

UNCLASSIFIED



Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-391



Standard Missile-6 (SM-6)

As of FY 2020 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

UNCLASSIFIED

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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

Standard Missile-6 (SM-6)

DoD Component

Navy

Responsible Office

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References

SAR Baseline (Production Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 26, 2010

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated August 9, 2013

Mission and Description

The STANDARD Missile-6 (SM-6) is a tri-mission capable (Anti-Air Warfare (AAW), Sea-Based Terminal Defense (SBT), and Anti-Surface Warfare (ASuW)) missile that provides for over-the-horizon engagements, enhanced capability at extended ranges and increased firepower with an active guidance section. Launched from AEGIS Cruisers and Destroyers, SM-6 provides timely, precise, accurate and lethal fire power against cruise missile threats and launch platforms in a fleet area defense role and is capable of successfully engaging manned and unmanned, fixed or rotary wing aircraft, and land attack or Anti-Ship Cruise Missiles (ASCM) in flight. SM-6 is an evolutionary acquisition program with requirements for future Block upgrades. Raytheon Missile Systems (RMS) is the sole source contractor for SM-6.

Executive Summary

Program Highlights Since Last Report

SM-6 Program is in full rate production for the SM-6 Block I variant and low-rate initial production for the more capable SM-6 Block IA variant.

The SM-6 FRP Block I/IA FY2017/2018 Production contract was awarded on September 28, 2018.

The SM-6 Block IA Engineering Change Proposal (ECP) FY2017/2018 contract was awarded December 14, 2018.

FY 2020 PB reflects a funding profile for a authorized Multi-Year Procurement (MYP) beginning in FY 2019 and completing in FY 2023. Advance Procurement (AP) is captured in the funding phasing to address economic order quantity material requirements. MYP and AP were approved in the FY 2019 Defense Authorization Act.

FY 2020 PB includes an emergent requirement to increase the SM-6 Block IA procurement to 180 All Up Rounds (AURs) per year starting in FY 2024.

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
July 2004	Milestone B Acquisition Decision Memorandum
September 2004	System Development and Demonstration (SD&D) contract awarded to Raytheon Missile Systems
August 2009	Milestone C Acquisition Decision Memorandum
September 2009	Letter contract to establish Not-to-Exceed prices for the LRIP contract FY 2009 Low Rate Initial Production (LRIP) SM-6 Block I awarded to Raytheon Missile Systems
January 2010	Land Based Testing completed
July 2010	LRIP SM-6 Block I (Lot 1) contract definitized with an FY 2010 (Lot 2) option awarded to Raytheon Missile Systems
January 2011	Developmental Testing (DT) Flight Testing completed
June 2011	LRIP FY 2011 (Lot 3) SM-6 Block I option awarded to Raytheon Missile Systems
October 2011	Operational Testing (OT) Flight Testing completed
May 2012	Undefinitized Contract Action (UCA) for FY 2012 LRIP SM-6 Block I
March 2013	Navy Electronic Resources and Requirements Review Board (ER3B) memorandum authorizing increase in procurement profile from 1200 to 1800 missiles
July 2013	LRIP FY 2012 SM-6 Block I contract awarded
August 2013	Full Rate Production Acquisition Decision Memorandum
September 2013	Full Rate Production (FRP) FY 2013 SM-6 Block I contract
November 2013	Initial Operational Capability (IOC) achieved
June 2014	FRP FY 2014 SM-6 Block I contract
May 2015	FRP FY 2015 SM-6 Block I/IA contract
May 2015	UCA for FY 2015 SM-6 Block IA Engineering Change Proposal (ECP) LRIP
February 2016	FRP FY 2016 SM-6 Block I/IA contract
January 2017	LRIP FY 2015/FY 2016 SM-6 Block IA ECP contract award
December 2017	Full Operational Capability (FOC) achieved
September 2018	FRP FY 2017/FY2018 SM-6 Block I/IA contract award
October 2018	FY 2019 National Defense Authorization Act (NDAA) authorized a Multi-Year Procurement (MYP) and Advanced Procurement (AP) beginning with the FY 2019 program year for the procurement of up to 625 missiles, completing in the FY 2023 program year
December 2018	Resource Management Decision included an emergent requirement to increase the SM-6 Block IA procurement from 125 to 180 All Up Rounds per year starting in FY 2024
December 2018	FRP FY2017/FY2018 SM-6 Block IA ECP contract award

Threshold Breaches

APB Breaches

Schedule		<input checked="" 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"/>

