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Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-607



Advanced Anti-Radiation Guided Missile - Extended Range (AARGM-ER)

As of FY 2020 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Sensitivity Originator

No originator information is available at this time.

Common Acronyms and Abbreviations for MDAP Programs

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

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

Program Information

Program Name

Advanced Anti-Radiation Guided Missile - Extended Range (AARGM-ER)

DoD Component

Navy

Responsible Office

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DSN Phone:

DSN Fax:

Date Assigned: June 29, 2017

References

SAR Baseline (Development Estimate)

Navy Acquisition Executive (NAE) Approved Acquisition Program Baseline (APB) dated February 27, 2019

Approved APB

Navy Acquisition Executive (NAE) Approved Acquisition Program Baseline (APB) dated February 27, 2019

Mission and Description

The AGM-88G Advanced Anti-Radiation Guided Missile-Extended Range (AARGM-ER) is an air-launched missile with the capability to rapidly engage air-defense threats. The AARGM-ER configuration will leverage previous investments on the AGM-88E AARGM and incorporate a new solid rocket motor for increased range. AARGM-ER will be integrated on the F/A-18E/F Super Hornet and EA-18G Growler aircraft and configured for internal carriage on the F-35 Lightning II. AARGM-ER requirements are documented in the AARGM-ER CDD that was approved via Joint Requirements Oversight Committee Memorandum (JROCM) serial number 052-16, dated June 16, 2016.

Executive Summary

Program Highlights Since Last Report

This is the initial SAR submission for the AARGM-ER program.

The AARGM-ER program is a capability upgrade to the AGM-88E AARGM. It is an ACAT IB program managed by the Direct and Time Sensitive Strike Program Office under Program Executive Officer for Unmanned Aviation and Strike Weapons. The MDA is the Assistance Secretary of the Navy (Research, Development and Acquisition) (ASN (RD&A)).

The AARGM-ER program was formally initiated with the FY 2016 PB. In November 2016, ASN (RD&A) provided concurrence for pre-development AARGM-ER risk reduction activities under a set of Front End Design Analysis (FEDA) studies and the use of Knowledge Points (KP) in lieu of Milestones.

A formal KP-1 event followed on August 16, 2017. KP-1 covered results from FEDA studies and identified key requirements trades. An ADM was issued that approved initiation of preliminary design under the Missile Section Integration (MSI) efforts and identified KP-2 as the decision review to assess program maturity to enter the EMD phase. As part of the MSI efforts and maturity assessment to enter EMD, a Preliminary Design Review was held in December 2018.

The KP-2 (Milestone B equivalent) ADM was issued on March 4, 2019 that approved entry into the EMD phase and award of the EMD contract. The EMD contract was awarded to Northrop Grumman Innovation Systems on March 7, 2019.

Because of the timing of program approval, PB 2020 does not fully reflect the program cost estimate. In accordance with the Full Funding Memorandum presented as part of Milestone B documentation, the Department intends to realign funding to the appropriate years in PB 2021.

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

History of Significant Developments Since Program Initiation

History of Significant Developments Since Program Initiation	
Date	Significant Development Description
March 2019	Program initiation at Milestone B.

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 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

Schedule



Schedule Events				
Events	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate
Knowledge Point 2	Jan 2019	Jan 2019	Jul 2019	Jan 2019
Knowledge Point 4	Mar 2021	Mar 2021	Sep 2021	Mar 2021
IOC	Sep 2023	Sep 2023	Mar 2024	Sep 2023
FRP	Mar 2024	Mar 2024	Sep 2024	Mar 2024

Change Explanations

None

Notes

KP-2 represents the program's entrance into EMD (equivalent to Milestone B). KP-4 represents the program's LRIP Decision (equivalent to Milestone C).

