Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-252

RQ-4A/B Global Hawk Unmanned Aircraft System (RQ-4A/B Global Hawk)

As of FY 2016 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

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)

Program Information

Program Name

RQ-4A/B Global Hawk Unmanned Aircraft System (RQ-4A/B Global Hawk)

DoD Component

Air Force

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Date Assigned: August 3, 2012

References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 6, 2001

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated February 23, 2015

Mission and Description

The RQ-4A/B Global Hawk Unmanned Aircraft System (RQ-4A/B Global Hawk) is a high altitude, long endurance Unmanned Aircraft System (UAS) with an integrated sensor suite and ground segment that provides Intelligence, Surveillance, and Reconnaissance (ISR) capabilities to joint warfighters. The system provides high-resolution, high-quality, digital Synthetic Aperture Radar (SAR) to include Ground Moving Target Indicator, plus Electro-Optical (EO), and medium wave Infrared (IR) imagery of targets and other critical areas of interest. The program does not have an antecedent system.

The current program profile consists of: Block 20, 30, and 40 aircraft which are larger than Block 10 aircraft and capable of carrying up to a 3,000-pound (lb) payload. All Block 10 aircraft have either been retired or transferred to the Navy or National Aeronautics and Space Administration. Block 20 was designed to be Image Intelligence only and carries an Enhanced Integrated Sensor Suite (EISS) that is designed for increased performance range and location accuracy over the Block 10 payload. The operational Block 20 aircraft have been converted to the Battlefield Airborne Communications Node (BACN) configuration, which provides airborne communications relay and gateway that allows real-time information exchanges between different tactical data link systems and provides decision makers with critical information. Block 30 carries the Airborne Signals Intelligence Payload that brings Signals Intelligence capability with the EISS. Block 40 incorporates the Multi-Platform Radar Technology Insertion Program Radar as its only sensor.

Executive Summary

Pertinent Program Background

As previously reported in the December 2010 SAR, on February 17, 2011, the Global Hawk Program Manager submitted a Program Deviation Report on a likely Nunn-McCurdy critical unit cost breach. On April 6, 2011, the Secretary of the Air Force (SECAF) notified Congress and the USD(AT&L) of the Nunn-McCurdy critical cost breach. Subsequently, the USD (AT&L) initiated a Nunn-McCurdy review of the program, which resulted in a certification of the Global Hawk program (in accordance with section 2433a of Title 10, United States Code). By law, the Global Hawk program requires a Milestone C to formally re-enter the acquisition framework; thus, establishing a foundation from which to execute ongoing development, production, and modification efforts, as well as, any approved modernization or preplanned product improvement efforts in the future. The required Milestone C DAB, originally scheduled for September 2011, was delayed as a result of budget driven program changes. The Milestone C DAB was also planned in 2012, 2013, and 2014, but each time was delayed due to ongoing budgetary and programmatic changes. The Global Hawk program office has spent significant time and resources over the last three to four years to successfully achieve a new Milestone C and re-enter the acquisition process.

The FY 2013 PB proposed termination of future Blk 30 production and divestiture of all Blk 30 systems previously procured. The FY 2013 National Defense Authorization Act (NDAA) included direction that none of the FY 2013 funds authorized for the DoD may be obligated or expended to retire, prepare to retire, or place in storage a RQ-4 Blk 30, as well as direction that during the period preceding December 31, 2014, in supporting the operational requirements of the combatant commands, the SECAF shall maintain the operational capability of each RQ-4 Blk 30 belonging to the Air Force or delivered to the Air Force during such period. The FY 2013 Appropriations Act also included a provision that required the SECAF to obligate and expend funds previously appropriated for the procurement of RQ-4 aircraft.

The FY 2014 NDAA included direction that none of the FY 2014 funds authorized for the DoD may be obligated or expended to retire, prepare to retire, or place in storage an RQ-4 Blk 30, as well as direction that during the period preceding December 31, 2016, in supporting the operational requirements of the combatant commands, the SECAF shall maintain the operational capability of each RQ-4 Blk 30 belonging to the Air Force or delivered to the Air Force during such period.

The FY 2015 PB and subsequent NDAA restored Blk 30's and all the modernization activities necessary to keep the entire RQ-4 fleet viable throughout the envisioned life cycle. The FY 2015 NDAA directed a High-Altitude Intelligence, Surveillance and Reconnaissance study and the Air Force is responding to that direction.

On February 23, 2015, the USD(AT&L) signed the RQ-4A/B Global Hawk Acquisition Strategy, APB and ADM, approving Milestone C.

Award of Major Contracts or Contract Modifications

The Global Hawk Program Office awarded numerous major contracts and contract modifications to include: initial spares, software upgrades, aircrew training, sustainment support, and FMS activities.

Status of Major Global Hawk System Efforts:

The Global Hawk weapon system surpassed 140,000 flight hours and 100,000 combat flight hours and continues to demonstrate superior improved sustainment performance and exceeded operational performance targets. For 2014, the Global Hawk fleet had an actual Aircraft Availability rate of 79.7%, exceeding the target rate of 72.0%. The Global Hawk cost per flying hour has decreased by more than 50% in the past two years.

Blk 30 Production and Fielding: The Pacific Command (PACOM) and European Command (EUCOM) Forward Operating Locations (FOL) currently consist of two Blk 30 aircraft at Andersen Air Force Base (AFB), Guam and one Blk 30 at Naval Air Station (NAS) Sigonella, Sicily. Both 30's stationed at Guam rotated to Misawa, Japan in May 2014 to increase sortie success rates during the monsoon season in the Pacific. The Blk 30's returned to Andersen AFB, Guam in early October

2014, flying 28 sorties and over 420 hours at Misawa, Japan. All FOLs are accomplishing multi-intelligence missions. NAS Sigonella, Sicily is flying missions in support of EUCOM, African Command (AFRICOM), and Central Command (CENTCOM). CENTCOM currently has two Blk 30 aircraft flying combat sorties. Blk 30's have flown over 21,500 combat hours. On August 15, 2014, the Global Hawk program office awarded the RQ-4B Global Hawk LRIP Lot 11 contract. This contract purchases three Blk 30 RQ-4B air vehicles and two Airborne Signals Intelligence Payload (ASIP) sensors as retrofit kits. Deliveries are expected in FY 2017. During 2014, four ASIP and two ASIP sensors, as retrofit kits, were delivered.

Blk 40 Production and Fielding: Blk 40 Early Operational Capability (EOC) was completed with two Blk 40 aircraft arriving in theater at the end of September 2013. Air Combat Command deployed two additional aircraft to the PACOM Area of Responsibility (AOR) in 2014. This compliments the two aircraft that continue to support the CENTCOM/AFRICOM AORs. The Blk 40 system is performing its Ground Moving Target Indicator (GMTI) detection mission in both theaters with a high level of mission effectiveness (95.1% CENTCOM; 88.7 % PACOM). As of January 15, 2015, over 180 missions and over 4,200 combat fight hours have flown since the IOC declaration, and the system has performed with a 94.6% mission effectiveness rating. The final two production Blk 40s were delivered to Grand Forks AFB, North Dakota during this period. Two Blk 40s were deployed from Grand Forks AFB, North Dakota to PACOM Andersen AFB, Guam in June 2014 for operations.

Battlefield Airborne Communications Node (BACN): Since deployment, the fleet of Global Hawk BACN aircraft has flown over 900 combat sorties and over 23,500 flying hours. During 2014, over 350 sorties and over 9,000 hours were flown, and a Global Hawk-BACN aircraft was in the air almost constantly.