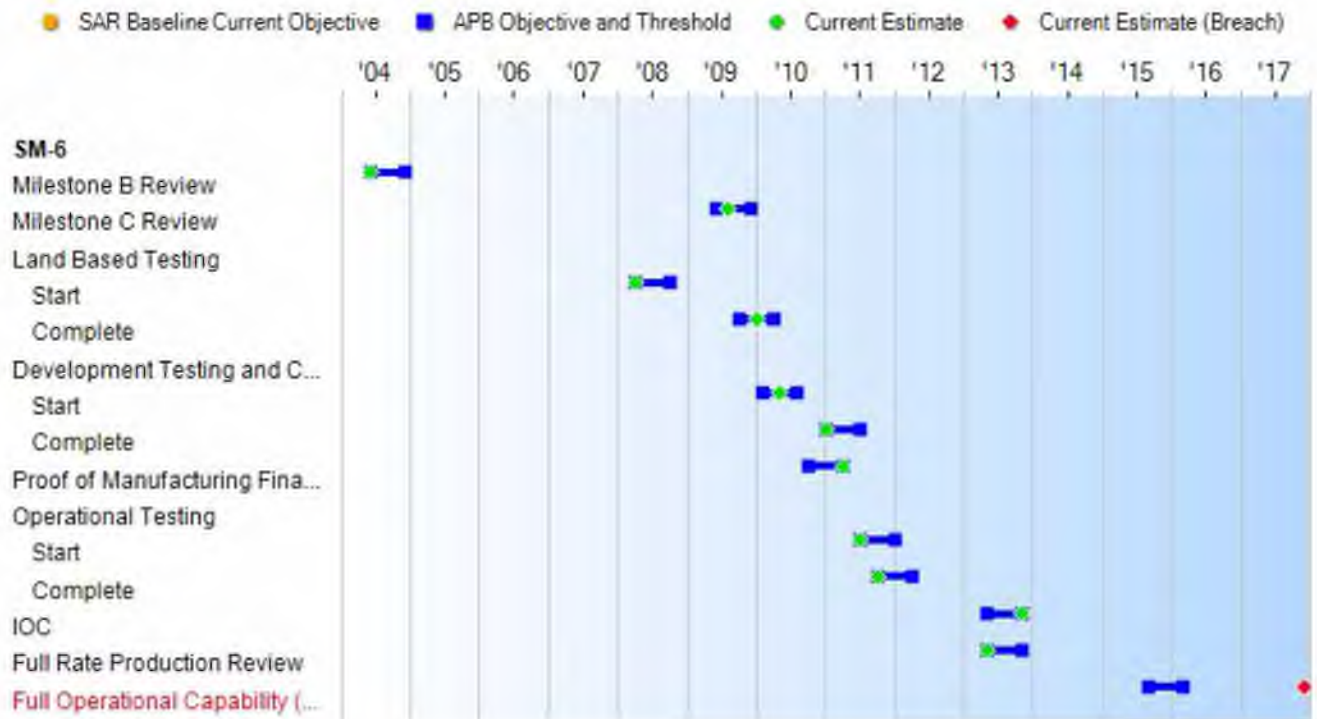
Explanation of Breach

The schedule breach was first reported in the December 2015 SAR. SM-6 successfully achieved FOC on December 27, 2017.

Nunn-McCurdy Breaches

Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Schedule



Schedule Events				
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate
Milestone B Review	Jun 2004	Jun 2004	Dec 2004	Jun 2004
Milestone C Review	Jun 2009	Jun 2009	Dec 2009	Aug 2009
Land Based Testing				
Start	Apr 2008	Apr 2008	Oct 2008	Apr 2008
Complete	Oct 2009	Oct 2009	Apr 2010	Jan 2010
Development Testing and Combined Development and Operational Testing				
Start	Feb 2010	Feb 2010	Aug 2010	May 2010
Complete	Apr 2010	Jan 2011	Jul 2011	Jan 2011
Proof of Manufacturing Final Review	Oct 2010	Oct 2010	Apr 2011	Apr 2011
Operational Testing				
Start	Aug 2010	Jul 2011	Jan 2012	Jul 2011
Complete	Sep 2010	Oct 2011	Apr 2012	Oct 2011
IOC	Mar 2011	May 2013	Nov 2013	Nov 2013
Full Rate Production Review	Jun 2011	May 2013	Nov 2013	May 2013
Full Operational Capability (FOC)	Sep 2015	Sep 2015	Mar 2016	Dec 2017¹

¹ APB Breach

Change Explanations

None

Notes

SM-6 successfully achieved FOC on December 27, 2017.

