



## Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-378



### EA-18G Growler Aircraft (EA-18G)

As of FY 2019 President's Budget

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

~~This document contains information that may be exempt from mandatory disclosure under the FOIA.~~

## Table of Contents

Sensitivity Originator	3
Common Acronyms and Abbreviations for MDAP Programs	4
Program Information	6
Responsible Office	6
References	7
Mission and Description	8
Executive Summary	9
Threshold Breaches	10
Schedule	11
Performance	12
Track to Budget	14
Cost and Funding	15
Low Rate Initial Production	24
<del>(U//FOUO)</del> Foreign Military Sales	25
Nuclear Costs	25
Unit Cost	26
Cost Variance	29
<del>(U//FOUO)</del> Contracts	32
Deliveries and Expenditures	38
Operating and Support Cost	39

## Sensitivity Originator

**Organization:** F/A-18 & EA-18G Program Office, PMA-265 Program Security Manager

**Organization Email:**

**Organization Phone:** 301-757-7516

## 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**

EA-18G Growler Aircraft (EA-18G)

**DoD Component**

Navy

## Responsible Office

CAPT David Kindley, USN  
Program Executive Officer (PMA-265)  
Bldg 2272, Suite 445, NAVAIRSYSCOMHQ  
47123 Buse Road, Unit IPT  
Patuxent River, MD 20670-1547

**Phone:** 301-757-7669**Fax:** 301-757-7520**DSN Phone:** 757-7669**DSN Fax:** 757-7520**Date Assigned:** July 16, 2015[david.kindley@navy.mil](mailto:david.kindley@navy.mil)

## References

### **SAR Baseline (Production Estimate)**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated July 18, 2007

### **Approved APB**

Assistant Secretary of the Navy (Research, Development & Acquisition) (ASN(RDA)) Approved Acquisition Program Baseline (APB) dated November 28, 2017

## Mission and Description

The EA-18G Growler Aircraft (EA-18G) is the fourth major variant of the F/A-18 family of aircraft. The EA-18G serves as the Navy's replacement for the EA-6B providing a capability to detect, identify, locate, and suppress hostile emitters. The EA-18G provides organic accurate emitter targeting for employment of onboard suppression weapons such as High-Speed Anti-Radiation Missile. The EA-18G aircraft is a missionized F/A-18F airframe coupled with the integration of its primary Airborne Electronic Attack systems that include the ALQ-99 Tactical Jamming System pods, AN/ALQ-218 Receiver, Communication Countermeasures Set with functionality equivalent to the USQ-113, and the Joint Tactical Terminal Receiver.



## Executive Summary

This is the final SAR submission for the EA-18G program.

Pursuant to section 2432 of title 10, United States Code, this is the final SAR submission for EA-18G because the program is 90% or more delivered.

There is no increase to the EA-18G procurement profile in the FY 2019 PB. The current EA-18G program of record is 160 aircraft.

The EA-18G Growler is a variant of the F/A-18F Super Hornet Block II, and performs the airborne electronic attack (AEA) mission that replaced the EA-6B Prowler. The EA-18G combines the capability of the combat-proven Super Hornet with the latest AEA avionics suite evolved from the EA-6B Improved Capability III system. The AEA subsystem includes the ALQ-99 Tactical Jamming Systems pods, AN/ALQ-218(V)2 Receiver, ALQ-227(V)1 Communication Countermeasures Set, Electronic Attack Unit, CN-1717A Interference CANCEllation System, and the Joint Tactical Terminal Receiver for Integrated Broadcast System reception. The EA-18G's array of sensors and weapons provides the warfighter with a lethal and survivable weapon system to counter current and emerging threats, providing tactical jamming and electronic protection to U.S. military forces and allies. The Navy operates the EA-18G as part of the carrier air wing as well as expeditionary. The last EA-6B Prowler squadron transitioned to EA-18G and was certified Safe for Flight in the first quarter of FY 2016. Currently there are one Fleet Replacement Squadron, four expeditionary squadrons, 10 Carrier Air Wing squadrons (including one based in Japan) and one reserve squadron.

The EA-18G program was approved for FRP in 2009 and an FRP contract for seven Lot 40 EA-18G aircraft was awarded on February 27, 2017. This was the final production lot for the EA-18G program. As of February 12, 2018, the program has delivered 153 aircraft to the fleet, which equates to the program being 95% delivered.

The EA-18G program is currently working to complete the H14 System Configuration Set (SCS) integration testing and to define the H16 SCS developmental and operational test requirements and retrofit efforts

(b)(3):10 USC § 130

Due to the Aircraft Program Data File, Version 122, increasing the number of Primary Aircraft Authorized for Carrier Air Wing, Expeditionary, and Fleet Replacement squadrons; an additional 405 aircraft operating years and 69,000 flight hours were factored into the O&S costs. As a result, the EA-18G program APB threshold for O&S costs is breached. The program is fully funded to cover the cost impact caused by the breach. As this is the final SAR, the MDA is not requiring a program deviation report and a revised APB.

As of February 12, 2018, EA-18G aircraft have flown 219,805 hours.

