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Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-202



AH-64E Apache Remanufacture (AH-64E Remanufacture)

As of FY 2020 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Sensitivity Originator

No originator info Available at this time.

Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance
ACAT - Acquisition Category
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
\$B - Billions of Dollars
BA - Budget Authority/Budget Activity
Blk - Block
BY - Base Year
CAPE - Cost Assessment and Program Evaluation
CARD - Cost Analysis Requirements Description
CDD - Capability Development Document
CLIN - Contract Line Item Number
CPD - Capability Production Document
CY - Calendar Year
DAB - Defense Acquisition Board
DAE - Defense Acquisition Executive
DAMIR - Defense Acquisition Management Information Retrieval
DoD - Department of Defense
DSN - Defense Switched Network
EMD - Engineering and Manufacturing Development
EVM - Earned Value Management
FOC - Full Operational Capability
FMS - Foreign Military Sales
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
IOC - Initial Operational Capability
Inc - Increment
JROC - Joint Requirements Oversight Council
\$K - Thousands of Dollars
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
\$M - Millions of Dollars
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
O&S - Operating and Support
PAUC - Program Acquisition Unit Cost

PB - President's Budget
PE - Program Element
PEO - Program Executive Officer
PM - Program Manager
POE - Program Office Estimate
RDT&E - Research, Development, Test, and Evaluation
SAR - Selected Acquisition Report
SCP - Service Cost Position
TBD - To Be Determined
TY - Then Year
UCR - Unit Cost Reporting
U.S. - United States
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)
USD(A&S) - Under Secretary of Defense (Acquisition and Sustainment)

Program Information

Program Name

AH-64E Apache Remanufacture (AH-64E Remanufacture)

DoD Component

Army

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Date Assigned: February 11, 2018

References

SAR Baseline (Production Estimate)

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

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated November 26, 2012

Mission and Description

The AH-64E Apache Remanufacture (AH-64E Reman), hereinafter referred to as AH-64E, is the heavy attack and reconnaissance helicopter of the U.S Army. It is a twin engine, four-blade, tandem seat, attack helicopter with 30-millimeter ammunition, 2.75-inch rockets, laser and radio frequency Hellfire missiles. The AH-64E is the Army's network-centric, multirole weapon supporting the Multi-Domain Battlefield. It provides the capability to simultaneously conduct (or quickly transition between) movement to contact, security, and or attack missions to destroy, defeat, delay, divert, or disrupt enemy forces as part of the Joint/Combined Arms Team. The AH-64E enables the Joint Air/Ground Maneuver Team to dominate the battle space by providing air-to-ground synergy through real-time Intelligence, Surveillance and Reconnaissance (ISR) information and responsive precision fires. 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 Multi-Domain operations. It provides a significantly enhanced warfighting capability over the AH-64A and AH-64D. It is capable of day or night employment in adverse weather and obscurants and can effectively engage and destroy advanced threat weapon systems on the air-land battlefield.

Tactically, the AH-64E provides significant warfighting advantages over the original AH-64D and multiplies the combat effectiveness of the entire fleet. It is 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. Additionally, the AH-64E includes upgraded engines, debuts evolutionary transmission technology and incorporates significant improvements to its main rotor system, which increases power and provides substantial performance gains.

The AH-64E is fully network-centric capable with current digitized forces and enables Multi-Domain operations. This enables interoperability with current and future Tactical Operations Center and Army Battle Command System forces. In addition, this reduces the logistics footprint, enhances deployability, reduces O&S costs, improves AH-64D flight performance and provides a means to effectively utilize already funded technology insertions. The AH-64E has a fully compatible and rapidly re-configurable open system architecture mission processor design, enabling rapid integration of future communication systems and minimizing obsolescence. The Multi-Domain concept drives the demand for network-centric interdependence and Joint integration across the force to new levels. The AH-64E meets these challenges by providing and integrating Command and Control, ISR, and communications connectivity for attack/reconnaissance aviation within Brigade Combat Teams, Divisions, and Corps.

Executive Summary

Program Highlights Since Last Report

The AH-64E Remanufacture requirements are stable and funding is adequate to meet cost and schedule baselines established in the current approved APB. Due to Boeing quality and design issues (transmission, strap pack and M230 weapon system), the program cannot certify that performance is acceptable. While corrective actions are in place, the Army is holding the contractor accountable and did not accept aircraft deliveries from February 2018 to August 2018.

While the Apache program meets all statutory acquisition requirements, there is an increased operational risk resulting from issues with the main transmission, main rotor strap pack, and the M230 gun. These issues are a result of quality and/or design issues from the prime contractor, the Boeing Company, Mesa, Arizona. The Apache Project Office is holding the vendor accountable to resolve these issues and eliminate the increased operational risk.

January 17, 2018: Begin fielding to 1-6 Cavalry Regiment, Fort Riley, Kansas.

March 20, 2018: Army Contracting Command (ACC) sent a letter to Boeing rejecting the acceptance of all U.S. AH-64E aircraft until the redesigned Strap Pack is fielded and additional criteria are met.

May 14, 2018: Army adjusted the Army Acquisition Objective from 767 to 812 and the Army Procurement Objective to 791 for the AH-64E Apache Helicopter.

June 7, 2018: Began fielding the redesigned strap pack to 1-149 Texas National Guard (NG) in Houston, Texas.

August 2018: Since Boeing has met the conditions to restart, PM Apache resumed inductions acceptance of all U.S. AH-64E Apache Remanufacture and New Build aircraft. Two AH-64Ds were inducted and two AH-64Es were accepted with planned delivery to 7-17 Cavalry Regiment by the end of September 2018.

September 2018: 7-17 Cavalry Regiment accepted and signed for the first two AH-64E aircraft September 26 and departed Fort Riley, Kansas to Fort Hood, Texas on September 27. The next three induction aircraft will arrive at the Central Modification Facility on October 4 for Version 4 Post Production Modifications, the estimated delivery to 7-17 Cavalry Regiment is October 30.