Main Operating Base (MOB) Support: Grand Forks AFB currently has five Blk 40 aircraft with sensors. Beale AFB currently has ten Blk 30 aircraft supporting Northern Command, Southern Command and local operations. The multiple Mission Control Elements at Beale AFB (Blk 30) and Grand Forks AFB (Blk 40) control the missions after handoff from the Launch and Recovery Elements at the FOLs (EUCOM, PACOM and CENTCOM).

The Blk 30 Test Program: In FY 2014, the Blk 30 test program consisted primarily of test planning. Developmental testing occurred for known deficiency fixes and Diminishing Manufacturing Sources issues. The Blk 30 test program is poised to execute several critical enhancement programs in FY 2015 including Synthetic Aperture Radar, Complex Imagery and ASIP upgrade efforts. Both of these are critical operational responses to recognized warfighter needs.

The Blk 40 Test Program: The Blk 40 completed Developmental Test & Evaluation during FY 2014, which included evaluation of the latest sensor software version and end-to-end testing of the Blk 40 enterprise. Following an Initial Operational Test & Evaluation in FY 2015, the Blk 40 will add Synthetic Aperture Radar imagery to the currently fielded GMTI capability. FY 2015 testing will include a major software upgrade, evaluation of classified capabilities, and support to the development of maritime modes for the North Atlantic Treaty Organization Alliance Ground Surveillance program.

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

This is the final SAR submission for the RQ-4 A/B Global Hawk program.

Pursuant to section 2432 of title 10, United States Code, this is the final SAR submission for RQ-4 A/B Global Hawk, because the program is 90% or more delivered.

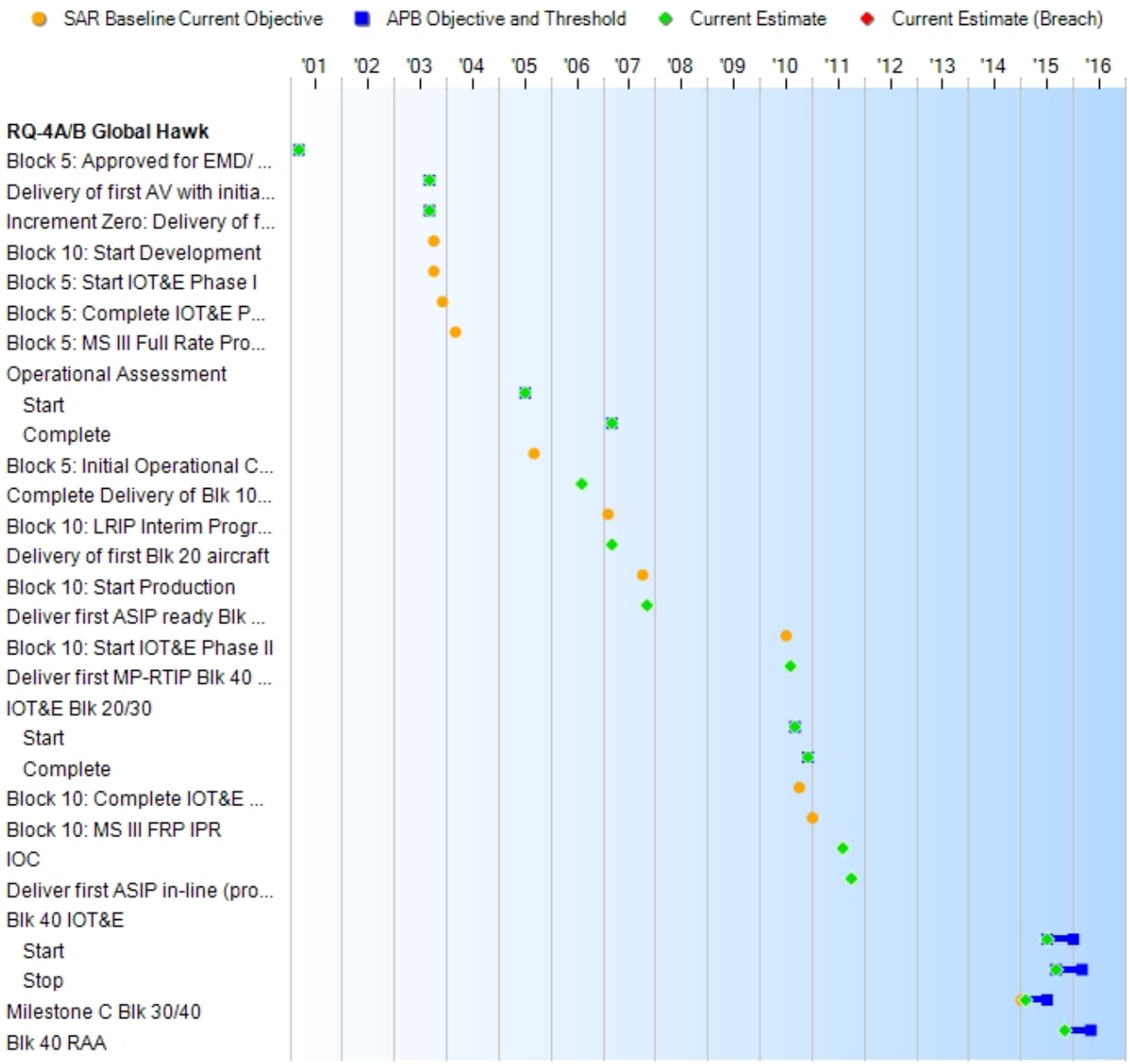
Threshold Breaches

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

Classified Threshold Breaches information is provided in the classified annex to this submission.

Schedule


SAR Baseline Current Objective
APB Objective and Threshold
Current Estimate
Current Estimate (Breach)
'01
'02
'03
'04
'05
'06
'07
'08
'09
'10
'11
'12
'13
'14
'15
'16
RQ-4A/B Global Hawk
Block 5: Approved for EMD/ ...
Delivery of first AV with initia...
Increment Zero: Delivery of f...
Block 10: Start Development
Block 5: Start IOT&E Phase I
Block 5: Complete IOT&E P...
Block 5: MS III Full Rate Pro...
Operational Assessment
Start
Complete
Block 5: Initial Operational C...
Complete Delivery of Blk 10...
Block 10: LRIP Interim Progr...
Delivery of first Blk 20 aircraft
Block 10: Start Production
Deliver first ASIP ready Blk ...
Block 10: Start IOT&E Phase II
Deliver first MP-RTIP Blk 40 ...
IOT&E Blk 20/30
Start
Complete
Block 10: Complete IOT&E ...
Block 10: MS III FRP IPR
IOC
Deliver first ASIP in-line (pro...
Blk 40 IOT&E
Start
Stop
Milestone C Blk 30/40
Blk 40 RAA