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

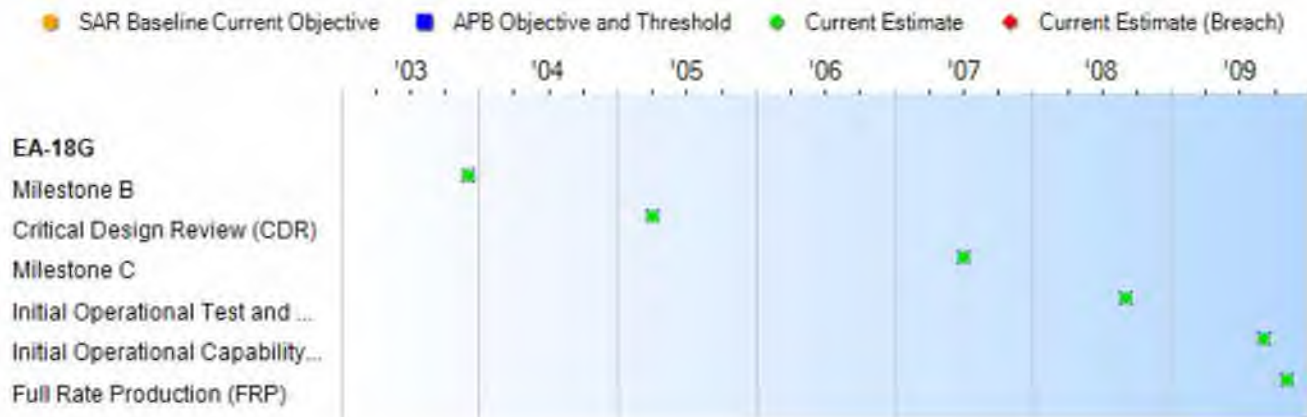
## Threshold Breaches

APB Breaches		
Schedule		<input type="checkbox"/>
Performance		<input type="checkbox"/>
Cost	RDT&E	<input type="checkbox"/>
	Procurement	<input type="checkbox"/>
	MILCON	<input type="checkbox"/>
	Acq O&M	<input type="checkbox"/>
O&S Cost		<input checked="" type="checkbox"/>
Unit Cost	PAUC	<input type="checkbox"/>
	APUC	<input type="checkbox"/>
Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Explanation of Breach	
<p>The Aircraft Program Data File, Version 122, increased nine of ten Carrier Air Wing squadrons from six Primary Aircraft Authorized (PAA) to seven PAA for the majority of the life cycle. Additionally, the Fleet Replacement Squadron increased by one PAA. These changes led to an increase in total annual PAA of 536 from the December 2016 SAR. The baseline Naval Synchronization Tool 17-01 data was used to estimate the 9,000 flight-hour service-life. The increase in PAA requirement led to an additional 405 total aircraft operating years and 69,000 more total flight hours. The Program Objective Memorandum-20 Flying Hour Program cost adjustment sheets also contributed to the O&amp;S increase, primarily due to the addition of the landing gear overhaul. As a result, the EA-18G program APB threshold for O&amp;S costs is breached.</p>	



## Schedule



Schedule Events				
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold	Current Estimate	
Milestone B	Dec 2003	Dec 2003	Dec 2003	Dec 2003
Critical Design Review (CDR)	Apr 2005	Apr 2005	Apr 2005	Apr 2005
Milestone C	Jul 2007	Jul 2007	Jul 2007	Jul 2007
Initial Operational Test and Evaluation (IOT&E)(Start)	Sep 2008	Sep 2008	Sep 2008	Sep 2008
Initial Operational Capability (IOC)	Sep 2009	Sep 2009	Sep 2009	Sep 2009
Full Rate Production (FRP)	Apr 2009	Nov 2009	Nov 2009	Nov 2009

### Change Explanations

None

## Performance

Performance Characteristics				
SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
Net-ready				
EA-18G must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for transition to Net-Centric military operations to include: 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services, 4) Information assurance requirements including availability, integrity, authentication, confidentiality, and nonrepudiation, and issuance of an ATO by the DAA, and 5) Operationally effective information exchanges; and mission critical performance and information assurance attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.	EA-18G must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for transition to Net-Centric military operations to include: 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services, 4) Information assurance requirements including availability, integrity, authentication, confidentiality, and nonrepudiation, and issuance of an ATO by the DAA, and 5) Operationally effective information exchanges; and mission critical performance and information assurance attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.	EA-18G must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for transition to Net-Centric military operations to include: 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services, 4) Information assurance requirements including availability, integrity, authentication, confidentiality, and nonrepudiation, and issuance of an IATO by the DAA, and 5) Operationally effective information exchanges; and mission critical performance and information assurance attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.	Meets all Net-Centric Requirements	Meets all Net-Centric Requirements
Receive Azimuth Coverage				
360 deg	360 deg	(T=O) 360 deg	360 deg	360 deg
Operational Availability				
>=0.98	>=0.98	>=0.85	0.98	>=0.98
Carrier Suitability				
Launch Catapult WOD (Max Gross Weight, Tropical Day)				



<=25 knots	<=25 knots	<=30 knots	21 knots	<=25 knots
<b>Deck Spot Factor</b>				
<=1.4	<=1.4	<=1.5	1.46	1.46
<b>Recovery Payload (empty wing and centerline pylons and nacelle ejectors, 47,000 lbs, 14 knots WOD)</b>				
>=9,000 lbs	>=9,000 lbs	(T=O) >=9,000 lbs	11,037 lbs	>=9,000 lbs
<b>Additional Internal Fuel Capacity (over F/A-18C/D)</b>				
>=3,000 lbs	>=3,000 lbs	(T=O) >=3,000 lbs	3,802 lbs	>=3,000 lbs