September 2018: Teams completed retrofit of the redesigned strap pack to all Category 1 Severe Coastal units (Texas NG, Missouri NG, Hawaii NG, Joint Base Lewis-McCord, Korea, and Hunter Army Airfield, Georgia). Retrofit shifted to Category 2 Deployed/Deploying units.

September 2018: PM Apache and ACC-Redstone executed options for 48 AH-64E Lot 8 Remanufacture aircraft (\$392M) and Advance Procurement for AH-64E Lot 9 (\$170M).

In November 2018, the Army stopped fielding of the redesigned strap pack and began legacy strap pack collar retrofit starting with severe coastal units. All severe coastal units will have fail safe collars installed by April 2019 and the entire Army fleet by July 2019.

December 2018: AH-64E Remanufacture Capability Version 6 Follow-on Operational Test & Evaluation II planned for April 2019.

Note: It is important to understand that the Remanufacture and New Build aircraft are procured using the same contracts, built on the same production line and delivered in the same configuration with the same capabilities.

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

History of Significant Developments Since Program Initiation	
History of Significant Developments Since Program Initiation	
Date	Significant Development Description
June 2006	Completed the Apache Block III (AB3) Milestone B DAE review
July 2006	The DAE ADM approved Milestone B, authored the AB3 program to enter System Design & Development (SDD) and designated AB3 as ACAT ID.
July 2006	Apache PM awarded an SDD contract to the Boeing Company to begin the development effort for AB3.
March 2007	A follow-on ADM authorized an LRIP quantity of 59 aircraft and granted the Army authority to procure long-lead items beginning in FY 2009. The APB schedule milestones were established for both Preliminary Design Review and the Critical Design Review.
December 2009	Resource Management Decision (RMD) 802 and RMD 700 directed the PM to increase the total procurement quantity by 56 AB3 aircraft as New Build airframes and included those aircraft in the FY 2011 PB at a total of \$2.6B. This change was implemented to support an increase in the training base capacity and to establish a new heavy Combat Aviation Brigade in the active component. This change was significant due to the fact that the baseline program was fundamentally a Remanufacture production program by design. The additional aircraft procurements would be New Build aircraft at a unit cost significantly higher than the remanufacture unit cost. The increased unit cost, compounded with minor fact-of-life changes throughout the program, caused a Nunn-McCurdy breach to the APUC as reflected in the December 2009 SAR. The DAE supported a rapid Nunn-McCurdy certification in response.
June 2010	Completed Nunn-McCurdy reporting resulting in an ADM certifying the program's progress to Milestone C and formally separating AB3 into two MDAPs for cost and reporting purposes: the Apache Block IIIA (AB3A) and Apache Block IIIB (AB3B) programs.
September 2010	Completed a successful Milestone C DAB authorizing LRIP and advance procurement actions for FRP.
October 2010	Awarded an LRIP contract procuring a total of 51 AH-64E Remanufacture aircraft.
October 2011	The first Apache AH-64E Remanufacture production delivery occurred on October 24, 2011 with a formal roll-out ceremony held on November 2, 2011.
April 2012	Completed the Initial Operational Test and Evaluation for the AH-64E Remanufacture production aircraft.
June 2012	The Apache PM requested and received approval for the Mission Design Series change for AB3 and was formally designated AH-64E Remanufacture. The AB3A and AB3B programs were subsequently renamed the AH-64E Apache Remanufacture and the AH-64E Apache New Build programs, respectively.
August 2012	A DAB approved FRP for the AH-64E Apache Remanufacture program and authorized up to 12 LRIP aircraft for the AH-64E Apache New Build program in FY 2013. The DAE ADM 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.
June 2014	The Government and Boeing definitized and awarded the FRP contract for Lot 3 and Lot 4. This contract supports the remanufacture of 72 AH-64E Apache Helicopters. This production activity supported completion of fielding the 2nd and 3rd Units Equipped, as well as augmentation of the training fleet.
August 2014	AH-64E Remanufacture Capability Version 4 Follow-on Operational Test & Evaluation successfully concluded on time on at Eglin Air Force Base, Florida. The Version 4 capability is scheduled to be delivered in 2016.