Schedule Events					
Events	**SAR Baseline Development Estimate**	**Current APB Production Objective/Threshold**		**Current Estimate**	
Block 5: Approved for EMD/ LRIP	Feb 2001	Mar 2001	Mar 2001	Mar 2001	
Delivery of first AV with initial Spiral 1 capability	N/A	Sep 2003	Sep 2003	Sep 2003	
Increment Zero: Delivery of first AV with initial Spiral 1 capability	N/A	Sep 2003	Sep 2003	Sep 2003	
Block 10: Start Development	Oct 2003	N/A	N/A	N/A	
Block 5: Start IOT&E Phase I	Oct 2003	N/A	N/A	N/A	
Block 5: Complete IOT&E Phase I	Dec 2003	N/A	N/A	N/A	
Block 5: MS III Full Rate Production (FRP) Review	Mar 2004	N/A	N/A	N/A	
Operational Assessment					
Start	N/A	Jul 2005	Jul 2005	Jul 2005	
Complete	N/A	Mar 2007	Mar 2007	Mar 2007	
Block 5: Initial Operational Capability (IOC)	Sep 2005	N/A	N/A	N/A	
Complete Delivery of Blk 10 aircraft	N/A	Aug 2006	Aug 2006	Aug 2006	
Block 10: LRIP Interim Program Review (IPR)	Feb 2007	N/A	N/A	N/A	
Delivery of first Blk 20 aircraft	N/A	Mar 2007	Mar 2007	Mar 2007	
Block 10: Start Production	Oct 2007	N/A	N/A	N/A	
Deliver first ASIP ready Blk 30 aircraft	N/A	Nov 2007	Nov 2007	Nov 2007	
Block 10: Start IOT&E Phase II	Jul 2010	N/A	N/A	N/A	
Deliver first MP-RTIP Blk 40 aircraft	N/A	Aug 2010	Aug 2010	Aug 2010	
IOT&E Blk 20/30					
Start	N/A	Sep 2010	Sep 2010	Sep 2010	
Complete	N/A	Dec 2010	Dec 2010	Dec 2010	
Block 10: Complete IOT&E Phase II	Oct 2010	N/A	N/A	N/A	
Block 10: MS III FRP IPR	Jan 2011	N/A	N/A	N/A	
IOC	N/A	Aug 2011	Aug 2011	Aug 2011	
Deliver first ASIP in-line (production) Blk 30 aircraft	N/A	Oct 2011	Oct 2011	Oct 2011	
Blk 40 IOT&E					
Start	N/A	Jul 2015	Jan 2016	Jul 2015	(Ch-1)
Stop	N/A	Sep 2015	Mar 2016	Sep 2015	(Ch-1)
Milestone C Blk 30/40	N/A	Jan 2015	Jul 2015	Feb 2015	(Ch-2)
Blk 40 RAA	N/A	Nov 2015	May 2016	Nov 2015	(Ch-3)

Change Explanations

(Ch-1) The Blk 40 IOT&E Start current estimate changed from Jan 2015 to Jul 2015 and the Blk 40 IOT&E Stop current estimate changed from Mar 2015 to Sep 2015 due to delays in the Processing, Exploitation, and Dissemination system upgrades, which is necessary for conducting IOT&E.
(Ch-2) The Milestone C Blk 30/40 current estimate was update to reflect the actual completion.
(Ch-3) The Blk 40 RAA was added with Milestone C APB.

Acronyms and Abbreviations

ASIP - Airborne Signals Intelligence Payload
AV - Air Vehicle (same as aircraft)
IOT&E - Initial Operational Test & Evaluation
MP-RTIP - Multi Platform Radar Technology Insertion Program
MS - Milestone

Performance

Performance Characteristics				
SAR Baseline Development Estimate	**Current APB Production Objective/Threshold**		**Demonstrated Performance**	**Current Estimate**
Block 5: Endurance - Air Vehicle (AV)				
Should be capable of flying an enroute distance of 3000 NM, remaining on-station 24 hours, and recover at the launch base.	N/A	N/A	N/A	N/A
Block 5: Airspace Coordination - Global Hawk System				
The Global Hawk system must be sufficiently robust to allow world wide system employment in all classes of airspace.	N/A	N/A	N/A	N/A
Block 5: Mission Execution - Ground Station				
The ground station will allow UAV operators to perform NRT mission control, mission monitoring, and mission updates/ modifications to include dymanic platform and payload control and retasking.	N/A	N/A	N/A	N/A
Block 5: Information Exchange Requirements (IERs)				
100% of all top-level IERs.	N/A	N/A	N/A	N/A
Block 10: System Survivability - AV				
The AV must be equipped to employ active counter measures against radar and IR-guided threats to the system as identified in the STAR.	N/A	N/A	N/A	N/A
Block 10: Mean Time Between Critical Failure (MTBCF)				
System MTBCF of	N/A	N/A	N/A	N/A

160 hours.					
Block 10: Signal Intelligence (SIGINT)					
TBD	N/A	N/A	N/A	N/A	
Endurance (Block 30 and Block 40)					
N/A	A mission configured, MC RQ-4B Block 30 or Block 40 aircraft must have a minimum endurance of 28 hours plus appropriate fuel reserves IAW AFI 11-202V3, General Flight Rules.	(T=O) A mission configured, MC RQ-4B Block 30 or Block 40 aircraft must have a minimum endurance of 28 hours plus appropriate fuel reserves IAW AFI 11-202V3, General Flight Rules.	TBD	A mission configured, MC RQ-4B Block 30 or Block 40 aircraft must have a minimum endurance of 28 hours plus appropriate fuel reserves IAW AFI 11-202V3, General Flight Rules.	(Ch-1)
Worldwide Operations					
Block 30					
N/A	The RQ-4B Block 30 system must be equipped to allow worldwide operations in all classes of airspace with minimal procedural workarounds, air traffic control agreements, and special use airspace.	The RQ-4B Block 30 system must be equipped to allow worldwide operations in all classes of airspace using procedural workarounds, air traffic control agreements, and special use airspace.	TBD	The RQ-4B Block 30 system must be equipped to allow worldwide operations in all classes of airspace with minimal procedural workarounds, air traffic control agreements, and special use airspace.	(Ch-1)
Block 40					
N/A	The RQ-4B Block 40 system must be sufficiently robust to allow worldwide operations in all classes of airspace.	The RQ-4B Block 40 system must be sufficiently robust to allow worldwide operations in all classes of airspace using procedural workarounds, air traffic control agreements, and special use airspace.	TBD	The RQ-4B Block 40 system must be sufficiently robust to allow worldwide operations in all classes of airspace.	(Ch-1)
Dynamic Re-tasking (Block 30 and Block 40)					
N/A	The RQ-4B Block 30 and Block 40 ground segment must allow operators to perform NRT mission control, mission monitoring, mission updates and modifications for dynamic aircraft and	The RQ-4B Block 30 and Block 40 ground segment must allow operators to perform NRT mission and payload control and monitoring, manual aircraft override control and manual target	TBD	The RQ-4B Block 30 and Block 40 ground segment must allow operators to perform NRT mission control, mission monitoring, mission updates and modifications for dynamic aircraft and	(Ch-1)