Acronyms and Abbreviations

KP - Knowledge Point(s)

Performance

Performance Characteristics				
SAR Baseline Development Estimate	Current APB Development Objective/Threshold	Demonstrated Performance	Current Estimate	
Availability Ao				
(T=O) >=0.9	(T=O) >=0.9	>=0.9	TBD	(T=O) >=0.9
Availability Am				
(T=O) >=0.8	(T=O) >=0.8	>=0.8	TBD	(T=O) >=0.8

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

Requirements Reference

CDD dated June 16, 2016

Change Explanations

None

Acronyms and Abbreviations

Am - Materiel Availability
Ao - Operational Availability

Track to Budget

RDT&E

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

Navy 1319 07 0205601N

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

2189 HARM Improvement

Procurement

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

Navy 1507 02 0204162N

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

2327 HARM Mods (Shared)

Navy 1507 06 0204162N

Line Item	Name
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6120 Spares and Repair Parts (Shared)

Notes

Project 2327 is shared with Advanced Anti-Radiation Guided Missile (AARGM) through 2023.

Project 6120 is shared with AARGM throughout the life-cycle of the program.

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2019 \$M			BY 2019 \$M	TY \$M		
	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Development Objective	Current Estimate
RDT&E	748.6	748.6	823.5	729.6	790.0	790.0	790.0
Procurement	2693.5	2693.5	2962.9	2690.8	3281.3	3281.3	3281.3
Flyaway	--	--	--	2541.6	--	--	3098.7
Recurring	--	--	--	2396.1	--	--	2926.5
Non Recurring	--	--	--	145.5	--	--	172.2
Support	--	--	--	149.2	--	--	182.6
Other Support	--	--	--	65.2	--	--	79.3
Initial Spares	--	--	--	84.0	--	--	103.3
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	3442.1	3442.1	N/A	3420.4	4071.3	4071.3	4071.3

Current APB Cost Estimate Reference

AARGM-ER was formally initiated with FY 2016 PB. The APB Cost is based on the Department of the Navy Component Cost position dated January 09, 2019

Cost Notes

The "Current Estimate" is based on the cost and funding position approved in the Knowledge Point-2 (Milestone B equivalent) ADM that was issued on March 4, 2019. The "Current Estimate" is aligned with the current APB and SAR baseline.

The procurement costs shown in the "Annual Funding by Appropriation" table for FY 2025 represent the entire "To Complete" amount. The escalation index utilized in FY 2025 reflects a composite value used to de-escalate to the appropriate BY 2019 value.

The APB is based on the Department of the Navy Component Cost Position which supported Knowledge Point 2 (MS-B equivalent). Program risk identified in the cost estimate includes a schedule risk associated with the new rocket motor. To mitigate this risk, integration and flight test efforts are sequenced to minimize dependency on the rocket motor development timeline. Additionally, early verification testing will be conducted to assess rocket motor development progress and risk mitigation.

Total Quantity			
Quantity	SAR Baseline Development Estimate	Current APB Development	Current Estimate
RDT&E	17	17	17
Procurement	2080	2080	2080
Total	2097	2097	2097

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2020 President's Budget / December 2018 SAR (TY\$ M)									
Appropriation	Prior	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
RDT&E	87.5	99.2	119.7	49.6	34.8	42.3	48.2	308.7	790.0
Procurement	0.0	0.0	0.0	30.0	30.7	31.3	214.1	2975.2	3281.3
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2020 Total	87.5	99.2	119.7	79.6	65.5	73.6	262.3	3283.9	4071.3
	--	--	--	--	--	--	--	--	--

Funding Notes

PB 2020 is the source of the values for "Prior" year through FY 2024. PB 2020 is not the source for "To Complete" and "Total". "Total" is aligned with the "Current Estimate".

The "Annual Funding by Appropriation" table is populated with PB 2020 values for FY 2016 through FY 2024. The value shown in FY 2025 represents the entire "To Complete" amount based on the "Total".

Because of the timing of program approval, PB 2020 does not fully reflect the program cost estimate. In accordance with the Full Funding Memorandum presented as part of Milestone B documentation, the Department intends to realign funding to the appropriate years in PB 2021.