November 2014	The First Unit Equipped, 1-229 Attack Reconnaissance Battalion (ARB), successfully completed the first operational combat deployment of the AH-64E Remanufacture.
December 2014	The Army Acquisition Executive (AAE) approved the Justification and Authorization to enter a Multi-Year (MY) procurement to support production from FY 2017 to FY 2021.
December 2014	The Apache PM delivered 83 AH-64E Remanufacture Attack Helicopters of the 690 Army Acquisition Objective.
August 2015	The Secretary of the Army approved the AH-64E MY procurement, which is on schedule to meet a 2nd Quarter FY 2017 award. Completed Manned/Unmanned Teaming Expanded Capabilities Competition and awarded the contract. Fire Control Radar Maritime Mode Testing occurred from August through September 2015 at Joint Base Little Creek, Virginia.
September 2015	Apache PM completed fielding to the 2-17 Cavalry (3-101 Attack Reconnaissance Battalion (ARB)), the Army's 4th Unit Equipped with the AH-64E Apaches. Apache PM assisted and managed transfer of 20 AH-64D aircraft from Germany and Forces Command to a new AH-64 unit, the 1-25 ARB in Fort Wainwright, Alaska. Apache PM identified and provided a materiel solution to support Apache AH-64D and AH-64E helicopters for first time stationing in an arctic environment.
September 2015	The Joint Staff and USD(AT&L) concurred on the MY procurement request for approval. In October 2015, Apache PM received FY 2015 funding in an Omnibus Reprogramming Action to support procurement of 13 additional AH-64E Remanufacture aircraft. OSD CAPE visited Boeing Mesa to support MY Independent Government Estimate analysis.
February 2016	The first Production Lot 5 AH-64E rolled off the Apache line at the Boeing facility in Mesa, Arizona. This aircraft marked the first production AH-64E with Version 4 capability.
March 2016	The AAE approved Boeing's MY commitment of 10% savings. Awarded Advance Procurement contract for AH-64E Production Lot 7.
April 2016	Definitized FRP Contract for Lot 5 and Lot 6 for 117 Apache AH-64E Remanufactured aircraft.
April 2016	Definitized the AH-64E System Development and Demonstration Version 6 contract.
November 2016	Apache PM completed fielding to the 5th Unit Equipped (7-17 CAV) at Fort Hood, Texas.
January 2017	Apache PM completed fielding six AH-64E aircraft to Fort Rucker, Alabama.
March 2017	Awarded AH-64E Apache Multi-Year Contract for Lot 7 through Lot 11 for a total of 244 Remanufactured aircraft, providing options to procure additional Remanufacture and New Build aircraft each year.
May 2017	Completed fielding to the 1-227th ARB, Fort Hood, Texas.
May 2017	The Army Acquisition Objective is increased by 77 aircraft from 690 to 767. Authorized Procurement Objective remains at 634 Remanufacture aircraft and 56 New Build aircraft.
June 2017	Apache PM fielded nine AH-64E aircraft to Fort Rucker, Alabama
December 2017	Completed fielding of 24 AH-64E Apache aircraft to 4-4 ARB, Fort Carson, Colorado.

Threshold Breaches

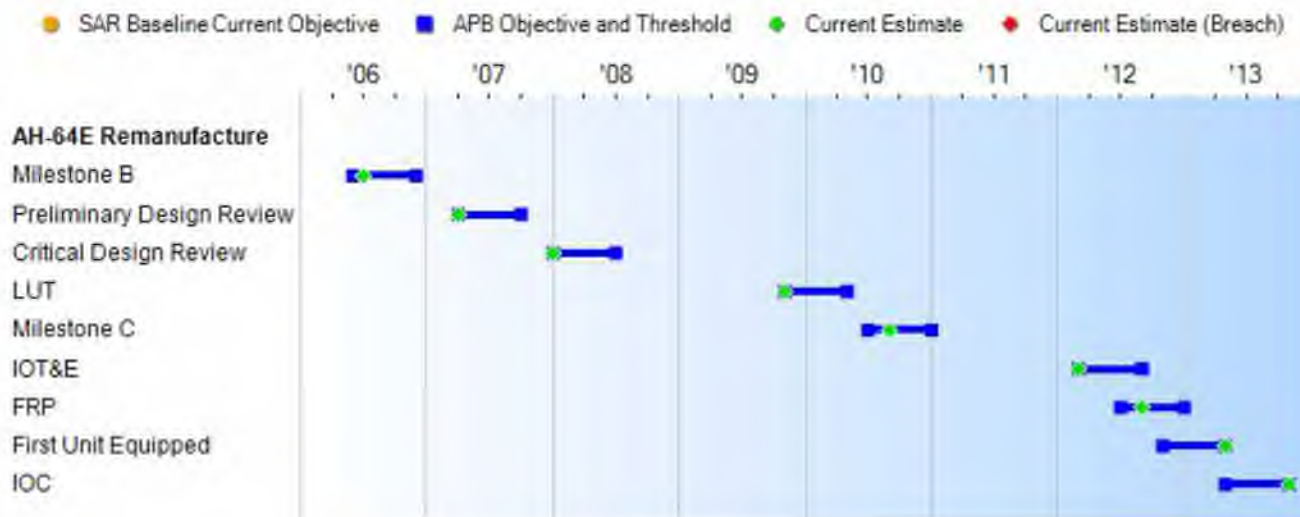
APB Breaches

- 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



Schedule Events				
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold	Current Estimate	
Milestone B	Jun 2006	Jun 2006	Dec 2006	Jul 2006
Preliminary Design Review	Apr 2007	Apr 2007	Oct 2007	Apr 2007
Critical Design Review	Jan 2008	Jan 2008	Jul 2008	Jan 2008
LUT	Nov 2009	Nov 2009	May 2010	Nov 2009
Milestone C	Jul 2010	Jul 2010	Jan 2011	Sep 2010
IOT&E	Mar 2012	Mar 2012	Sep 2012	Mar 2012
FRP	Jul 2012	Jul 2012	Jan 2013	Sep 2012
First Unit Equipped	Nov 2012	Nov 2012	May 2013	May 2013
IOC	May 2013	May 2013	Nov 2013	Nov 2013

Change Explanations

None

Notes

AH-64E Remanufacture (formerly known as Apache Block IIIA) schedule encompasses a continuous integration of technology to maintain overmatch which began with a risk reduction effort from May 2005 to July 2006. This effort was followed by the current development effort which began in July 2006 and continues through FY 2020. Production started in FY 2010 and continues through FY 2025.

Acronyms and Abbreviations

IOT&E - Initial Operational Test and Evaluation
LUT - Limited User Test

Performance

Performance Characteristics				
SAR Baseline Production Estimate	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	Support execution of all critical operational activities
Performance				
6000' PA, 95 F OGE Hover (lbs/payload)				
4,100	4,100	3,400	Met Threshold	3400
Mission Reliability				
MTBF(M) hrs.				
Lot 1				
22	22	15.3	Met Objective	24.5
Lot 4				
22	22	17	Met Objective	24.5
MR for 3.5 hr. flight (%)				
85	85	80	Met Objective	86.7
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 (mm)				
IAW JROCM 086-10	IAW JROCM 086-10	IAW JROCM 086-10	Met Objective	IAW JROCM 086-10

Requirements Reference

CPD dated June 1, 2010

Change Explanations

None

Notes

Net Ready KPP compliance is achieved by meeting the information exchange capabilities required by the Integrated Architectures Operational View-1 and is demonstrated by completing Joint Interoperability Certification, Army Interoperability Certification and DoD Information Assurance and Accreditation Process.