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

#### Requirements Reference

CPD Change 1 dated October 19, 2009

#### Change Explanations

None

#### Acronyms and Abbreviations

ATO - Authority to Operate  
DAA - Designated Approval Authority  
deg - Degrees  
DISR - DoD Information Technology Standards and Profile Registry  
GIG IT - Global Information Grid Information Technology  
IATO - Interim Authority to Operate  
KIP - Key Interface Profile  
lbs - Pounds  
NCOW RM - Net-Centric Operations and Warfare Reference Model  
TV - Technical View  
WOD - Wind Over Deck

## Track to Budget

### RDT&E

Appn	BA	PE
------	----	----

Navy 1319 05 0604269N

Project	Name
---------	------

3063 EA-18G Development

### Procurement

Appn	BA	PE
------	----	----

Navy 1506 01 0204154N

Line Item	Name
-----------	------

0143 EA-18G (Sunk)

Navy 1506 06 0204154N

Line Item	Name
-----------	------

0605 Spares and Repair Parts (Shared) (Sunk)

### MILCON

Appn	BA	PE
------	----	----

Navy 1205 01 0703676N

Project	Name
---------	------

P193 EA-18G Facility Improvements (Sunk)

## Cost and Funding

### Cost Summary

Total Acquisition Cost							
Appropriation	BY 2004 \$M			BY 2004 \$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	1755.3	2163.1	2379.4	2185.8	1899.9	2481.2	2511.8
Procurement	5754.6	10762.9	11839.2	10767.0	6712.5	12872.5	12872.5
Flyaway	--	--	--	9261.2	--	--	11052.6
Recurring	--	--	--	9157.1	--	--	10931.8
Non Recurring	--	--	--	104.1	--	--	120.8
Support	--	--	--	1505.8	--	--	1819.9
Other Support	--	--	--	1262.3	--	--	1538.8
Initial Spares	--	--	--	243.5	--	--	281.1
MILCON	20.9	21.4	23.5	21.4	24.0	24.0	24.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	7530.8	12947.4	N/A	12974.2	8636.4	15377.7	15408.3

#### Current APB Cost Estimate Reference

Program Office Estimate dated April 12, 2017

#### Cost Notes

In accordance with Section 842 of the National Defense Authorization Act for FY 2017, which amended Title 10 U.S.C. § 2334, the Director of Cost Assessment and Program Evaluation, and the Secretary of the military department concerned or the head of the Defense Agency concerned, must issue guidance requiring a discussion of risk, the potential impacts of risk on program costs, and approaches to mitigate risk in cost estimates for MDAPs and major subprograms. The information required by the guidance is to be reported in each SAR. This guidance is not yet available; therefore, the information on cost risk is not contained in this SAR.

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E	0	0	0
Procurement	84	160	160
Total	84	160	160



## Cost and Funding

### Funding Summary

Appropriation Summary									
FY 2019 President's Budget / December 2017 SAR (TY\$ M)									
Appropriation	Prior	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
RDT&E	1961.0	173.5	147.4	64.1	64.7	49.9	51.2	0.0	2511.8
Procurement	12872.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12872.5
MILCON	24.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	24.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2019 Total	14857.5	173.5	147.4	64.1	64.7	49.9	51.2	0.0	15408.3
PB 2018 Total	14861.1	173.5	152.5	68.1	68.7	53.8	0.0	0.0	15377.7
Delta	-3.6	0.0	-5.1	-4.0	-4.0	-3.9	51.2	0.0	30.6

Quantity Summary										
FY 2019 President's Budget / December 2017 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	160	0	0	0	0	0	0	0	160
PB 2019 Total	0	160	0	0	0	0	0	0	0	160
PB 2018 Total	0	160	0	0	0	0	0	0	0	160
Delta	0	0	0	0	0	0	0	0	0	0



## Cost and Funding

### Annual Funding By Appropriation

Annual Funding							
1319   RDT&E   Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2004	--	--	--	--	--	--	203.7
2005	--	--	--	--	--	--	353.7
2006	--	--	--	--	--	--	379.7
2007	--	--	--	--	--	--	361.0
2008	--	--	--	--	--	--	269.4
2009	--	--	--	--	--	--	115.7
2010	--	--	--	--	--	--	55.5
2011	--	--	--	--	--	--	20.2
2012	--	--	--	--	--	--	14.8
2013	--	--	--	--	--	--	11.8
2014	--	--	--	--	--	--	10.6
2015	--	--	--	--	--	--	18.7
2016	--	--	--	--	--	--	45.4
2017	--	--	--	--	--	--	100.8
2018	--	--	--	--	--	--	173.5
2019	--	--	--	--	--	--	147.4
2020	--	--	--	--	--	--	64.1
2021	--	--	--	--	--	--	64.7
2022	--	--	--	--	--	--	49.9
2023	--	--	--	--	--	--	51.2
Subtotal	--	--	--	--	--	--	2511.8