Acronyms and Abbreviations

FFP - Firm Fixed Price
MYP - Multi Year Procurement
SYP - Single Year Procurement

Performance

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

Track to Budget

General Notes

FY 2012 was the last year of SM-6 RDT&E funding related to the Baseline Program of Record as reported in the SAR.

The FY 2019 PB for SM-6 procurement (APPN 1507, PE 0204228N) includes Line Item 2234 and 6120. Both are shared with SM-2 through FY 2011. All up rounds are reflected in Budget Line Item (BLI) 2234 P1-7. Initial Spares are included in BLI 6120 P1-35.

RDT&E

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

Navy 1319 05 0604366N

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

3092 Standard Missile 6 Program (Shared) (Sunk)

Notes: FY 2012 is the last year of SM-6 RDT&E funding related to the Baseline Program of Record as reported in the SAR.

Procurement

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

Navy 1507 02 0204228N

Line Item	Name
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2234 STANDARD Missile

Notes: Shared with SM-2 through FY 2011. Shared with SM-6 Block IB and WIB MAT Project Issue starting in FY 2021.

Navy 1507 06 0204228N

Line Item	Name
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6120 Spares and Repair Parts (Shared)

Notes: Shared with SM-2 in Standard Missile Replenishment Spares line through FY 2011. Shared with SM-6 Block IB starting in FY 2021 and continues to be shared with other Navy programs.

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	861.6	834.5	918.0	834.7	963.2	933.4	933.4
Procurement	4419.5	6854.1	7539.5	7424.7	5634.0	9623.8	10595.8
Flyaway	--	--	--	6515.0	--	--	9321.0
Recurring	--	--	--	6353.6	--	--	9092.9
Non Recurring	--	--	--	161.4	--	--	228.1
Support	--	--	--	909.7	--	--	1274.8
Other Support	--	--	--	630.4	--	--	874.9
Initial Spares	--	--	--	279.3	--	--	399.9
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	5281.1	7688.6	N/A	8259.4	6597.2	10557.2	11529.2

Cost Notes

No cost estimate for the program has been completed in the previous year.

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E	0	0	0
Procurement	1200	1800	2331
Total	1200	1800	2331

Quantity Notes

SM-6 received authorization to increase the procurement profile from 1200 missiles to 1800 missiles as documented in the Navy Electronic Resources and Requirements Review Board memorandum, dated March 18, 2013.

SM-6 received authorization for an emergent requirement to increase SM-6 Block IA procurement to 180 All Up Rounds (AUR) per year starting in FY 2024 resulting in a total procurement quantity from 1800 to 2331 as documented in the RMD 700 dated December 7, 2018.

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	933.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	933.4
Procurement	3331.1	636.6	515.2	550.9	587.9	481.1	802.8	3690.2	10595.8
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2020 Total	4264.5	636.6	515.2	550.9	587.9	481.1	802.8	3690.2	11529.2
PB 2019 Total	4285.1	636.6	530.0	500.9	481.9	437.1	625.8	1269.2	8766.6
Delta	-20.6	0.0	-14.8	50.0	106.0	44.0	177.0	2421.0	2762.6

Quantity Summary										
FY 2020 President's Budget / December 2018 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	806	125	125	125	125	125	180	720	2331
PB 2020 Total	0	806	125	125	125	125	125	180	720	2331
PB 2019 Total	0	806	125	125	125	125	125	125	244	1800
Delta	0	0	0	0	0	0	0	55	476	531

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	--	--	--	--	--	--	25.5
2005	--	--	--	--	--	--	83.8
2006	--	--	--	--	--	--	114.8
2007	--	--	--	--	--	--	150.0
2008	--	--	--	--	--	--	172.6
2009	--	--	--	--	--	--	195.4
2010	--	--	--	--	--	--	112.6
2011	--	--	--	--	--	--	61.0
2012	--	--	--	--	--	--	17.7
Subtotal	--	--	--	--	--	--	933.4

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	--	--	--	--	--	--	25.0
2005	--	--	--	--	--	--	80.0
2006	--	--	--	--	--	--	106.3
2007	--	--	--	--	--	--	135.6
2008	--	--	--	--	--	--	153.2
2009	--	--	--	--	--	--	171.3
2010	--	--	--	--	--	--	97.2
2011	--	--	--	--	--	--	51.4
2012	--	--	--	--	--	--	14.7
Subtotal	--	--	--	--	--	--	834.7