Mission Reliability based on Reliability, Availability, and Maintainability data derived from performance of fielded aircraft and scored aircraft data from testing.

Matériel Availability = Operational Availability (Fully Mission Capable Time plus Partially Mission Capable Time)

The cumulative Operational Availability rate of fielded AH-64E aircraft as of the October reporting period for aircraft engaged in combat operations is 85%.

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 System

mm - Millimeters

MR - Mission Reliability

MTBF (M) - Mean Time Between Failure (Mission)

OGE - Out of Ground Effect

PA - Pressure Altitude

Track to Budget

RDT&E

Appn	BA	PE	
Army	2040	07	0203744A
	Project	Name	
	D17	Aircraft Modifications/Product Improvement Programs (Sunk)	
Army	2040	07	0607135A
	Project	Name	
	ES2	Apache Product Improvement Program (Sunk)	

Procurement

Appn	BA	PE	
Army	2031	01	0210100A
	Line Item	Name	
	A05111	AH-64 Apache Block IIIA Reman	
Army	2031	02	0210102A
	Line Item	Name	
	AA6606	AH-64 Mods (Sunk)	
	Notes:	Prior to FY 2009 and creation of the AH-64E program, this line was shared to reflect AH-64E advance procurement.	

Acq O&M

Appn	BA	PE	
Army	2020	04	0702806A
	Subactivity Group	Name	
	435	Acquisition and Management Support: Attack Helicopter (Shared)	

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2010 \$M			BY 2010 \$M	TY \$M		
	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate
RDT&E	1611.8	1504.2	1654.6	1490.9	1664.7	1557.8	1539.3
Procurement	8856.9	10088.1	11096.9	10974.8	10231.9	12041.7	12935.3
Flyaway	--	--	--	10124.6	--	--	11902.8
Recurring	--	--	--	10075.9	--	--	11845.0
Non Recurring	--	--	--	48.7	--	--	57.8
Support	--	--	--	850.2	--	--	1032.5
Other Support	--	--	--	713.3	--	--	867.3
Initial Spares	--	--	--	136.9	--	--	165.2
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	118.7	0.0	0.0	150.3
Total	10468.7	11592.3	N/A	12584.4	11896.6	13599.5	14624.9

Cost Notes

No revised cost estimate for the program was completed in the previous year.

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E		5	5
Procurement		634	634
Total		639	639

Cost and Funding**Funding Summary**

Appropriation Summary									
FY 2020 President's Budget / December 2018 SAR (TY\$ M)									
Appropriation	Prior	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
RDT&E	1515.3	24.0	0.0	0.0	0.0	0.0	0.0	0.0	1539.3
Procurement	7138.2	927.8	997.8	962.5	706.2	799.4	806.3	597.1	12935.3
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	18.5	17.7	18.0	18.4	18.8	19.3	39.6	150.3
PB 2020 Total	8653.5	970.3	1015.5	980.5	724.6	818.2	825.6	636.7	14624.9
PB 2019 Total	8691.9	977.6	1018.6	978.9	919.9	699.0	884.0	378.4	14548.3
Delta	-38.4	-7.3	-3.1	1.6	-195.3	119.2	-58.4	258.3	76.6

Quantity Summary										
FY 2020 President's Budget / December 2018 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Development	5	0	0	0	0	0	0	0	0	5
Production	0	340	48	48	50	31	42	39	36	634
PB 2020 Total	5	340	48	48	50	31	42	39	36	639
PB 2019 Total	5	342	48	48	51	43	35	47	20	639
Delta	0	-2	0	0	-1	-12	7	-8	16	0

Cost and Funding

Annual Funding By Appropriation

Annual Funding							
2040 RDT&E Research, Development, Test, and Evaluation, Army							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2005	--	--	--	--	--	--	57.0
2006	--	--	--	--	--	--	107.1
2007	--	--	--	--	--	--	119.9
2008	--	--	--	--	--	--	184.8
2009	--	--	--	--	--	--	218.2
2010	--	--	--	--	--	--	149.0
2011	--	--	--	--	--	--	90.7
2012	--	--	--	--	--	--	89.8
2013	--	--	--	--	--	--	120.7
2014	--	--	--	--	--	--	112.4
2015	--	--	--	--	--	--	86.1
2016	--	--	--	--	--	--	63.0
2017	--	--	--	--	--	--	61.0
2018	--	--	--	--	--	--	55.6
2019	--	--	--	--	--	--	24.0
Subtotal	5	--	--	--	--	--	1539.3

Annual Funding							
2040 RDT&E Research, Development, Test, and Evaluation, Army							
Fiscal Year	Quantity	BY 2010 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2005	--	--	--	--	--	--	61.7
2006	--	--	--	--	--	--	112.8
2007	--	--	--	--	--	--	123.4
2008	--	--	--	--	--	--	186.6
2009	--	--	--	--	--	--	217.5
2010	--	--	--	--	--	--	146.3
2011	--	--	--	--	--	--	87.4
2012	--	--	--	--	--	--	85.2
2013	--	--	--	--	--	--	112.5
2014	--	--	--	--	--	--	102.8
2015	--	--	--	--	--	--	77.4
2016	--	--	--	--	--	--	56.1
2017	--	--	--	--	--	--	53.2
2018	--	--	--	--	--	--	47.7
2019	--	--	--	--	--	--	20.3
Subtotal	5	--	--	--	--	--	1490.9