Quantity Summary										
FY 2020 President's Budget / December 2018 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Development	17	0	0	0	0	0	0	0	0	17
Production	0	0	0	0	16	16	16	291	1741	2080
PB 2020 Total	17	0	0	0	16	16	16	291	1741	2097
	--	--	--	--	--	--	--	--	--	--

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
2016	--	--	--	--	--	--	9.2
2017	--	--	--	--	--	--	29.1
2018	--	--	--	--	--	--	49.2
2019	--	--	--	--	--	--	99.2
2020	--	--	--	--	--	--	119.7
2021	--	--	--	--	--	--	49.6
2022	--	--	--	--	--	--	34.8
2023	--	--	--	--	--	--	42.3
2024	--	--	--	--	--	--	48.2
2025	--	--	--	--	--	--	308.7
Subtotal	17	--	--	--	--	--	790.0

Annual Funding 1319 RDT&E Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2019 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2016	--	--	--	--	--	--	9.6
2017	--	--	--	--	--	--	29.7
2018	--	--	--	--	--	--	49.2
2019	--	--	--	--	--	--	97.3
2020	--	--	--	--	--	--	115.1
2021	--	--	--	--	--	--	46.7
2022	--	--	--	--	--	--	32.2
2023	--	--	--	--	--	--	38.3
2024	--	--	--	--	--	--	42.8
2025	--	--	--	--	--	--	268.7
Subtotal	17	--	--	--	--	--	729.6

Annual Funding 1507 Procurement Weapons 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	
2021	16	14.6	0.5	13.5	28.6	1.4	30.0	
2022	16	12.5	0.5	15.5	28.5	2.2	30.7	
2023	16	12.1	0.4	16.9	29.4	1.9	31.3	
2024	291	185.5	5.4	19.6	210.5	3.6	214.1	
2025	1741	2623.6	71.4	106.7	2801.7	173.5	2975.2	
Subtotal	2080	2848.3	78.2	172.2	3098.7	182.6	3281.3	

Annual Funding 1507 Procurement Weapons Procurement, Navy								
Fiscal Year	Quantity	BY 2019 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2021	16	13.5	0.5	12.5	26.5	1.3	27.8	
2022	16	11.4	0.5	14.0	25.9	2.0	27.9	
2023	16	10.8	0.4	15.0	26.2	1.7	27.9	
2024	291	162.0	4.7	17.2	183.9	3.1	187.0	
2025	1741	2134.2	58.1	86.8	2279.1	141.1	2420.2	
Subtotal	2080	2331.9	64.2	145.5	2541.6	149.2	2690.8	

The procurement costs shown in the "Annual Funding by Appropriation" table for FY 2025 represent the entire "To Complete" amount. The escalation index utilized in FY 2025 reflects a composite value used to de-escalate to the appropriate Base Year 2019 value.

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	3/4/2019	3/4/2019
Approved Quantity	208	208
Reference	AARGM-ER KP-2 ADM	AARGM-ER KP-2 ADM
Start Year	2021	2021
End Year	2023	2023

Knowledge Point 2 (KP-2) ADM approved LRIP quantities of up to 208 All Up Rounds (AURs).