Annual Funding							
1319   RDT&E   Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2004 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2004	--	--	--	--	--	--	199.6
2005	--	--	--	--	--	--	337.8
2006	--	--	--	--	--	--	351.6
2007	--	--	--	--	--	--	326.3
2008	--	--	--	--	--	--	239.2
2009	--	--	--	--	--	--	101.4
2010	--	--	--	--	--	--	47.9
2011	--	--	--	--	--	--	17.0
2012	--	--	--	--	--	--	12.3
2013	--	--	--	--	--	--	9.7
2014	--	--	--	--	--	--	8.6
2015	--	--	--	--	--	--	15.0
2016	--	--	--	--	--	--	35.7
2017	--	--	--	--	--	--	78.0
2018	--	--	--	--	--	--	132.0
2019	--	--	--	--	--	--	110.0
2020	--	--	--	--	--	--	46.9
2021	--	--	--	--	--	--	46.4
2022	--	--	--	--	--	--	35.1
2023	--	--	--	--	--	--	35.3
Subtotal	--	--	--	--	--	--	2185.8

Annual Funding							
1506   Procurement   Aircraft Procurement, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2005	--	8.2	--	--	8.2	--	8.2
2006	4	308.0	--	7.5	315.5	55.7	371.2
2007	9	638.7	--	5.8	644.5	104.9	749.4
2008	21	1396.4	--	63.4	1459.8	164.9	1624.7
2009	22	1563.3	--	17.1	1580.4	157.3	1737.7
2010	22	1482.0	--	--	1482.0	85.6	1567.6
2011	12	819.0	--	0.2	819.2	144.4	963.6
2012	12	799.4	--	0.3	799.7	147.7	947.4
2013	15	783.3	--	0.1	783.4	188.1	971.5
2014	21	1352.7	--	24.5	1377.2	428.0	1805.2
2015	15	1203.3	--	1.9	1205.2	260.8	1466.0
2016	7	577.5	--	--	577.5	82.5	660.0
Subtotal	160	10931.8	--	120.8	11052.6	1819.9	12872.5

Annual Funding							
1506   Procurement   Aircraft Procurement, Navy							
Fiscal Year	Quantity	BY 2004 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2005	--	7.7	--	--	7.7	--	7.7
2006	4	281.1	--	6.8	287.9	50.9	338.8
2007	9	569.7	--	5.2	574.9	93.5	668.4
2008	21	1227.0	--	55.7	1282.7	145.0	1427.7
2009	22	1354.8	--	14.8	1369.6	136.4	1506.0
2010	22	1258.1	--	--	1258.1	72.6	1330.7
2011	12	681.8	--	0.2	682.0	120.1	802.1
2012	12	656.2	--	0.2	656.4	121.2	777.6
2013	15	636.2	--	0.1	636.3	152.7	789.0
2014	21	1084.8	--	19.6	1104.4	343.3	1447.7
2015	15	951.3	--	1.5	952.8	206.1	1158.9
2016	7	448.4	--	--	448.4	64.0	512.4
Subtotal	160	9157.1	--	104.1	9261.2	1505.8	10767.0



Cost Quantity Information		
1506   Procurement   Aircraft Procurement, Navy		
Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned With Quantity) BY 2004 \$M
2005	--	--
2006	4	265.0
2007	9	558.2
2008	21	1218.8
2009	22	1360.0
2010	22	1282.9
2011	12	673.5
2012	12	657.7
2013	15	622.4
2014	21	1120.4
2015	15	949.8
2016	7	448.4
Subtotal	160	9157.1

Annual Funding 1205   MILCON   Military Construction, Navy and Marine Corps		
Fiscal Year	TY \$M	
	Total Program	
2007		24.0
Subtotal		24.0

Annual Funding 1205   MILCON   Military Construction, Navy and Marine Corps		
Fiscal Year	BY 2004 \$M	
	Total Program	
2007		21.4
Subtotal		21.4

## Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
<b>Approval Date</b>	12/18/2003	5/8/2008
<b>Approved Quantity</b>	9	30
<b>Reference</b>	Milestone B ADM	Milestone C ADM
<b>Start Year</b>	2006	2006
<b>End Year</b>	2009	2009

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the determination that 30 EA-18G aircraft would be the minimum requirement to conduct LRIP, permit a systematic increase in the production rate of the ALQ-218 system, and avoid a break in the production line.

In LRIP I (FY 2007), the EA-18G program office procured nine EA-18G systems (including one FY 2007 supplemental). For LRIP II (FY 2008), the EA-18G program office procured 21 EA-18G systems (including three FY 2008 supplementals).