Annual Funding								
2031 Procurement Aircraft Procurement, Army								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2009	--	28.4	--	--	28.4	--	28.4	
2010	8	230.0	--	--	230.0	--	230.0	
2011	16	508.4	--	--	508.4	--	508.4	
2012	27	609.3	--	--	609.3	--	609.3	
2013	37	593.6	--	--	593.6	--	593.6	
2014	35	671.6	--	18.0	689.6	62.9	752.5	
2015	53	1034.9	--	2.6	1037.5	85.9	1123.4	
2016	64	1256.9	--	2.7	1259.6	93.8	1353.4	
2017	52	933.7	--	3.7	937.4	96.6	1034.0	
2018	48	824.3	--	3.4	827.7	77.5	905.2	
2019	48	848.2	--	3.6	851.8	76.0	927.8	
2020	48	885.8	--	3.7	889.5	108.3	997.8	
2021	50	858.0	--	3.9	861.9	100.6	962.5	
2022	31	608.5	--	3.9	612.4	93.8	706.2	
2023	42	695.7	--	4.0	699.7	99.7	799.4	
2024	39	723.4	--	4.1	727.5	78.8	806.3	
2025	36	534.3	--	4.2	538.5	58.6	597.1	
Subtotal	634	11845.0	--	57.8	11902.8	1032.5	12935.3	

Annual Funding 2031 Procurement Aircraft Procurement, Army							
Fiscal Year	Quantity	BY 2010 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2009	--	28.1	--	--	28.1	--	28.1
2010	8	224.0	--	--	224.0	--	224.0
2011	16	486.3	--	--	486.3	--	486.3
2012	27	573.1	--	--	573.1	--	573.1
2013	37	548.5	--	--	548.5	--	548.5
2014	35	611.1	--	16.4	627.5	57.2	684.7
2015	53	927.1	--	2.3	929.4	76.9	1006.3
2016	64	1111.0	--	2.4	1113.4	82.9	1196.3
2017	52	808.8	--	3.2	812.0	83.6	895.6
2018	48	699.5	--	2.9	702.4	65.7	768.1
2019	48	704.2	--	3.0	707.2	63.1	770.3
2020	48	721.2	--	3.0	724.2	88.2	812.4
2021	50	684.9	--	3.1	688.0	80.3	768.3
2022	31	476.2	--	3.1	479.3	73.4	552.7
2023	42	533.8	--	3.1	536.9	76.4	613.3
2024	39	544.1	--	3.1	547.2	59.3	606.5
2025	36	394.0	--	3.1	397.1	43.2	440.3
Subtotal	634	10075.9	--	48.7	10124.6	850.2	10974.8

Cost Quantity Information		
2031 Procurement Aircraft Procurement, Army		
Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned With Quantity) BY 2010 \$M
2009	--	--
2010	8	184.2
2011	16	382.6
2012	27	531.6
2013	37	641.4
2014	35	556.3
2015	53	707.1
2016	64	1078.3
2017	52	794.2
2018	48	777.0
2019	48	851.4
2020	48	772.1
2021	50	721.5
2022	31	501.3
2023	42	595.2
2024	39	574.3
2025	36	407.4
Subtotal	634	10075.9

Annual Funding		
2020	Acq O&M	Operation and Maintenance, Army
Fiscal Year	TY \$M	
	Total Program	
	2019	18.5
	2020	17.7
	2021	18.0
	2022	18.4
	2023	18.8
	2024	19.3
	2025	19.6
	2026	20.0
	Subtotal	150.3

Annual Funding 2020 Acq O&M Operation and Maintenance, Army	
Fiscal Year	BY 2010 \$M
	Total Program
2019	15.6
2020	14.7
2021	14.7
2022	14.7
2023	14.7
2024	14.8
2025	14.7
2026	14.8
Subtotal	118.7

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	10/7/2010	10/7/2010
Approved Quantity	51	51
Reference	Milestone C ADM	Milestone C ADM
Start Year	2010	2010
End Year	2013	2013

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost \$M	Description
Netherlands	7/31/2018	28	576.0	Fully Implemented
United Arab Emirates	1/9/2018	27	624.9	Contract Award Pending
United Kingdom	6/24/2016	50	1259.3	Fully Implemented