Foreign Military Sales

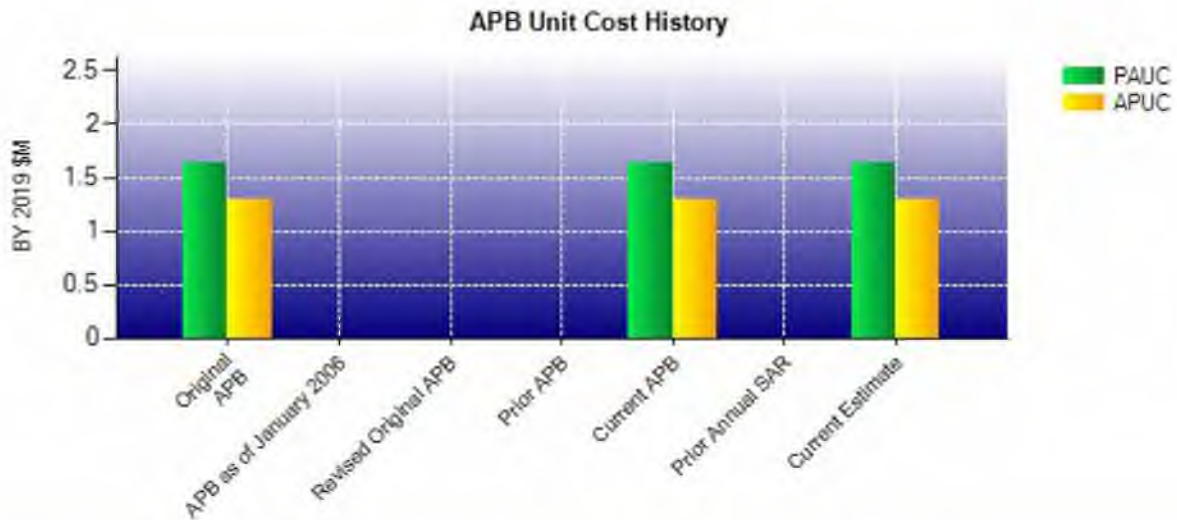
None

Nuclear Costs

None

Unit Cost

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2019 \$M	BY 2019 \$M	% Change
	Current UCR Baseline (Feb 2019 APB)	Current Estimate (Dec 2018 SAR)	
Program Acquisition Unit Cost			
Cost	3442.1	3420.4	
Quantity	2097	2097	
Unit Cost	1.641	1.631	-0.61
Average Procurement Unit Cost			
Cost	2693.5	2690.8	
Quantity	2080	2080	
Unit Cost	1.295	1.294	-0.08
Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2019 \$M	BY 2019 \$M	% Change
	Original UCR Baseline (Feb 2019 APB)	Current Estimate (Dec 2018 SAR)	
Program Acquisition Unit Cost			
Cost	3442.1	3420.4	
Quantity	2097	2097	
Unit Cost	1.641	1.631	-0.61
Average Procurement Unit Cost			
Cost	2693.5	2690.8	
Quantity	2080	2080	
Unit Cost	1.295	1.294	-0.08



APB Unit Cost History					
Item	Date	BY 2019 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Feb 2019	1.641	1.295	1.941	1.578
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	N/A	N/A	N/A	N/A	N/A
Current APB	Feb 2019	1.641	1.295	1.941	1.578
Prior Annual SAR	N/A	N/A	N/A	N/A	N/A
Current Estimate	Dec 2018	1.631	1.294	1.941	1.578

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY \$M)									
PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
1.941	0.010	0.000	-0.017	0.008	0.000	0.000	-0.001	0.000	1.941

Current SAR Baseline to Current Estimate (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
1.578	0.010	0.000	-0.017	0.008	0.000	0.000	-0.001	0.000	1.578

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	Jan 2019	N/A	Jan 2019
Milestone C	N/A	N/A	N/A	N/A
IOC	N/A	Sep 2023	N/A	Sep 2023
Total Cost (TY \$M)	N/A	4071.3	N/A	4071.3
Total Quantity	N/A	2097	N/A	2097
PAUC	N/A	1.941	N/A	1.941

Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	790.0	3281.3	--	4071.3
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	--	--	--
Other	--	--	--	--
Support	--	--	--	--
Subtotal	--	--	--	--
Current Changes				
Economic	-1.0	+21.1	--	+20.1
Quantity	--	--	--	--
Schedule	--	-36.1	--	-36.1
Engineering	+0.5	+16.5	--	+17.0
Estimating	+0.5	--	--	+0.5
Other	--	--	--	--
Support	--	-1.5	--	-1.5
Subtotal	--	--	--	--
Total Changes	--	--	--	--
CE - Cost Variance	790.0	3281.3	--	4071.3
CE - Cost & Funding	790.0	3281.3	--	4071.3

Summary BY 2019 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	748.6	2693.5	--	3442.1
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	--	--	--	--
Other	--	--	--	--
Support	--	--	--	--
Subtotal	--	--	--	--
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	-19.5	-5.3	--	-24.8
Estimating	+0.5	--	--	+0.5
Other	--	--	--	--
Support	--	+2.6	--	+2.6
Subtotal	-19.0	-2.7	--	-21.7
Total Changes	-19.0	-2.7	--	-21.7
CE - Cost Variance	729.6	2690.8	--	3420.4
CE - Cost & Funding	729.6	2690.8	--	3420.4

Initial SAR - Above variances (if any) reflect changes since the SAR Baseline/APB.