	payload control and re-tasking.	changes to accomplish ad-hoc mission re-tasking.		payload control and re-tasking.	
Battlespace Awareness (Block 30)					
EO Sensor					
N/A	EO sensor must provide a search rate of at least 23,000 sq km per hour at an average NIIRS of 5.0 or better on actionable imagery.	(T=O) EO sensor must provide a search rate of at least 23,000 sq km per hour at an average NIIRS of 5.0 or better on actionable imagery.	TBD	EO sensor must provide a search rate of at least 23,000 sq km per hour at an average NIIRS of 5.0 or better on actionable imagery.	(Ch-1)
IR Sensor					
N/A	IR sensor must provide a search rate of at least 12,000 sq km per hour at an average NIIRS of 4.7 or better on actionable imagery.	(T=O) IR sensor must provide a search rate of at least 12,000 sq km per hour at an average NIIRS of 4.7 or better on actionable imagery.	TBD	IR sensor must provide a search rate of at least 12,000 sq km per hour at an average NIIRS of 4.7 or better on actionable imagery.	(Ch-1)
SAR Spot Mode					
N/A	SAR spot mode (Block 30) will provide a minimum average NIIRS of 5.5 from 20-160 km (16-86.5 NM) at aircraft broadside ± 30 degrees.	(T=O) SAR spot mode (Block 30) will provide a minimum average NIIRS of 5.5 from 20-160 km (16-86.5 NM) at aircraft broadside ± 30 degrees.	TBD	SAR spot mode (Block 30) will provide a minimum average NIIRS of 5.5 from 20-160 km (16-86.5 NM) at aircraft broadside ± 30 degrees.	(Ch-1)
Net Ready (Block 30 and Block 40)					
N/A	The RQ-4B Block 30 and Block 40 system must support military operations, be able to enter and be managed in the network, and exchange information.	(T=O) The RQ-4B Block 30 and Block 40 system must support military operations, be able to enter and be managed in the network, and exchange information.	TBD	The RQ-4B Block 30 and Block 40 system must support military operations, be able to enter and be managed in the network, and exchange information.	(Ch-1)
Survivability (Block 30 and Block 40)					
N/A	The RQ-4B Block 30 and Block 40 aircraft must provide onboard threat warning and/or autonomous threat reaction.	The RQ-4B Block 30 and Block 40 system must receive and disseminate to operators on-going situational awareness and dynamic situational updates from external sources regarding threats to the aircraft.	TBD	The RQ-4B Block 30 and Block 40 aircraft must provide onboard threat warning and/or autonomous threat reaction.	(Ch-1)
Energy (Block 30 and Block 40)					

N/A	The RQ-4 Block 30 and Block 40 will not impact forward deployed logistic infrastructure in support of contingency operations.	(T=O) The RQ-4 Block 30 and Block 40 will not impact forward deployed logistic infrastructure in support of contingency operations.	TBD	The RQ-4 Block 30 and Block 40 will not impact forward deployed logistic infrastructure in support of contingency operations.	(Ch-1)
Materiel Availability Rate (Block 30 and Block 40)					
Aircraft					
N/A	The RQ-4B Block 30 and Block 40 aircraft must achieve a materiel availability rate of 60%.	(T=O) The RQ-4B Block 30 and Block 40 aircraft must achieve a materiel availability rate of 60%.	TBD	The RQ-4B Block 30 and Block 40 aircraft must achieve a materiel availability rate of 60%.	(Ch-1)
MCE					
N/A	The MCE must achieve a materiel availability rate of 95%.	(T=O) The MCE must achieve a materiel availability rate of 95%.	TBD	The MCE must achieve a materiel availability rate of 95%.	(Ch-1)
LRE					
N/A	The LRE must achieve a materiel availability rate of 90%.	(T=O) The LRE must achieve a materiel availability rate of 90%.	TBD	The LRE must achieve a materiel availability rate of 90%.	(Ch-1)

Classified Performance information is provided in the classified annex to this submission.

Requirements Reference

RQ-4B Block 30 Capability Production Document dated November 20, 2014 and the RQ-4B Block 40 Capability Production Document dated January 13, 2015.

Change Explanations

(Ch-1) The changes in Performance reflect the approved Milestone C APB.

Acronyms and Abbreviations

DOF - Degrees of Freedom
EO - Electro-Optical
GIG-KIP - Global Information Grid Key Interface Profile
hrs - hours
IAW - In Accordance With
IR - Infrared
Km - Kilometer
NCOW-RM - Net-Centric Operation and Warfare Reference Model
NIIRS - National Image Interpretability Rating Scale
NM - Nautical Mile
NRT - Near Real Time
SAR - Synthetic Aperture Radar
STAR - System Threat Assessment Report
UAV - Unmanned Air Vehicle

Track to Budget

General Notes

The FY 2016 PB includes funding for RQ-4 follow-on efforts that are not part of the MDAP. Those funds are excluded from this report.

RDT&E

Appn	BA	PE
Air Force	07	0305205F

Project	Name		
4799	Global Hawk HAEUAV/Predator		(Sunk)

Appn	BA	PE
Air Force	07	0305220F

Project	Name		
5144	Global Hawk HAEUAV		(Sunk)
5145	RQ-4 Block 30	(Shared)	
Notes:	This project is shared with other RQ-4 Block 30 follow-on efforts that are not a part of this MDAP.		
5146	RQ-4 BLOCK 40	(Shared)	
Notes:	This project is shared with other RQ-4 Block 40 follow-on efforts that are not a part of this MDAP.		
5147	RQ-4 GSRA/CSRA	(Shared)	(Sunk)
Notes:	This project is shared with other Ground Station and Communications System follow-on efforts that are not a part of this MDAP.		

Notes

Projects 5145, 5146 and 5147 share funding with other RQ-4 follow-on efforts that are not a part of this MDAP. Project 5147 is marked Sunk for funding for completed MDAP effort. This Project also identifies funding for upgrade work that will occur after the MDAP program has been completed.

Procurement

Appn	BA	PE
Air Force	3010 07	0305220F

Line Item	Name		
000075	OTHER PRODUCTION CHARGES RQ-4	(Shared)	(Sunk)
Notes:	This project is shared with other RQ-4 follow-on efforts that are not a part of this MDAP.		

Appn	BA	PE
Air Force	3010 06	0305220F

Line Item	Name	
000999	Initial Spares	(Shared)
Notes:	This project is shared with other RQ-4 follow-on efforts that are not a part of this MDAP.	

Air Force	3010	04	0305220F		
	Line Item	**Name**			
	HAEUAV	RQ-4			
Air Force	3010	04	0305205F		
	Line Item	**Name**			
	HAEUAV	RQ-4	(Shared)	(Sunk)	
Air Force	3010	05	0305220F		
	Line Item	**Name**			
	HAWK00	RQ-4 Mods	(Shared)		
	Notes:	This project is shared with other RQ-4 follow-on efforts that are not a part of this MDAP.			
Air Force	3010	04	0305220F		
	Line Item	**Name**			
	RQ440P	RQ-4 BLOCK 40 PROC		(Sunk)	
Air Force	3010	05	0305220F		
	Line Item	**Name**			
	RQ4GCM	RQ-4 GSRA/CSRA Mod	(Shared)	(Sunk)	
	Notes:	This project is shared with other Ground Station and Communications System follow-on efforts that are not a part of this MDAP.			
Air Force	3080	02	0305220F		
	Line Item	**Name**			
	821800	Base Communication Infrastructure	(Shared)	(Sunk)	
Air Force	3080	03	0305220F		
	Line Item	**Name**			
	837300	Passenger Carrying Vehicles	(Shared)	(Sunk)	

Notes

Line Items 000075, 000999, HAWK00, and RQ4GCM share funding with other RQ-4 follow-on efforts that are not a part of this MDAP. Although Line Items 000075, 000999, and HAWK00 have funding in future years, they are also marked sunk because the future efforts funded in those projects are not a part of this MDAP.