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	
2009	19	92.4	--	17.6	110.0	12.4	122.4	
2010	11	54.5	--	10.5	65.0	32.7	97.7	
2011	59	210.5	--	--	210.5	32.5	243.0	
2012	89	272.2	--	--	272.2	67.2	339.4	
2013	89	264.6	--	--	264.6	54.4	319.0	
2014	93	259.2	--	--	259.2	60.0	319.2	
2015	95	361.8	--	--	361.8	57.5	419.3	
2016	101	379.5	--	--	379.5	54.9	434.4	
2017	125	448.7	--	--	448.7	47.5	496.2	
2018	125	482.2	--	--	482.2	58.3	540.5	
2019	125	570.9	--	--	570.9	65.7	636.6	
2020	125	453.6	--	--	453.6	61.6	515.2	
2021	125	425.9	--	50.0	475.9	75.0	550.9	
2022	125	401.8	--	106.0	507.8	80.1	587.9	
2023	125	355.4	--	44.0	399.4	81.7	481.1	
2024	180	719.5	--	--	719.5	83.3	802.8	
2025	180	820.6	--	--	820.6	85.0	905.6	
2026	180	829.5	--	--	829.5	86.7	916.2	
2027	180	839.6	--	--	839.6	88.3	927.9	
2028	180	850.5	--	--	850.5	90.0	940.5	
Subtotal	2331	9092.9	--	228.1	9321.0	1274.8	10595.8	

Annual Funding 1507 Procurement Weapons 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
2009	19	80.0	--	15.2	95.2	10.8	106.0
2010	11	46.4	--	8.9	55.3	27.9	83.2
2011	59	175.9	--	--	175.9	27.2	203.1
2012	89	224.1	--	--	224.1	55.3	279.4
2013	89	214.8	--	--	214.8	44.1	258.9
2014	93	207.5	--	--	207.5	48.0	255.5
2015	95	285.0	--	--	285.0	45.4	330.4
2016	101	293.7	--	--	293.7	42.4	336.1
2017	125	340.4	--	--	340.4	36.0	376.4
2018	125	358.5	--	--	358.5	43.3	401.8
2019	125	416.1	--	--	416.1	47.9	464.0
2020	125	324.1	--	--	324.1	44.0	368.1
2021	125	298.4	--	34.9	333.3	52.6	385.9
2022	125	276.0	--	72.8	348.8	55.0	403.8
2023	125	239.3	--	29.6	268.9	55.0	323.9
2024	180	475.0	--	--	475.0	55.0	530.0
2025	180	531.1	--	--	531.1	55.0	586.1
2026	180	526.3	--	--	526.3	55.0	581.3
2027	180	522.3	--	--	522.3	54.9	577.2
2028	180	518.7	--	--	518.7	54.9	573.6
Subtotal	2331	6353.6	--	161.4	6515.0	909.7	7424.7

FY 2020 PB reflects a funding profile for a authorized Multyear Procurement (MYP) beginning in FY 2019 and completing in FY 2023. Advance Procurement (AP) is captured in the funding phasing to address economic order quantity material requirements. MYP and AP were approved in the FY 2019 Defense Authorization Act.

FY 2020 PB includes an emergent requirement to increase the SM-6 Block IA procurement to 180 All Up Rounds (AUR) per year starting in FY 2024. The FY 2024 - FY 2028 resumes single year procurements for SM-6 Block IA AURs only after the MYP.

The total Procurement Cost reflected in the FY 2020 PB, FY 2024 funding control is lower than the projected AUR Unit Price for a procurement of 180 SM-6 Block IAs. The Total Procurement Cost reflected in FY 2025 through FY 2028 represents estimates at the projected AUR Unit Price.

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	7/12/2004	4/5/2012
Approved Quantity	120	178
Reference	Milestone B ADM	LRIP Lot 4 ADM
Start Year	2009	2009
End Year	2011	2012

The SM-6 program received authorization to enter into a fourth year of LRIP as documented in the ADM dated April 5, 2012. This ADM authorized the increase in the total LRIP quantity from 120 (10 percent) to 178 (15 percent) based on a procurement profile of 1200 missiles, and deferred the FRP decision to FY 2013.

The SM-6 program received authorization to increase the procurement profile from 1200 missiles to 1800 missiles as documented in the Navy Electronic Resources and Requirements Review Board memorandum, dated March 18, 2013.