SAR Baseline Reference: Navy Acquisition Executive (NAE) Approved Acquisition Program Baseline (APB) dated February 27, 2019

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-1.0
Funding delta exists between PB 2020 and the program cost estimate approved at Knowledge Point-2 (MS-B). (Engineering)	-19.5	+0.5
Adjustment for current and prior escalation. (Estimating)	+0.5	+0.5
RDT&E Subtotal	-19.0	0.0

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+21.1
Funding delta exists between PB 2020 and the program cost estimate approved at Knowledge Point-2 (MS-B). (Schedule)	0.0	-36.1
Funding delta exists between PB 2020 and the program cost estimate approved at Knowledge Point-2 (MS-B). (Engineering)	-5.3	+16.5
Funding delta exists between PB 2020 and the program cost estimate approved at Knowledge Point-2 (MS-B). (Support)	+3.6	-0.3
Funding delta exists between PB 2020 and the program cost estimate approved at Knowledge Point-2 (MS-B). (Support)	-1.0	-1.2
Procurement Subtotal	-2.7	0.0

Contracts

General Notes

Alliant Techsystems Operations, LLC is a wholly owned subsidiary of Northrop Grumman Innovation Systems

Contract Identification

Appropriation: RDT&E
Contract Name: AARGM-ER Engineering and Manufacturing Development (EMD)
Contractor: Alliant Techsystems Operations, LLC
Contractor Location: 9401 Corbin Avenue
 Northridge, CA 91324
Contract Number: N00019-19-C-0050
Contract Type: Cost Plus Incentive Fee (CPIF)
Award Date: March 07, 2019
Definitization Date: March 07, 2019

Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
317.1	N/A	17	317.1	N/A	17	317.1	317.1

Cost and Schedule Variance Explanations

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

General Contract Variance Explanation

Cost and schedule variances are not reported for this contract, because earned value management reporting has not yet commenced due to the contract being awarded on March 7, 2019.

Notes

This is the first time this contract is being reported.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	17	0.00%
Production	0	0	2080	0.00%
Total Program Quantity Delivered	0	0	2097	0.00%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	4071.3	Years Appropriated	4
Expended to Date	92.4	Percent Years Appropriated	40.00%
Percent Expended	2.27%	Appropriated to Date	186.7
Total Funding Years	10	Percent Appropriated	4.59%

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

Operating and Support Cost

Cost Estimate Details

Date of Estimate:	January 09, 2019
Source of Estimate:	SCP
Quantity to Sustain:	2080
Unit of Measure:	Total Quantity
Service Life per Unit:	15.00 Years
Fiscal Years in Service:	FY 2023 - FY 2047

The estimate concentrates on the costs for the AGM-88G AARGM-ER All Up Round missiles. The 2080 quantity to sustain does not include 17 developmental assets that are not maintained.

Sustainment Strategy

The contractor will provide product support through IOC and first deployment. The Life Cycle Sustainment Plan will address short and long term support activities and requirements. The weapon will be operated and maintained by sailors and be supported by three level maintenance based on the results of the Level of Repair Analysis which will be performed once the final design is solidified.

Antecedent Information

The Antecedent System is the AARGM. Data is based on a AARGM period of performance of FY 2011 - FY 2039 (29 years), vice FY 2023 - FY 2047 (25 years) for AARGM-ER. Historical O&S costs were collected from the Naval Visibility & Management of Operating and Support Costs database. Antecedent costs are not normalized to the AGM-88G AARGM ER parameters.

Cost Element	Annual O&S Costs BY2019 \$M	
	AARGM-ER Average Annual Cost Per Total Quantity	Advanced Anti-Radiation Guided Missile (AARGM) (Antecedent) Total Quantity
Unit-Level Manpower	0.000	0.000
Unit Operations	0.010	0.000
Maintenance	2.380	0.780
Sustaining Support	4.240	4.370
Continuing System Improvements	2.080	2.270
Indirect Support	0.000	0.000
Other	0.000	0.000
Total	8.710	7.420

Item	Total O&S Cost \$M				
	AARGM-ER			Advanced Anti-Radiation Guided Missile (AARGM) (Antecedent)	
	Current Development APB Objective/Threshold		Current Estimate		
Base Year	218.1	239.9	218.1		239.9
Then Year	309.5	N/A	309.5		N/A

Equation to Translate Annual Cost to Total Cost

Total Cost/Total Years of Service = Annual Cost

Disposal Estimate Details

Date of Estimate: January 09, 2019
Source of Estimate: SCP
Disposal/Demilitarization Total Cost (BY 2019 \$M): 2.4