MILCON

Appn		BA	PE		
Air Force	3300	01	0305205F		
	Project	**Name**			
	F030011X	(Air Force)		(Shared)	(Sunk)
	F04000XX	(Air Force)			(Sunk)
Air Force	3300	01	0305220F		
	Project	**Name**			
	0501003X	(Air Force)			(Sunk)
	06BAEY09	(Air Force)			(Sunk)
	07USAFE6	(Air Force)			(Sunk)
	1030060B	(Air Force)			(Sunk)

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2015 $M			BY 2015 $M	TY $M		
	SAR Baseline Development Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Production Objective	Current Estimate
RDT&E	1116.4	4225.4	4647.9	4217.9	906.2	3767.0	3767.0
Procurement	4628.6	5534.7	6088.2	5524.5	4459.8	5135.6	5135.6
Flyaway	--	--	--	4089.9	--	--	3750.7
Recurring	--	--	--	3953.2	--	--	3626.0
Non Recurring	--	--	--	136.7	--	--	124.7
Support	--	--	--	1434.6	--	--	1384.9
Other Support	--	--	--	636.1	--	--	637.4
Initial Spares	--	--	--	798.5	--	--	747.5
MILCON	33.9	139.0	152.9	138.8	28.0	122.9	122.9
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	5778.9	9899.1	N/A	9881.2	5394.0	9025.5	9025.5

Current APB Cost Estimate Reference

Global Hawk (RQ-4B) Air Force Service Cost Position (SCP), dated January 13, 2015

Confidence Level

Confidence Level of cost estimate for current APB: 50%

The Life-Cycle Cost Estimate (LCCE) reflects the most probable cost. In this case, the confidence level of the cost estimate is 50%. It takes into consideration relevant risks, including ordinary levels of external and unforeseen events, aiming to provide sufficient resources to execute the program under normal conditions encountering average levels of technical, schedule, and programmatic risk and external influence.

The Base Year for the program has been updated from FY 2000 to FY 2015 using the following deflators:

Appn Category	Deflation Factor
RDT&E	1.32837961
Procurement	1.32837961
MILCON	1.32837961

Total Quantity			
Quantity	**SAR Baseline Development Estimate**	**Current APB Production**	**Current Estimate**
RDT&E	0	0	0
Procurement	63	45	45
Total	63	45	45

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2016 President's Budget / December 2014 SAR (TY$ M)									
Appropriation	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
RDT&E	3288.5	118.7	179.6	134.5	45.7	0.0	0.0	0.0	3767.0
Procurement	4691.3	51.2	88.8	68.2	18.7	56.4	29.9	131.1	5135.6
MILCON	122.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	122.9
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2016 Total	8102.7	169.9	268.4	202.7	64.4	56.4	29.9	131.1	9025.5
PB 2015 Total	8273.1	244.3	310.3	198.2	69.9	15.2	10.9	7.8	9129.7
Delta	-170.4	-74.4	-41.9	4.5	-5.5	41.2	19.0	123.3	-104.2

Quantity Summary										
FY 2016 President's Budget / December 2014 SAR (TY$ M)										
Quantity	Undistributed	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	45	0	0	0	0	0	0	0	45
PB 2016 Total	0	45	0	0	0	0	0	0	0	45
PB 2015 Total	0	45	0	0	0	0	0	0	0	45
Delta	0	0	0	0	0	0	0	0	0	0

Cost and Funding

Annual Funding By Appropriation

Annual Funding 3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2001	--	--	--	--	--	--	129.5
2002	--	--	--	--	--	--	198.3
2003	--	--	--	--	--	--	329.1
2004	--	--	--	--	--	--	351.6
2005	--	--	--	--	--	--	368.3
2006	--	--	--	--	--	--	254.7
2007	--	--	--	--	--	--	223.1
2008	--	--	--	--	--	--	264.6
2009	--	--	--	--	--	--	227.7
2010	--	--	--	--	--	--	219.3
2011	--	--	--	--	--	--	190.5
2012	--	--	--	--	--	--	286.4
2013	--	--	--	--	--	--	151.4
2014	--	--	--	--	--	--	94.0
2015	--	--	--	--	--	--	118.7
2016	--	--	--	--	--	--	179.6
2017	--	--	--	--	--	--	134.5
2018	--	--	--	--	--	--	45.7
Subtotal	--	--	--	--	--	--	3767.0

Annual Funding 3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	BY 2015 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2001	--	--	--	--	--	--	165.5
2002	--	--	--	--	--	--	250.8
2003	--	--	--	--	--	--	410.6
2004	--	--	--	--	--	--	428.0
2005	--	--	--	--	--	--	437.2
2006	--	--	--	--	--	--	293.5
2007	--	--	--	--	--	--	250.5
2008	--	--	--	--	--	--	291.2
2009	--	--	--	--	--	--	247.3
2010	--	--	--	--	--	--	235.2
2011	--	--	--	--	--	--	200.5
2012	--	--	--	--	--	--	296.3
2013	--	--	--	--	--	--	154.0
2014	--	--	--	--	--	--	94.1
2015	--	--	--	--	--	--	117.4
2016	--	--	--	--	--	--	174.6
2017	--	--	--	--	--	--	128.4
2018	--	--	--	--	--	--	42.8
Subtotal	--	--	--	--	--	--	4217.9

Total Global Hawk PE includes post modernization outside of RQ-4A/B Global Hawk APB.

Annual Funding 3080 | Procurement | Other Procurement, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2003	--	--	--	--	--	0.6	0.6
2004	--	--	--	--	--	0.2	0.2
2005	--	--	--	--	--	0.3	0.3
2006	--	--	--	--	--	0.3	0.3
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	0.8	0.8
2009	--	--	--	--	--	0.3	0.3
Subtotal	--	--	--	--	--	2.5	2.5

Annual Funding 3080 | Procurement | Other Procurement, Air Force							
Fiscal Year	Quantity	BY 2015 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2003	--	--	--	--	--	0.7	0.7
2004	--	--	--	--	--	0.2	0.2
2005	--	--	--	--	--	0.4	0.4
2006	--	--	--	--	--	0.3	0.3
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	0.9	0.9
2009	--	--	--	--	--	0.3	0.3
Subtotal	--	--	--	--	--	2.8	2.8

Annual Funding 3010 | Procurement | Aircraft Procurement, Air Force							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2001	--	21.0	--	--	21.0	--	21.0
2002	3	144.4	--	8.7	153.1	6.8	159.9
2003	3	136.4	--	11.1	147.5	31.1	178.6
2004	4	210.4	--	3.5	213.9	38.1	252.0
2005	4	252.3	--	8.4	260.7	84.5	345.2
2006	5	290.3	--	2.5	292.8	59.1	351.9
2007	5	328.2	7.5	12.2	347.9	75.2	423.1
2008	5	362.5	25.7	7.4	395.6	132.0	527.6
2009	5	388.3	84.7	32.4	505.4	240.1	745.5
2010	4	341.1	86.7	20.3	448.1	127.2	575.3
2011	4	415.4	84.2	--	499.6	65.5	565.1
2012	3	206.5	55.1	--	261.6	106.6	368.2
2013	--	--	7.0	7.2	14.2	115.5	129.7
2014	--	--	33.0	11.0	44.0	1.7	45.7
2015	--	--	22.4	--	22.4	28.8	51.2
2016	--	--	43.6	--	43.6	45.2	88.8
2017	--	--	52.2	--	52.2	16.0	68.2
2018	--	--	14.3	--	14.3	4.4	18.7
2019	--	--	12.7	--	12.7	43.7	56.4
2020	--	--	0.1	--	0.1	29.8	29.9
2021	--	--	--	--	--	43.6	43.6
2022	--	--	--	--	--	87.5	87.5
Subtotal	45	3096.8	529.2	124.7	3750.7	1382.4	5133.1

