation**
Prior SAR Total O&S Estimate December 2012	3,538.1	
Cost Estimating Methodology	-202.72	Methodology for estimating training ammunition updated to match CAPE ICE dated August 15, 2012. Methodology to estimate Class IX Repair Parts updated to match current system reimbursable rates.
Cost Data Update	0.00	
Labor Rate	0.00	
Energy Rate	-19.04	Petroleum, Oil, and Lubricants Rates updated February 24, 2014.
Technical Input	0.00	
Programmatic/Planning Factors	+77.28	Program Schedule updated February 24, 2014.
Other	0.00	
Total Changes	-144.48	
Current Estimate	3,393.6	

Disposal Costs:

Total Disposal Costs for the AH-64E Remanufacture and New Build aircraft is $42.13M (BY$ 2010) in accordance with the OSD CAPE ICE dated August 15, 2012.