**(U//FOUO) Foreign Military Sales**~~(U//FOUO)~~

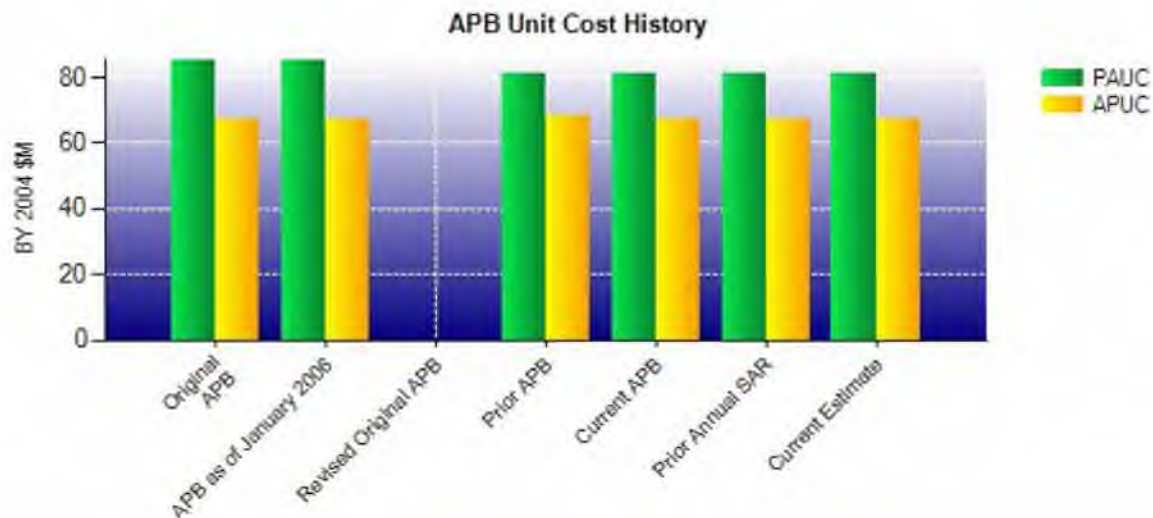
Country	Date of Sale	Quantity	Total Cost \$M	Description
Australia	9/24/2013	0	17.7	FMS Case, AT-P-GTM, provides for EA-18G Aircrew initial training and support related to AT-P-SCI and AT-P-LEN FMS Cases.
Australia	7/4/2013	12	1346.7	FMS Case, AT-P-SCI, provides for the procurement of 12 EA-18G aircraft and support. The 12 aircraft were included in the Lot 38 procurement contract, which was awarded on June 30, 2014.
Australia	8/30/2012	12	992.4	FMS Case, AT-P-LEN, provides for the procurement of 12 Airborne Electronic Attack (AEA) kit sets, the modification effort to convert six Australian Lot 33 F/A-18F to AEA-18G Aircraft, and support. Per AT-P-SCI, Australia elected to obtain 12 new build EA-18G aircraft vice converting six Australian Lot 33 F/A-18F to EA-18G.

**Notes****Nuclear Costs**

None

## Unit Cost

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2004 \$M	BY 2004 \$M	% Change
	Current UCR Baseline (Nov 2017 APB)	Current Estimate (Dec 2017 SAR)	
Program Acquisition Unit Cost			
Cost	12947.4	12974.2	
Quantity	160	160	
Unit Cost	80.921	81.089	+0.21
Average Procurement Unit Cost			
Cost	10762.9	10767.0	
Quantity	160	160	
Unit Cost	67.268	67.294	+0.04
Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2004 \$M	BY 2004 \$M	% Change
	Original UCR Baseline (Dec 2003 APB)	Current Estimate (Dec 2017 SAR)	
Program Acquisition Unit Cost			
Cost	7662.6	12974.2	
Quantity	90	160	
Unit Cost	85.140	81.089	-4.76
Average Procurement Unit Cost			
Cost	6030.5	10767.0	
Quantity	90	160	
Unit Cost	67.006	67.294	+0.43



APB Unit Cost History					
Item	Date	BY 2004 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Dec 2003	85.140	67.006	93.573	74.600
APB as of January 2006	Dec 2003	85.140	67.006	93.573	74.600
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	Oct 2015	81.188	68.401	95.968	81.672
Current APB	Nov 2017	80.921	67.268	96.111	80.453
Prior Annual SAR	Dec 2016	80.921	67.268	96.111	80.453
Current Estimate	Dec 2017	81.089	67.294	96.302	80.453

### 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	
93.573	4.150	1.442	-0.319	0.947	-0.348	0.000	3.369	9.241	102.814

Current SAR Baseline to Current Estimate (TY \$M)									
PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
102.814	-0.560	-11.763	-0.082	1.062	-1.968	0.000	6.799	-6.512	96.302



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	
74.600	3.679	0.057	-0.319	0.138	-1.613	0.000	3.369	5.311	79.911

Current SAR Baseline to Current Estimate (TY \$M)									
APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
79.911	-0.612	-0.885	-0.082	0.000	-4.678	0.000	6.799	0.542	80.453

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	Nov 2003	Dec 2003	Dec 2003
Milestone C	N/A	Apr 2007	Jul 2007	Jul 2007
IOC	N/A	Sep 2009	Sep 2009	Sep 2009
Total Cost (TY \$M)	N/A	8421.6	8636.4	15408.3
Total Quantity	N/A	90	84	160
PAUC	N/A	93.573	102.814	96.302

**Cost Variance**

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	1899.9	6712.5	24.0	8636.4
Previous Changes				
Economic	+12.2	-92.8	--	-80.6
Quantity	--	+5931.7	--	+5931.7
Schedule	--	-13.1	--	-13.1
Engineering	+170.0	--	--	+170.0
Estimating	+399.1	-752.7	--	-353.6
Other	--	--	--	--
Support	--	+1086.9	--	+1086.9
Subtotal	+581.3	+6160.0	--	+6741.3
Current Changes				
Economic	-3.8	-5.2	--	-9.0
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+34.4	+4.3	--	+38.7
Other	--	--	--	--
Support	--	+0.9	--	+0.9
Subtotal	+30.6	--	--	+30.6
Total Changes	+611.9	+6160.0	--	+6771.9
CE - Cost Variance	2511.8	12872.5	24.0	15408.3
CE - Cost & Funding	2511.8	12872.5	24.0	15408.3