Annual Funding 3010 | Procurement | Aircraft Procurement, Air Force							
Fiscal Year	Quantity	BY 2015 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2001	--	26.6	--	--	26.6	--	26.6
2002	3	180.5	--	10.9	191.4	8.5	199.9
2003	3	167.8	--	13.7	181.5	38.2	219.7
2004	4	252.1	--	4.2	256.3	45.6	301.9
2005	4	293.7	--	9.8	303.5	98.4	401.9
2006	5	329.2	--	2.8	332.0	67.1	399.1
2007	5	362.5	8.3	13.5	384.3	83.1	467.4
2008	5	394.1	27.9	8.0	430.0	143.6	573.6
2009	5	415.1	90.5	34.6	540.2	256.7	796.9
2010	4	357.8	90.9	21.3	470.0	133.4	603.4
2011	4	428.7	86.9	--	515.6	67.6	583.2
2012	3	209.7	56.0	--	265.7	108.3	374.0
2013	--	--	7.0	7.2	14.2	114.6	128.8
2014	--	--	32.3	10.7	43.0	1.7	44.7
2015	--	--	21.6	--	21.6	27.7	49.3
2016	--	--	41.2	--	41.2	42.7	83.9
2017	--	--	48.4	--	48.4	14.8	63.2
2018	--	--	13.0	--	13.0	4.0	17.0
2019	--	--	11.3	--	11.3	39.0	50.3
2020	--	--	0.1	--	0.1	26.0	26.1
2021	--	--	--	--	--	37.3	37.3
2022	--	--	--	--	--	73.5	73.5
Subtotal	45	3417.8	535.4	136.7	4089.9	1431.8	5521.7

Total Global Hawk PE includes post modernization outside of RQ-4A/B Global Hawk APB.

Cost Quantity Information 3010 | Procurement | Aircraft Procurement, Air Force		
Fiscal Year	**Quantity**	**End Item Recurring Flyaway (Aligned With Quantity) BY 2015 $M**
2001	--	--
2002	3	167.7
2003	3	159.3
2004	4	239.2
2005	4	284.4
2006	5	330.7
2007	5	359.3
2008	5	375.5
2009	5	437.7
2010	4	307.6
2011	4	465.1
2012	3	291.3
2013	--	--
2014	--	--
2015	--	--
2016	--	--
2017	--	--
2018	--	--
2019	--	--
2020	--	--
2021	--	--
2022	--	--
Subtotal	45	3417.8

Annual Funding 3300 | MILCON | Military Construction, Air Force	
Fiscal Year	**TY $M**
	Total Program
2003	11.7
2004	22.2
2005	9.8
2006	14.1
2007	48.6
2008	--
2009	--
2010	16.5
Subtotal	122.9

Annual Funding 3300 | MILCON | Military Construction, Air Force	
Fiscal Year	**BY 2015 $M**
	Total Program
2003	14.3
2004	26.4
2005	11.3
2006	15.9
2007	53.5
2008	--
2009	--
2010	17.4
Subtotal	138.8

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	3/6/2001	9/9/2013
Approved Quantity	6	45
Reference	Milestone II ADM	LRIP ADM
Start Year	2001	2001
End Year	2004	2017

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the small RQ-4A/B Global Hawk fleet size of 45. This exaggerates the effects of the 10% boundary.

The FY 2014 PB procurement baseline includes 45 aircraft and associated ground stations (ten Launch and Recovery Elements and ten Mission Control Elements).

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost $M	Description
South Korea	3/26/2014	4	693.0	South Korea signed the Letter of Agreement on March 26, 2014. The South Korean Global Hawk program is a $693M FMS case (KS-D-SAD) to purchase 4 GH Block 30-I aircraft (capable for export,) 2 ground control elements (1 fixed, 1 transportable) and 2 spare engines. An Undefinitized Contract Action was issued to the contractor on December 16, 2014 in order to preserve the proposed first aircraft delivery in the 4th quarter of FY 2018. The initial efforts in this case will deliver the aircraft with the Enhanced Integrated Sensor Suite with the potential to add other payloads later in the program.
NATO	9/3/2009	5	2383.0	The North Atlantic Treaty Organization (NATO) Alliance Ground Surveillance (AGS) program has contracted with NGISSII (a Northrop Grumman company) through a Direct Commercial Sale (DCS) to obtain five RQ-4B Global Hawk Block 40-like aircraft equipped with the US Navy's Q-4 TRITON COMMS/COMMS architecture; the Radar Technology Insertion Program (RTIP) Synthetic Aperture Radar sensor; and integrated with a NATO -unique ground station environment The program is a cooperative development effort with 15 of the 28 NATO nations funding the procurement effort; Poland officially joined in 2014. US Government (USG) funds approximately 41.7% of the cost.
Germany	9/25/2007	1	675.0	The Euro Hawk Risk Reduction Program (RRP) is the DCS between the German Government and Euro Hawk GmbH (Northrop Grumman/Cassidian partnership). The German Government purchased a Euro Hawk system to replace their current signals intelligence system. The system consists of one modified RQ-4B Global Hawk air vehicle and ground segment, and a German-built Signals Intelligence (SIGINT) sensor payload. The USG provides support through a $34.8M FMS case (GY-D-STY). The air vehicle was delivered to Germany for sensor integration in July 2011. Germany's sensor integration flight testing began on January 11, 2013. On May 14, 2013, the German government announced the decision to cancel the Euro Hawk program. Although Germany obtained airworthiness certification for experimental aircraft flight testing, the program was cancelled due to the perceived cost to obtain permanent airworthiness certification. Germany halted sensor flight testing at

	the end of August 2013, but has since decided to reschedule flight test and reconsider options for system purchases.

Notes

Nuclear Costs

None

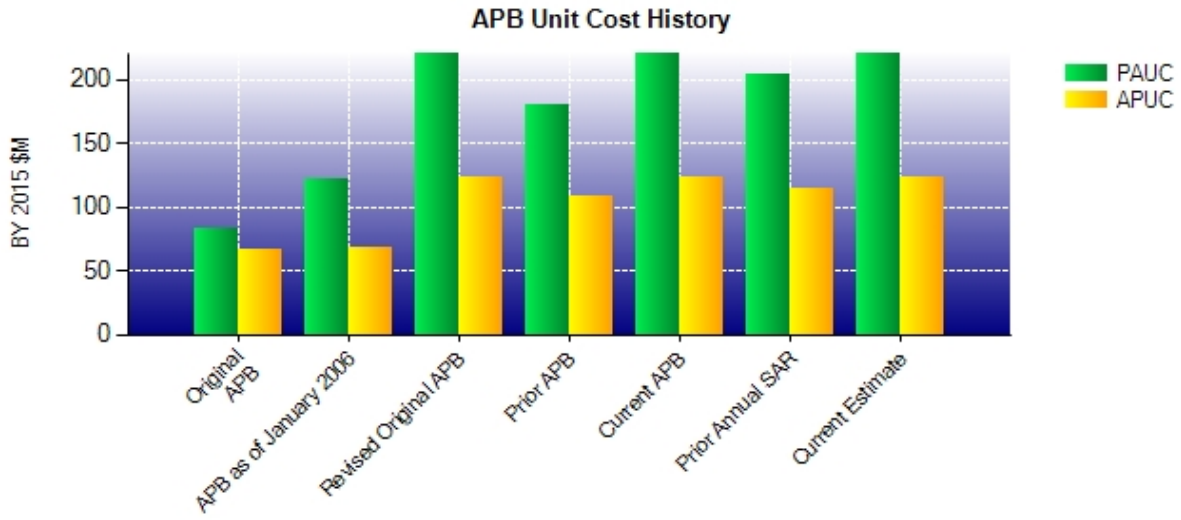
Unit Cost

Unit Cost Report

Item	BY 2015 $M Current UCR Baseline (Feb 2015 APB)	BY 2015 $M Current Estimate (Dec 2014 SAR)	% Change
Program Acquisition Unit Cost			
Cost	9899.1	9881.2	
Quantity	45	45	
Item	219.980	219.582	-0.18
Average Procurement Unit Cost			
Cost	5534.7	5524.5	
Quantity	45	45	
Unit Cost	122.993	122.767	-0.18