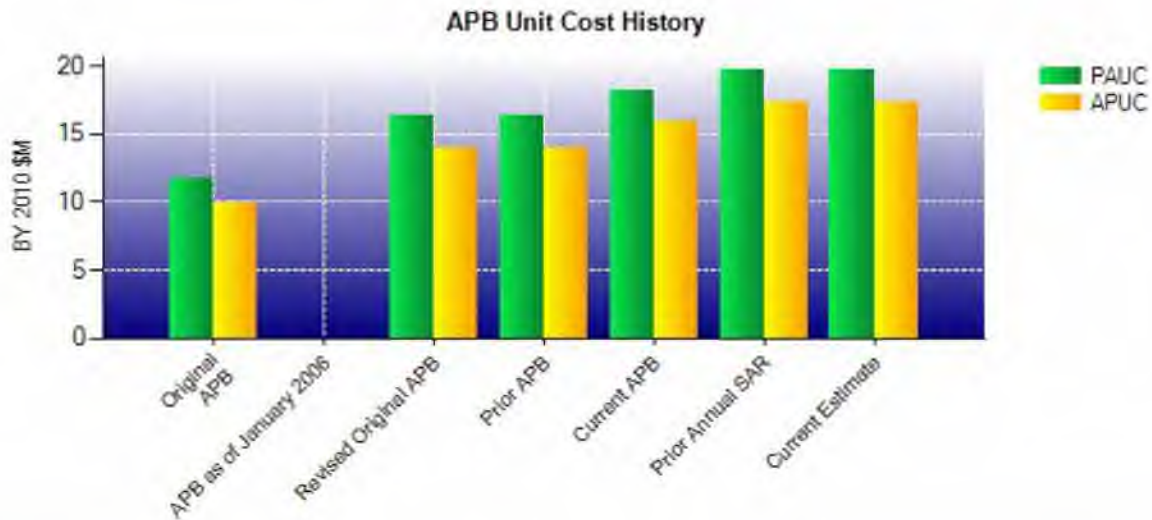
Notes

Nuclear Costs

None

Unit Cost

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2010 \$M	BY 2010 \$M	% Change
	Current UCR Baseline (Nov 2012 APB)	Current Estimate (Dec 2018 SAR)	
Program Acquisition Unit Cost			
Cost	11592.3	12584.4	
Quantity	639	639	
Unit Cost	18.141	19.694	+8.56
Average Procurement Unit Cost			
Cost	10088.1	10974.8	
Quantity	634	634	
Unit Cost	15.912	17.310	+8.79
Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2010 \$M	BY 2010 \$M	% Change
	Revised Original UCR Baseline (Dec 2010 APB)	Current Estimate (Dec 2018 SAR)	
Program Acquisition Unit Cost			
Cost	10468.7	12584.4	
Quantity	639	639	
Unit Cost	16.383	19.694	+20.21
Average Procurement Unit Cost			
Cost	8856.9	10974.8	
Quantity	634	634	
Unit Cost	13.970	17.310	+23.91



APB Unit Cost History					
Item	Date	BY 2010 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Aug 2006	11.735	9.945	13.445	11.649
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	Dec 2010	16.383	13.970	18.618	16.139
Prior APB	Dec 2010	16.383	13.970	18.618	16.139
Current APB	Nov 2012	18.141	15.912	21.282	18.993
Prior Annual SAR	Dec 2017	19.729	17.312	22.767	20.246
Current Estimate	Dec 2018	19.694	17.310	22.887	20.403

SAR Unit Cost History

Initial SAR Baseline to Current SAR Baseline (TY \$M)									
Initial PAUC Development Estimate	Changes								PAUC Production Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
13.445	-0.626	-0.159	0.231	0.000	3.961	0.000	1.766	5.173	18.618

Current SAR Baseline to Current Estimate (TY \$M)									
PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
18.618	0.175	0.000	0.003	0.000	5.153	0.000	-1.062	4.269	22.887

Initial SAR Baseline to Current SAR Baseline (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Production Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
11.649	-0.614	-0.056	0.233	0.000	3.147	0.000	1.780	4.490	16.139

Current SAR Baseline to Current Estimate (TY \$M)									
APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
16.139	0.156	0.000	-0.046	0.000	5.224	0.000	-1.071	4.263	20.403

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	Jun 2006	Jun 2006	Jul 2006
Milestone C	N/A	Apr 2010	Jul 2010	Sep 2010
IOC	N/A	Jan 2013	May 2013	Nov 2013
Total Cost (TY \$M)	N/A	8093.9	11896.6	14624.9
Total Quantity	N/A	602	639	639
PAUC	N/A	13.445	18.618	22.887

Cost Variance

Summary TY \$M					
Item	RDT&E	Procurement	MILCON	Acq O&M	Total
SAR Baseline (Production Estimate)	1664.7	10231.9	--	--	11896.6
Previous Changes					
Economic	+10.2	+19.7	--	--	+29.9
Quantity	--	--	--	--	--
Schedule	+30.8	-46.9	--	--	-16.1
Engineering	--	--	--	--	--
Estimating	-154.6	+3337.0	--	+161.3	+3343.7
Other	--	--	--	--	--
Support	--	-705.8	--	--	-705.8
Subtotal	-113.6	+2604.0	--	+161.3	+2651.7
Current Changes					
Economic	+1.6	+79.5	--	+1.0	+82.1
Quantity	--	--	--	--	--
Schedule	--	+17.7	--	--	+17.7
Engineering	--	--	--	--	--
Estimating	-13.4	-24.7	--	-12.0	-50.1
Other	--	--	--	--	--
Support	--	+26.9	--	--	+26.9
Subtotal	-11.8	+99.4	--	-11.0	+76.6
Total Changes	-125.4	+2703.4	--	+150.3	+2728.3
CE - Cost Variance	1539.3	12935.3	--	150.3	14624.9
CE - Cost & Funding	1539.3	12935.3	--	150.3	14624.9

Summary BY 2010 \$M					
Item	RDT&E	Procurement	MILCON	Acq O&M	Total
SAR Baseline (Production Estimate)	1611.8	8856.9	--	--	10468.7
Previous Changes					
Economic	--	--	--	--	--
Quantity	--	--	--	--	--
Schedule	+25.9	-8.9	--	--	+17.0
Engineering	--	--	--	--	--
Estimating	-135.3	+2771.3	--	+128.3	+2764.3
Other	--	--	--	--	--
Support	--	-643.3	--	--	-643.3
Subtotal	-109.4	+2119.1	--	+128.3	+2138.0
Current Changes					
Economic	--	--	--	--	--
Quantity	--	--	--	--	--
Schedule	--	--	--	--	--
Engineering	--	--	--	--	--
Estimating	-11.5	-21.0	--	-9.6	-42.1
Other	--	--	--	--	--
Support	--	+19.8	--	--	+19.8
Subtotal	-11.5	-1.2	--	-9.6	-22.3
Total Changes	-120.9	+2117.9	--	+118.7	+2115.7
CE - Cost Variance	1490.9	10974.8	--	118.7	12584.4
CE - Cost & Funding	1490.9	10974.8	--	118.7	12584.4

Previous Estimate: December 2017

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+1.6
Revised estimate to align with FY 2020 PB. (Estimating)	-0.4	-0.4
Funding reduced in the approved FY 2018 NDAA and FY 2019 NDAA. (Estimating)	-9.6	-11.4
Adjustment for current and prior escalation. (Estimating)	-1.5	-1.6
RDT&E Subtotal	-11.5	-11.8