Summary BY 2004 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	1755.3	5754.6	20.9	7530.8
Previous Changes				
Economic	--	--	--	--
Quantity	--	+4746.2	--	+4746.2
Schedule	--	-4.6	--	-4.6
Engineering	+126.1	--	--	+126.1
Estimating	+281.7	-601.5	+0.5	-319.3
Other	--	--	--	--
Support	--	+868.2	--	+868.2
Subtotal	+407.8	+5008.3	+0.5	+5416.6
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+22.7	+3.6	--	+26.3
Other	--	--	--	--
Support	--	+0.5	--	+0.5
Subtotal	+22.7	+4.1	--	+26.8
Total Changes	+430.5	+5012.4	+0.5	+5443.4
CE - Cost Variance	2185.8	10767.0	21.4	12974.2
CE - Cost & Funding	2185.8	10767.0	21.4	12974.2

Previous Estimate: December 2016



<b>RDT&amp;E</b>	<b>\$M</b>	
<b>Current Change Explanations</b>	<b>Base Year</b>	<b>Then Year</b>
Revised escalation indices. (Economic)	N/A	-3.8
Revised estimate for inflation rate adjustment due to updated assumptions. (Estimating)	-2.8	-3.6
Revised estimate for Airborne Electronic Attack System Enhancements. (Estimating)	+35.3	+51.2
Adjustment for current and prior escalation. (Estimating)	+1.0	+1.4
Realignment of funding for Next Generation Air Dominance (Estimating)	-10.8	-14.6
<b>RDT&amp;E Subtotal</b>	<b>+22.7</b>	<b>+30.6</b>

<b>Procurement</b>	<b>\$M</b>	
<b>Current Change Explanations</b>	<b>Base Year</b>	<b>Then Year</b>
Revised escalation indices. (Economic)	N/A	-5.2
Adjustment for current and prior escalation. (Estimating)	+3.6	+4.2
Revised estimate to reflect actuals. (Estimating)	0.0	+0.1
Adjustment for current and prior escalation. (Support)	+0.5	+1.0
Decrease in Other Support to reflect actuals (Support)	-4.3	-5.5
Increase in Initial Spares to reflect actuals (Support)	+4.3	+5.4
<b>Procurement Subtotal</b>	<b>+4.1</b>	<b>0.0</b>

**(U//FOUO) Contracts****(U//FOUO) Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** System Configuration Sets (SCS) Contract  
**Contractor:** The Boeing Company  
**Contractor Location:** 6200 JS McDonnell Blvd.  
 St. Louis, MO 63166  
**Contract Number:** N68936-14-D-0008  
**Contract Type:** Indefinite Delivery Indefinite Quantity (IDIQ), Cost Plus Incentive Fee (CPIF), Cost Plus Fixed Fee (CPFF)  
**Award Date:** December 12, 2013  
**Definitization Date:** December 12, 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
872.8	N/A	90	654.3	N/A	90	959.1	959.1

**Target Price Change Explanation**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the current contract target price reflecting the cumulative value of all orders on the contract; the initial contract price target reflects the value of the basic contract at contract award.

**Cost and Schedule Variance Explanations**

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

**Notes**

A waiver to exclude EVM requirements for CPFF level-of-effort task orders on this contract was approved on July 24, 2013. There have been no CPIF orders awarded on this contract. As a result, there are no EVM metrics reported.

The Initial Contract Target Price and Quantities and Current Contract Target Price and Quantities represent the total negotiated value and quantities for the basic contract. Therefore, these values represent the potential value and maximum quantity of products for all delivery and task orders issued against the contract to support all U.S. Navy and Royal Australian Air Force F/A-18 and EA-18G platform requirements.

The value, quantities, and funding for each delivery or task order issued under this IDIQ contract are individually negotiated.



**(U//FOUO) Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** F414 Engine Production (Lots 16-19)  
**Contractor:** GE Aircraft Engines  
**Contractor Location:** 1000 Western Ave.  
 Lynn, MA 01910  
**Contract Number:** N00019-11-C-0045  
**Contract Type:** Firm Fixed Price (FFP)  
**Award Date:** April 20, 2011  
**Definitization Date:** September 26, 2012

**Contract Price**

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
5.2	N/A	0	507.9	N/A	114	507.9	507.9

**Target Price Change Explanation**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the FY 2012 procurement of 24 engines and devices, FY 2013 procurement of long lead material, FY 2013 procurement of 18 engines and devices, modifications executed for advanced procurement for FY 2014 engines, modification executed for the FY 2014 procurement of 42 engines and devices, and the modification executed for the FY 2015 procurement of 30 engines and devices.

**Cost and Schedule Variance Explanations**

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

**Notes**

All engines have been delivered.

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

**(U//FOUO) Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** EA-18G FRP (Lots 38-39)  
**Contractor:** The Boeing Company  
**Contractor Location:** 6200 JS McDonnell Blvd.  
 St. Louis, MO 63166  
**Contract Number:** N00019-14-C-0032  
**Contract Type:** Fixed Price Incentive(Firm Target) (FPIF)  
**Award Date:** June 30, 2014  
**Definitization Date:** June 30, 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
1466.9	1488.9	33	3127.6	3289.4	48	3127.6	3127.6

**Target Price Change Explanation**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the contract modification to include the procurement of Lot 38-39 Airborne Electronic Attack (AEA) kits, AEA-specific obsolescence efforts, and Royal Australian Air Force (RAAF) unique hardware and support.