Item	BY 2015 $M Revised Original UCR Baseline (Feb 2015 APB)	BY 2015 $M Current Estimate (Dec 2014 SAR)	% Change
Program Acquisition Unit Cost			
Cost	9899.1	9881.2	
Quantity	45	45	
Unit Cost	219.980	219.582	-0.18
Average Procurement Unit Cost			
Cost	5534.7	5524.5	
Quantity	45	45	
Unit Cost	122.993	122.767	-0.18

Unit Cost History



Item	Date	BY 2015 $M		TY $M	
		PAUC	APUC	PAUC	APUC
Original APB	Mar 2001	82.703	66.244	85.619	70.790
APB as of January 2006	Dec 2002	122.033	68.214	115.459	65.673
Revised Original APB	Feb 2015	219.980	122.993	200.567	114.124
Prior APB	Mar 2007	179.728	108.793	180.267	111.530
Current APB	Feb 2015	219.980	122.993	200.567	114.124
Prior Annual SAR	Dec 2013	203.471	114.502	202.882	116.080
Current Estimate	Dec 2014	219.582	122.767	200.567	114.124

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)									
Initial PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
85.619	3.767	20.726	1.664	51.896	15.131	0.000	21.764	114.948	200.567

Current SAR Baseline to Current Estimate (TY $M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
70.790	1.844	14.795	-10.502	14.564	2.602	0.000	20.031	43.334	114.124

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone I	N/A	N/A	N/A	N/A
Milestone II	N/A	Feb 2001	N/A	Mar 2001
Milestone III	N/A	N/A	N/A	N/A
IOC	N/A	N/A	N/A	Aug 2011
Total Cost (TY $M)	N/A	5394.0	N/A	9025.5
Total Quantity	N/A	63	N/A	45
PAUC	N/A	85.619	N/A	200.567

The Global Hawk FRP Decision Review, which would have replaced the previously planned Milestone III decision, is no longer applicable. Production is nearly complete. The APB was reset at Milestone C on February 23, 2015.

Cost Variance

Summary TY $M				
Item	**RDT&E**	**Procurement**	**MILCON**	**Total**
SAR Baseline (Development Estimate)	906.2	4459.8	28.0	5394.0
Previous Changes				
Economic	+26.1	+6.4	+3.6	+36.1
Quantity	--	-608.5	--	-608.5
Schedule	+555.6	-472.6	-8.1	+74.9
Engineering	+1562.9	+655.4	+117.0	+2335.3
Estimating	+657.4	+480.7	-20.6	+1117.5
Other	--	--	--	--
Support	+75.0	+702.4	+3.0	+780.4
Subtotal	+2877.0	+763.8	+94.9	+3735.7
Current Changes				
Economic	+55.0	+76.6	+1.8	+133.4
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-71.2	-363.6	-1.8	-436.6
Other	--	--	--	--
Support	--	+199.0	--	+199.0
Subtotal	-16.2	-88.0	--	-104.2
Adjustments	--	--	--	--
Total Changes	+2860.8	+675.8	+94.9	+3631.5
CE - Cost Variance	3767.0	5135.6	122.9	9025.5
CE - Cost & Funding	3767.0	5135.6	122.9	9025.5

Summary BY 2015 $M				
Item	**RDT&E**	**Procurement**	**MILCON**	**Total**
SAR Baseline (Development Estimate)	1116.4	4628.6	33.9	5778.9
Previous Changes				
Economic	--	--	--	--
Quantity	--	-540.4	--	-540.4
Schedule	+550.5	-474.5	-2.8	+73.2
Engineering	+1882.8	+887.0	+130.6	+2900.4
Estimating	+652.6	+476.7	-24.2	+1105.1
Other	--	--	--	--
Support	+97.9	+737.3	+3.3	+838.5
Subtotal	+3183.8	+1086.1	+106.9	+4376.8
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-82.3	-358.9	-2.0	-443.2
Other	--	--	--	--
Support	--	+168.7	--	+168.7
Subtotal	-82.3	-190.2	-2.0	-274.5
Adjustments	--	--	--	--
Total Changes	+3101.5	+895.9	+104.9	+4102.3
CE - Cost Variance	4217.9	5524.5	138.8	9881.2
CE - Cost & Funding	4217.9	5524.5	138.8	9881.2

Previous Estimate: December 2013

RDT&E	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+55.0
Revised estimate to reflect prior year actuals. (Estimating)	-43.8	-43.0
Revised estimate of costs for software integration. (Estimating)	-72.1	-73.9
Revised estimate for government testing. (Estimating)	+17.2	+18.1
Revised estimate for Program Office support costs. (Estimating)	+61.9	+64.2
Revised estimate for Joint Mission Planning System development. (Estimating)	+1.6	+1.4
Revised estimate for cost of Enhanced Weather Capability and Ice Shape Testing. (Estimating)	-1.9	-1.7
Revised estimate for reliability and maintainability. (Estimating)	+20.9	+21.4
Revised estimate for contractor test support. (Estimating)	+4.9	+5.8
Revised estimate for infrastructure costs. (Estimating)	+17.9	+19.0
Revised estimate for Airborne Signals Intelligence Payload (ASIP) sensors. (Estimating)	-31.1	-32.2
Adjustment for current and prior escalation. (Estimating)	-60.8	-53.4
Revised estimate to reflect the application of new out year escalation indices. (Estimating)	+3.0	+3.1
RDT&E Subtotal	-82.3	-16.2

Procurement	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+76.6
Revised estimate to reflect prior year actuals. (Estimating)	-126.6	-125.0
Revised estimate for production line disposition. (Estimating)	-24.5	-25.7
Revised estimate for diminishing manufacturing sources. (Estimating)	-22.5	-24.0
Revised estimate of International Maritime Satellite/Communication Security modifications. (Estimating)	-40.8	-42.7
Revised estimate of cost of weather radar. (Estimating)	-5.3	-5.9
Revised estimate for ASIP sensors. (Estimating)	-21.0	-23.9
Revised estimate for program office management/other government costs. (Estimating)	-14.9	-16.4
Revised estimate for change requests and low cost modifications. (Estimating)	-8.2	-9.0
Revised estimate due to recategorization of Flyaway Costs. (Estimating)	-34.0	-36.0
Adjustment for current and prior escalation. (Estimating)	-64.2	-58.3
Revised estimate to reflect the application of new out year escalation indices. (Estimating)	+3.1	+3.3
Adjustment for current and prior escalation. (Support)	-18.0	-17.0
Increase in Other Support due to recategorization of Flyaway Costs and depot activation. (Support)	+236.3	+269.3
Decrease in Initial Spares due to removal of follow-on efforts that are not part of the MDAP. (Support)	-49.6	-53.3
Procurement Subtotal	-190.2	-88.0

MILCON	$M	
Current Change Explanations	Base Year	Then Year

Revised escalation indices. (Economic)	N/A	+1.8
Adjustment for current and prior escalation. (Estimating)	-2.0	-1.8
MILCON Subtotal	-2.0	0.0

Contracts

Contract Identification

Appropriation: Procurement
Contract Name: LRIP Lot 9 Payloads FFP
Contractor: Northrop Grumman Systems Corporation
Contractor Location: 17066 Goldentop Road
San Diego, CA 92127-2412
Contract Number: FA8620-10-C-4007/2
Contract Type: Firm Fixed Price (FFP)
Award Date: May 20, 2010
Definitization Date: August 12, 2011

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
20.1	N/A	15	137.9	N/A	522	137.9	137.9

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the strategy to add additional spares and Peculiar Support Equipment (PSE).