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+79.5
Stretch-out of procurement buy profile from FY 2018 to FY 2025. (Schedule)	0.0	+17.7
Revised estimate to reflect actuals in FY 2017 (Estimating)	-2.9	-3.3
Revised estimate to reflect actuals in FY 2018 (Estimating)	+3.7	+4.5
Revised estimate to align with FY 2020 PB. (Estimating)	+4.1	+4.8
Adjustment for current and prior escalation. (Estimating)	-26.3	-31.4
Revised estimate due to application of new outyear escalation indices. (Estimating)	+0.4	+0.7
Adjustment for current and prior escalation. (Support)	-2.8	-2.6
Increase in Other Support due to reduction in other program office funding lines. (Support)	+64.0	+81.8
Decrease in Initial Spares due to methodology updates to reflect latest costs. (Support)	-41.4	-52.3
Procurement Subtotal	-1.2	+99.4

Acq O&M	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+1.0
Adjustment for current and prior escalation. (Estimating)	-0.1	-0.1
Revised estimate to align with the FY 2020 PB. (Estimating)	-9.5	-11.9
Acq O&M Subtotal	-9.6	-11.0

Contracts

Contract Identification

Appropriation: Procurement
Contract Name: MTADS/PNVS Production/Services IDIQ
Contractor: Lockheed Martin
Contractor Location: 5600 W Sand Lake Road
 MP-263
 Orlando, FL 32819-8907
Contract Number: W52P1J-17-D-0043
Contract Type: Firm Fixed Price (FFP)
Award Date: April 28, 2017
Definitization Date: April 28, 2017

Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
0.5	N/A	0	54.6	N/A	0	4655.0	4655.0

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to only one Task Order/Delivery Order (TO/DO) that was awarded with the initial contract. The current contract price includes multiple TO/DO which were awarded.

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

Quantities are reflective of complete Modernized Target Acquisition Designation Sight (MTADS)/Pilot Night Vision Sensor (PNVS) systems, but multiple Line Replaceable Unit's / Line Replaceable Modules are contained within a MTADS/PNVS system.

Contract Identification

Appropriation: Procurement
Contract Name: AH-64E Apache Multi-Year Contract
Contractor: The Boeing Company
Contractor Location: 5000 E McDowell Road
 Mesa, AZ 85215-9707
Contract Number: W58RGZ-16-C-0023
Contract Type: Firm Fixed Price (FFP)
Award Date: March 15, 2017
Definitization Date: March 15, 2017

Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
3030.5	N/A	244	3073.4	N/A	244	3073.4	3073.4

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to a directed change and exercise of options.

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

August 2018: Boeing met the conditions to restart, the U.S. Government resumed acceptance of all U.S. AH-64E Apache Remanufacture and New Build aircraft.

November 2018: The Army stopped fielding of the redesigned strap pack and began legacy strap pack collar retrofit starting with severe coastal units. All severe coastal units will have fail safe collars installed by April 2019 and the entire U.S. fleet by July 2019.

Contract Identification

Appropriation: Procurement
Contract Name: FRP Lots 5-6
Contractor: The Boeing Company
Contractor Location: 5000 E McDowell Road
Mesa, AZ 85215-9707
Contract Number: W58RGZ-14-C-0018
Contract Type: Fixed Price Incentive(Firm Target) (FPIF)
Award Date: February 19, 2015
Definitization Date: April 07, 2016

Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1403.4	N/A	99	1529.9	N/A	117	1529.9	1529.9

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to additional quantities.

Cost and Schedule Variance Explanations

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

General Contract Variance Explanation

Cost and schedule variances are not reported for this contract, because an earned value management waiver was granted by The Army Acquisition Executive on June 25, 2014.

Notes

This contract is more than 90% complete; therefore, this is the final report for this contract.

Contract Identification

Appropriation: Procurement
Contract Name: FRP Lots 3-4
Contractor: The Boeing Company
Contractor Location: 5000 E McDowell Road
 Mesa, AZ 85215-9707
Contract Number: W58RGZ-12-C-0055
Contract Type: Fixed Price Incentive(Firm Target) (FPIF)
Award Date: June 29, 2012
Definitization Date: June 27, 2014

Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
N/A	N/A	72	1111.1	1124.5	72	1111.1	1111.1

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to an undefinitized contract action; the contract is now definitized.

Cost and Schedule Variance Explanations

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

Notes

The Army Acquisition Executive approved a waiver of EVM reporting requirements for this contract on June 25, 2014.

This contract is more than 90% complete; therefore, this is the final report for this contract.

Contract Identification

Appropriation: RDT&E
Contract Name: AH 64E, Version 6 (V6) System Development and Demonstration (SDD)
Contractor: The Boeing Company
Contractor Location: 5000 E. McDowell Road
 Mesa, AZ 85215
Contract Number: W58RGZ-15-C-0043
Contract Type: Cost Plus Incentive Fee (CPIF)
Award Date: April 15, 2015
Definitization Date: April 07, 2016

Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
321.8	N/A	0	347.5	N/A	0	344.4	344.4

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to Government directed changes.

Contract Variance

Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/31/2019)	-2.8	-2.6
Previous Cumulative Variances	-1.3	-1.8
Net Change	-1.5	-0.8

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to rework to complete V6 Software and Testing.

The unfavorable net change in the schedule variance is due to rework to complete V6 Software and Testing.

Notes

This contract is more than 90% complete; therefore, this is the final report for this contract.

Contract Identification

Appropriation: Procurement
Contract Name: M-RFI Lot 1 Production
Contractor: Lockheed Martin
Contractor Location: 1801 NY-17C
 Owego, NY 13827
Contract Number: W52P1J-16-C-0007
Contract Type: Firm Fixed Price (FFP)
Award Date: May 31, 2016
Definitization Date: May 31, 2016

Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
7.4	N/A	10	68.3	N/A	77	72.9	72.9

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the procurement of additional hardware.