**Cost and Schedule Variance Explanations**

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

**Notes**

The EA-18G FRP (Lot 38) contract was awarded on June 30, 2014, for the procurement of 33 EA-18G aircraft with AEA kits, which includes 21 U.S. Navy aircraft and 12 RAAF aircraft. A contract modification was awarded on October 26, 2015, for the procurement of 15 EA-18G aircraft with AEA kits.

The Deputy Assistant Secretary of the Navy for Acquisition and Procurement approved a deviation (Deviation No. 14-N-907, dated May 29, 2014) to exclude EVM requirements on this contract.

All contract values above reflect the procurement of the EA-18G variant only.

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



**(U//FOUO) Contract Identification**

**Appropriation:** RDT&E  
**Contract Name:** EA-18G ALQ-218 Operational Test Program Sets (OTPSs)  
**Contractor:** The Boeing Company  
**Contractor Location:** 6200 James S McDonnell Boulevard  
 Berkeley, MO 63134  
**Contract Number:** N68335-10-G-0012/46  
**Contract Type:** Cost Plus Fixed Fee (CPFF)  
**Award Date:** September 25, 2013  
**Definitization Date:** September 25, 2013

**(U//FOUO) Contract Price**

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
76.2	N/A	14	77.5	N/A	14	78.6	78.6

**(U//FOUO) Target Price Change Explanation**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to two additional contract modifications being awarded.

**Contract Variance**

Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (1/10/2018)	+1.8	-1.3
Previous Cumulative Variances	+0.8	-2.6
Net Change	+1.0	+1.3

**Cost and Schedule Variance Explanations**

The favorable net change in the cost variance is due to the resolution of technical data issues and finalizing the review and clean up of fault lists.

The favorable net change in the schedule variance is due to process improvements resulting in reduced integration and fault insertion/test times, as compared to the previous current estimated completion forecast schedule.

**(U//FOUO) Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** F/A-18E/F & EA-18G FRP (Lot 40)  
**Contractor:** The Boeing Company  
**Contractor Location:** 6200 James S McDonnell Boulevard  
 St. Louis, MO 63134  
**Contract Number:** N00019-17-C-0003  
**Contract Type:** Fixed Price Incentive(Firm Target) (FPIF)  
**Award Date:** February 27, 2017  
**Definitization Date:** February 27, 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
440.7	442.8	7	440.7	442.8	7	440.7	440.7

**Cost and Schedule Variance Explanations**

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

**Notes**

All contract values above reflect the procurement of the EA-18G variant only.

The Deputy Assistant Secretary of the Navy for Acquisition and Procurement approved a deviation (Deviation No. 17-N-903, dated January 5, 2017) to exclude EVM requirements on this contract.

**(U//FOUO) Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** F/A-18E/F & EA-18G F414 Engines (Lots 20-21)  
**Contractor:** General Electric Company  
**Contractor Location:** 1000 Western Ave  
 Lynn, MA 01905-2655  
**Contract Number:** N00019-17-C-0047  
**Contract Type:** Firm Fixed Price (FFP)  
**Award Date:** March 29, 2017  
**Definitization Date:** March 29, 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
53.4	N/A	14	53.4	N/A	14	53.4	53.4

**Cost and Schedule Variance Explanations**

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

**Notes**

All contract values above reflect the procurement of the engines for the EA-18G variant only.



## Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	153	153	160	95.63%
Total Program Quantity Delivered	153	153	160	95.63%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	15408.3	Years Appropriated	15
Expended to Date	13262.7	Percent Years Appropriated	75.00%
Percent Expended	86.08%	Appropriated to Date	15031.0
Total Funding Years	20	Percent Appropriated	97.55%

The above data is current as of February 12, 2018.

## Operating and Support Cost

### Cost Estimate Details

<b>Date of Estimate:</b>	February 13, 2018
<b>Source of Estimate:</b>	POE
<b>Quantity to Sustain:</b>	160
<b>Unit of Measure:</b>	Aircraft
<b>Service Life per Unit:</b>	31.10 Years
<b>Fiscal Years in Service:</b>	FY 2008 - FY 2050

The variable components of the cost estimate, such as the flying hour program, are based on the number of aircraft operational years available and the flight hours generated. Some elements, such as personnel and their associated indirect and training costs, are dependent on the number of squadrons and their manning requirements. Other fixed elements, such as sustaining engineering, are based on a cost per aircraft. Modification, airframe, and support equipment depot maintenance are estimated as the total requirement and then applied on a cost-per-aircraft basis.

The total number of aircraft operating years was determined using Naval Synchronization Tool (NST) data to estimate the total operating months for each individual aircraft during the service life for that particular aircraft, excluding out-of-reporting (OOR) time for scheduled depot-level (D-level) maintenance events. The sum of the total operating months for the individual aircraft was multiplied by the total aircraft authorization (TAA) of 160 aircraft and then divided by 12 (months in a year) with the resultant number of aircraft operating years. The service life per unit was also determined using NST data for each individual aircraft and is calculated by subtracting the estimated strike date from the fleet delivery date for each aircraft. The total service-life years and months are then summed and divided by TAA of 160. The time for OOR-scheduled D-level maintenance events is included in the calculation of service life per unit.