Cost and Schedule Variance Explanations

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

Notes

This contract procures PSE (339 items) and Enhanced Integrated Sensor Suite and Airborne Signals Intelligence Payload spares (183 items) for the LRIP Lot 9 Payloads captured under the LRIP Lot 9 Payloads FPIF contract, as well as supporting labor for the PSE and spares.

This contract is 90% delivered and will no longer be reported.

Contract Identification

Appropriation: RDT&E
Contract Name: IDIQ Task Order 1 - Enterprise Management Services
Contractor: Northrop Grumman
Contractor Location: San Diego, CA 92127-2412
Contract Number: FA8620-13-D-3014/1
Contract Type: Firm Fixed Price (FFP)
Award Date: May 15, 2013
Definitization Date: May 15, 2013

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
28.0	N/A	N/A	28.0	N/A	N/A	28.0	28.0

Cost and Schedule Variance Explanations

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

Notes

This contract is for the procurement of Enterprise Management services.

Contract Identification

Appropriation: RDT&E
Contract Name: IDIQ Task Order 2 - Flight Test Support
Contractor: Northrop Grumman
Contractor Location: SanDiego, CA 92127-2412
Contract Number: FA8620-13-D-3014/2
Contract Type: Cost Plus Fixed Fee (CPFF)
Award Date: May 15, 2013
Definitization Date: May 15, 2013

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
22.9	N/A	N/A	45.6	N/A	N/A	44.9	47.0

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the option year contract being executed.

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/31/2014)	-0.7	-0.6
Previous Cumulative Variances	-0.5	-0.3
Net Change	-0.2	-0.3

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to allocated costs from a pool across a broad range of contracts higher than planned. This is a recurring variance and is expected to continue through the end of the PoP.

The unfavorable net change in the schedule variance is due to lagging invoices from the subcontractors.

Notes

This contract is for flight test support for the Global Hawk fleet.

Contract Identification

Appropriation: Procurement

Contract Name: Global Hawk LRIP Lot 11

Contractor: Northrop Grumman (Aerospace Systems)

Contractor Location: 17066 Goldentop Rd
San Diego, CA 92127

Contract Number: FA8620-13-C-3018

Contract Type: Firm Fixed Price (FFP)

Award Date: August 15, 2014

Definitization Date: August 15, 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
355.0	N/A	3	355.0	N/A	3	355.0	355.0

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.

The LRIP Lot 11 contract procures three Blk 30 aircraft and two ASIP sensor kits.

Deliveries and Expenditures

Deliveries				
Delivered to Date	**Planned to Date**	**Actual to Date**	**Total Quantity**	**Percent Delivered**
Development	0	0	0	--
Production	45	42	45	93.33%
Total Program Quantity Delivered	45	42	45	93.33%

Expended and Appropriated (TY $M)			
Total Acquisition Cost	9025.5	Years Appropriated	15
Expended to Date	7337.0	Percent Years Appropriated	68.18%
Percent Expended	81.29%	Appropriated to Date	8272.6
Total Funding Years	22	Percent Appropriated	91.66%

The above data is current as of January 31, 2015.

Operating and Support Cost

Cost Estimate Details

Date of Estimate: January 13, 2015
Source of Estimate: SCP
Quantity to Sustain: 45
Unit of Measure: Aircraft
Service Life per Unit: 20.00 Years
Fiscal Years in Service: FY 2003 - FY 2034

Current sustainment planning assumes that Block 30s will fly through 2032, while Block 40s will fly through 2034 (dates based on IOC +20 years). At this time, the Life Cycle Sustainment Plan, the Concept of Operations, and the Operations Tempo are all being re-examined in light of operational and budget decisions. Costs below span FY 2003 through FY 2034, the entire period of planned Global Hawk production fleet operations. Total quantity of aircraft supported over the life cycle is 45. Cost estimates assume all 45 aircraft will be operational. The service life of a Global Hawk air vehicle is planned for 20 years but may vary based on operational tempo.

The total estimated flying hours for the life of the program is 510,724, an increase from the previous estimated flying hours of 497,562. This increase includes Block 30s flying through FY 2032 and Block 40s through FY 2034.

Sustainment Strategy

Global Hawk sustainment is accomplished by a combination of civil service, military, and contractor personnel. The Global Hawk is being maintained using a two level maintenance (2LM) concept – Organizational and Depot, which supports the maximum use of rapid transportation, minimum turnaround times for repair, and a capability to deploy with minimum direct mission support equipment. The 2LM concept is used at both the Forward Operating Locations and Main Operating Bases. Air Combat Command accomplishes organizational level maintenance tasks via military, civilian, and contractor support. The contractor accomplishes depot level maintenance tasks and repair actions under a Contractor Logistics Support contract.

Antecedent Information

No Antecedent

Annual O&S Costs BY2015 $M

Cost Element	RQ-4A/B Global Hawk Average Annual Cost Per Aircraft	No Global Hawk Antecedent (Antecedent)
Unit-Level Manpower	3.014	0.000
Unit Operations	1.562	0.000
Maintenance	4.091	0.000
Sustaining Support	3.889	0.000
Continuing System Improvements	0.870	0.000
Indirect Support	2.257	0.000
Other	0.000	0.000
Total	15.683	--

Item	Total O&S Cost $M			
	RQ-4A/B Global Hawk			No Global Hawk Antecedent (Antecedent)
	Current Production APB Objective/Threshold		Current Estimate	
Base Year	15724.8	17297.3	11872.5	N/A
Then Year	17835.9	N/A	17835.9	N/A

Equation to Translate Annual Cost to Total Cost

Unitized costs are calculated by dividing total estimated O&S costs in BY 2000 dollars ($11,872.5M) by total life cycle operational aircraft years (757), resulting in an average annual O&S cost per aircraft of $15.68M.

O&S Cost Variance		
Category	**BY 2015 $M**	**Change Explanations**
Prior SAR Total O&S Estimates - Dec 2013 SAR	12909.7	
Programmatic/Planning Factors	-567.1	Sustainment costs that are no longer part of the MDAP.
Cost Estimating Methodology	0.0	
Cost Data Update	-192.0	Manpower that is not associated with the MDAP.
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	-278.1	Reliability improvements resulting in lower maintenance cost.
Other	0.0	
Total Changes	-1037.2	
Current Estimate	11872.5	

Disposal Estimate Details

Date of Estimate: January 13, 2015

Source of Estimate: SCP

Disposal/Demilitarization Total Cost (BY 2015 $M): Total costs for disposal of all Aircraft are 6.4