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

Notes

This is the first time this contract is being reported.

Contract Identification

Appropriation: Procurement
Contract Name: REU/MMA Production & Services IDIQ
Contractor: Longbow Limited Liability (LBL)
Contractor Location: 5600 Sand Lake Road
 Orlando, FL
Contract Number: W52P1J-16-D-0055
Contract Type: Firm Fixed Price (FFP), Cost Plus Fixed Fee (CPFF)
Award Date: August 18, 2016
Definitization Date: June 07, 2018

Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
23.4	N/A	22	81.6	N/A	89	931.2	931.2

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to only one Task Order/Delivery Order (TO/DO) that was awarded with the initial contract. The current contract price includes multiple TO/DO which were awarded.

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP/CPFF) contract.

General Contract Variance Explanation

Cost and schedule variances are not reported for this contract, because the cost or incentive portion does not meet the threshold requirements for EVM reporting.

Notes

This is the first time this contract is being reported.

Contract Identification

Appropriation: Procurement
Contract Name: MUMT Production & Services IDIQ
Contractor: L3 Communications Systems - West
Contractor Location: UT
Contract Number: W52P1J-17-D-0070
Contract Type: Firm Fixed Price (FFP), Cost Plus Fixed Fee (CPFF)
Award Date: August 31, 2017
Definitization Date: August 31, 2017

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
66.6	N/A	233	118.9	N/A	307	226.6	226.6

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to only one Task Order/Delivery Order (TO/DO) that was awarded with the initial contract. The current contract price includes multiple TO/DO which were awarded.

Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP/CPFF) contract.

General Contract Variance Explanation

Cost and schedule variances are not reported for this contract, because the cost or incentive portion does not meet the threshold requirements for EVM reporting.

Notes

This is the first time this contract is being reported.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	5	5	5	100.00%
Production	254	254	634	40.06%
Total Program Quantity Delivered	259	259	639	40.53%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	14624.9	Years Appropriated	15
Expended to Date	6295.4	Percent Years Appropriated	68.18%
Percent Expended	43.05%	Appropriated to Date	9623.8
Total Funding Years	22	Percent Appropriated	65.80%

The above data is current as of March 11, 2019.

Operating and Support Cost

Cost Estimate Details

Date of Estimate:	January 16, 2019
Source of Estimate:	POE
Quantity to Sustain:	634
Unit of Measure:	Aircraft
Service Life per Unit:	20.00 Years
Fiscal Years in Service:	FY 2012 - FY 2047

The O&S cost estimate is based upon the OSD CAPE ICE dated August 15, 2012. The estimate was last updated on January 16, 2019 for fact-of-life changes.

The sustainment quantity of 634 aircraft differs from the acquisition quantity of 639 aircraft by five aircraft. Those five aircraft were procured as limited test articles only and do not become part of the operational inventory.

Sustainment Strategy

The AH-64E Apache is maintained in a two level maintenance system (field and depot) by a mix of Soldier and civilian maintainers. The strategy assumes the fielding of 634 Remanufactured aircraft, each flying 238.8 hours per year. Aircraft are logistically supported by a mix of organic supply and Contractor Performance Based Logistics activities.

Antecedent Information

The antecedent to the AH-64E Apache is the AH-64D Longbow. The AH-64D Longbow will be in service until 2031. There are currently 396 AH-64D Longbow aircraft in operation.

As of the Milestone C estimate updated January 15, 2013, the AH-64D Longbow was estimated to have a total of 14,847 Fleet Years of operational tempo.

14,847 Fleet Years x \$3,420K per operation hour = \$50,776.7M (BY 2010 \$M); \$58,146.7M (TY)

Cost Element	Annual O&S Costs BY2010 \$M	
	AH-64E Remanufacture Average Annual Cost Per Aircraft	Longbow Apache (Antecedent) Average Annual Cost Per Aircraft
Unit-Level Manpower	1.180	1.538
Unit Operations	0.136	0.205
Maintenance	0.669	1.148
Sustaining Support	0.691	0.355
Continuing System Improvements	0.057	0.073
Indirect Support	0.040	0.101
Other	0.000	0.000
Total	2.773	3.420

Item	Total O&S Cost \$M			
	AH-64E Remanufacture			Longbow Apache (Antecedent)
	Current Production APB Objective/Threshold		Current Estimate	
Base Year	38506.0	42356.6	35149.4	50776.7
Then Year	53639.0	N/A	50885.2	N/A

The AH-64E Remanufacture estimate is updated to reflect fact-of-life changes to the Apache AH-64E support program as of January 16, 2019.

Equation to Translate Annual Cost to Total Cost

634 Helicopters x 20 Years Operational Life x \$2,773K Unitized Cost = \$35,161.6M (BY 2010 \$M)

The discrepancy between the reported cost and the equation is due to rounding.

O&S Cost Variance		
Category	BY 2010 \$M	Change Explanations
Prior SAR Total O&S Estimates - Dec 2017 SAR	33711.4	
Programmatic/Planning Factors	0.0	
Cost Estimating Methodology	1150.1	Updated methodology for estimating government program office costs during sustainment phase.
Cost Data Update	43.2	Updated spares, reparables, and POL with latest actuals.
Labor Rate	244.7	Army Military-Civilian Costing System Manpower Cost factors changed.
Energy Rate	0.0	
Technical Input	0.0	
Other	0.0	
Total Changes	1438.0	
Current Estimate	35149.4	

Disposal Estimate Details

Date of Estimate: August 15, 2012
Source of Estimate: CAPE ICE
Disposal/Demilitarization Total Cost (BY 2010 \$M): 46.0

Total Disposal Costs for both the AH-64E Remanufacture and AH-64E New Build aircraft is \$46.03M (BY 2010 \$M) in accordance with the OSD CAPE ICE dated August 15, 2012.