Consumption rate, gallons per hour: 1,285  
 Number of aircraft operating years: 4,905  
 Flight hours per aircraft per month: 23.7  
 Petroleum, oil, lubrication (POL) cost, JP-5 per gallon FY 2004\$: 0.98  
 Fatigue life (flight hours): 7,500  
 Operational service life (flight hours): 9,000  
 Total life-cycle flight hours: 1,393,895

### Sustainment Strategy

The EA-18G support strategy is based on the following assumptions for basing and utilization.

Primary mission authorized aircraft (PMAA) will be comprised of 10 Carrier Air Wing (CVW) squadrons (nine with seven PMAA and one with six PMAA), one of which will be part of the Forward Deployed Naval Force stationed out of Yokosuka, Japan, four Expeditionary Squadrons (with six PMAA), and one reserve Squadron (five PMAA). All squadrons are manned to the level required to execute the Expeditionary mission for a total of 98 PMAA. The Fleet Replacement Squadron (FRS) will consist of 27 Primary Training Aircraft Authorization (PTAA) aircraft while the Naval Aviation Warfare Development Center will maintain three PTAA.

The EA-18G and F/A-18E/F common maintenance training will be conducted at Naval Air Station (NAS), Lemoore, CA, with peculiar EA-18G Airborne Electronic Attack (AEA) maintenance training being conducted at NAS Whidbey Island, WA. Initial aircrew training will be conducted at NAS Whidbey Island, WA.

The EA-18G and F/A-18E/F common Intermediate-level (I-level) maintenance will be conducted at NAS Lemoore,



CA. Fleet Readiness Center (FRC) West, Lemoore and FRC Mid-Atlantic, Oceana maintain full third-degree engine repair capability for all F414-GE-400 Engines. Limited I-level for some EA-18G and F/A-18E/F common maintenance tasks has been established at NAS Whidbey Island, WA. The AEA I-level maintenance will be stood up at NAS Whidbey Island, WA, and aboard the CVNs commencing FY 2018.

The EA-18G D-level maintenance will follow the directives as published in the integrated logistics support, supply chain management, and F414-GE-400 support contracts. This support strategy focuses on the integration of existing F/A-18F support, support that was developed for the EA-6B equipment common to the EA-18G, and development of support for EA-18G-unique design circumstances. While the EA-18G AEA equipment is based on the Improved Capability III system that was developed for the EA-6B, much of it is repackaged, some with added EA-18G-unique components, and some new design EA-18G equipment.

#### Antecedent Information

Antecedent program: EA-6B

Consumption rate, gallons per hour: 1,084

Number of aircraft operating years: 4,905 (Not actual, but used in order to provide a comparison between the EA-18G and its antecedent platform)

Flight hours per aircraft per month: 29.2

POL cost, JP-5 per gallon FY 2004\$: 0.98

Source of Antecedent Cost Information: Naval Visibility and Management Operating and Support Costs (VAMOSC) database Aircraft Type Model Series Report (ATMSR)

For comparison purposes, the Antecedent's Average Annual Cost per Aircraft is derived from total FY 2010 - 2014 cost from the Naval VAMOSC ATMSR, divided by the total number of aircraft in ATMSR for FY 2010 - 2014. This value is then multiplied by the total number of aircraft operating years associated with EA-18G to provide a point of comparison.

Annual O&S Costs BY2004 \$M			
Cost Element	EA-18G		EA-6B (Antecedent)
	Average Annual Cost Per Aircraft		Average Annual Cost Per Aircraft
Unit-Level Manpower	1.260		1.874
Unit Operations	0.511		0.491
Maintenance	2.741		3.039
Sustaining Support	0.143		0.266
Continuing System Improvements	1.355		1.494
Indirect Support	0.318		0.322
Other	0.000		0.000
Total	6.328		7.486

Item	Total O&S Cost \$M			
	EA-18G			EA-6B (Antecedent)
	Current Production APB Objective/Threshold	Current Estimate		
Base Year	27060.3	29766.3	31037.3'	36694.7
Then Year	49235.5	N/A	57738.9	N/A



<sup>1</sup> APB O&S Cost Breach

Disposal Cost is included in the Operating and Support Cost of the current APB objective and threshold for this program.

#### Equation to Translate Annual Cost to Total Cost

The Average Annual Cost Per Aircraft for the EA-18G is calculated by dividing the Total O&S Cost of \$31,037.3 BY 2004 \$M by the Total Aircraft Operating Years of 4,905 for the program, resulting in \$6.328M BY \$M per aircraft per year.

O&S Cost Variance		
Category	BY 2004 \$M	Change Explanations
Prior SAR Total O&S Estimates - Dec 2016 SAR	27060.3	
Programmatic/Planning Factors	1777.7	Updated NST 17-01 data reflects additional PAA in Aircraft Program Data File
Cost Estimating Methodology	0.0	
Cost Data Update	2705.3	Updated for cost adjustment sheet pricing, APN-5 Operational Safety Improvement Program controls, Cost Adjustment Visibility Tracking System, and inflation
Labor Rate	142.9	Increase in FY 2018 composite rate
Energy Rate	-159.8	Decrease in FY 2017 fuel price and average consumption rate
Technical Input	-489.1	Improved Fleetsight engine reliability projections
Other	0.0	
Total Changes	3977.0	
Current Estimate	31037.3	

#### Disposal Estimate Details

**Date of Estimate:** February 13, 2018  
**Source of Estimate:** POE  
**Disposal/Demilitarization Total Cost (BY 2004 \$M):** Total costs for disposal of all Aircraft are 28.0

The TY value is \$60.1M.