The SM-6 program built up 25 non-LRIP rounds to be test fired during the System Development and Demonstration phase of the program. All 25 missiles were expended prior to IOC.

Foreign Military Sales

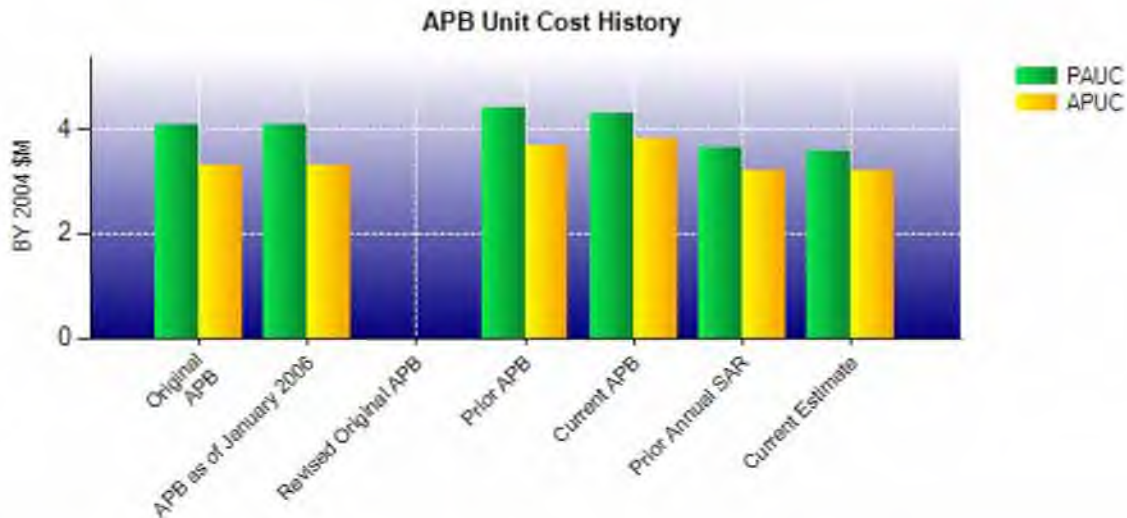
None

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 (Aug 2013 APB)	Current Estimate (Dec 2018 SAR)	
Program Acquisition Unit Cost			
Cost	7688.6	8259.4	
Quantity	1800	2331	
Unit Cost	4.271	3.543	-17.05
Average Procurement Unit Cost			
Cost	6854.1	7424.7	
Quantity	1800	2331	
Unit Cost	3.808	3.185	-16.36
Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2004 \$M	BY 2004 \$M	% Change
	Original UCR Baseline (Jul 2004 APB)	Current Estimate (Dec 2018 SAR)	
Program Acquisition Unit Cost			
Cost	4866.3	8259.4	
Quantity	1200	2331	
Unit Cost	4.055	3.543	-12.63
Average Procurement Unit Cost			
Cost	3949.6	7424.7	
Quantity	1200	2331	
Unit Cost	3.291	3.185	-3.22



APB Unit Cost History					
Item	Date	BY 2004 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Jul 2004	4.055	3.291	4.986	4.163
APB as of January 2006	Jul 2004	4.055	3.291	4.986	4.163
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	Mar 2010	4.401	3.683	5.498	4.695
Current APB	Aug 2013	4.271	3.808	5.865	5.347
Prior Annual SAR	Dec 2017	3.647	3.183	4.870	4.352
Current Estimate	Dec 2018	3.543	3.185	4.946	4.546

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	
4.986	0.114	0.000	-0.046	0.000	0.153	0.000	0.291	0.512	5.498

Current SAR Baseline to Current Estimate (TY \$M)									
PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
5.498	-0.033	-0.493	0.123	0.000	-0.376	0.000	0.227	-0.552	4.946

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	
4.163	0.085	0.000	-0.046	0.000	0.202	0.000	0.291	0.532	4.695

Current SAR Baseline to Current Estimate (TY \$M)									
APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
4.695	-0.034	-0.102	0.123	0.000	-0.363	0.000	0.227	-0.149	4.546

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A		N/A	N/A	N/A
Milestone B			Jun 2004	Jun 2004
Milestone C			Sep 2008	Jun 2009
IOC			Sep 2010	Mar 2011
Total Cost (TY \$M)			5983.3	6597.2
Total Quantity			1200	1200
PAUC			4.986	5.498

Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	963.2	5634.0	--	6597.2
Previous Changes				
Economic	+1.2	-134.0	--	-132.8
Quantity	--	+2619.6	--	+2619.6
Schedule	--	+195.6	--	+195.6
Engineering	--	--	--	--
Estimating	-31.0	-855.1	--	-886.1
Other	--	--	--	--
Support	--	+373.1	--	+373.1
Subtotal	-29.8	+2199.2	--	+2169.4
Current Changes				
Economic	--	+55.4	--	+55.4
Quantity	--	+2452.0	--	+2452.0
Schedule	--	+90.4	--	+90.4
Engineering	--	--	--	--
Estimating	--	+9.7	--	+9.7
Other	--	--	--	--
Support	--	+155.1	--	+155.1
Subtotal	--	+2762.6	--	+2762.6
Total Changes	-29.8	+4961.8	--	+4932.0
CE - Cost Variance	933.4	10595.8	--	11529.2
CE - Cost & Funding	933.4	10595.8	--	11529.2

Summary BY 2004 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	861.6	4419.5	--	5281.1
Previous Changes				
Economic	--	--	--	--
Quantity	--	+1761.1	--	+1761.1
Schedule	--	-25.0	--	-25.0
Engineering	--	--	--	--
Estimating	-26.9	-655.8	--	-682.7
Other	--	--	--	--
Support	--	+229.8	--	+229.8
Subtotal	-26.9	+1310.1	--	+1283.2
Current Changes				
Economic	--	--	--	--
Quantity	--	+1524.7	--	+1524.7
Schedule	--	+64.0	--	+64.0
Engineering	--	--	--	--
Estimating	--	+13.2	--	+13.2
Other	--	--	--	--
Support	--	+93.2	--	+93.2
Subtotal	--	+1695.1	--	+1695.1
Total Changes	-26.9	+3005.2	--	+2978.3
CE - Cost Variance	834.7	7424.7	--	8259.4
CE - Cost & Funding	834.7	7424.7	--	8259.4

Previous Estimate: December 2017

Procurement	\$M	
	Base Year	Then Year
Current Change Explanations		
Revised escalation indices. (Economic)	N/A	+55.4
Total Quantity variance resulting from an increase of 531 All Up Round (AUR) missiles from 1,800 to 2,331. due to an emergent requirement starting in FY 2024 to increase SM-6 Block IA procurement from 125 missiles per year to 180 missiles per year for at least five years through FY 2028. (Subtotal)	+1309.2	+2105.4
Quantity variance resulting from an increase of 531 AUR missiles from 1,800 to 2,331. (Quantity)	(+1524.7)	(+2452.0)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+64.0)	(+103.0)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-279.5)	(-449.6)
Acceleration of procurement buy profile starting in FY 2024 to support an emergent requirement to increase SM-6 Block IA procurement from 125 missiles per year to 180 missiles per year. (Schedule) (QR)	0.0	-12.6
Revised estimate to include Non-Recurring Tooling and Test Equipment required to support an emergent requirement to increase SM-6 Block IA procurement from 125 missiles per year to 180 missiles per year. (Estimating) (QR)	+137.3	+200.0
Revised estimate for SM-6 Block IA unit cost assuming a Single Year Procurement starting in FY 2024. (Estimating)	+192.6	+310.6
Funding adjustment to support other Navy priorities. (Estimating)	-25.7	-35.8
Adjustment for current and prior escalation. (Estimating)	-11.5	-15.5
Adjustment for current and prior escalation. (Support)	-1.6	-2.0
Increase in Other Support due to extension of the procurement profile and increase in SM-6 Block IA procurement quantity. (Support) (QR)	+65.9	+107.1
Increase in Initial Spares requirements estimated as a percent of AUR hardware. (Support)	+28.9	+50.0
Procurement Subtotal	+1695.1	+2762.6

(QR) Quantity Related

Contracts

Contract Identification

Appropriation: Procurement
Contract Name: SM-6 FRP 15/16
Contractor: Raytheon
Contractor Location: 1151 East Hermans Road
 Tucson, AZ 85756
Contract Number: N00024-15-C-5408/1
Contract Type: Firm Fixed Price (FFP)
Award Date: May 29, 2015
Definitization Date: May 29, 2015

Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
259.1	N/A	93	515.0	N/A	101	515.0	515.0

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the Initial Contract Price Target reflects the FY 2015 basic contract awarded on May 30, 2015 and the Current Contract Price Target reflects the FY 2016 contract option awarded on February 26, 2016.

Cost and Schedule Variance Explanations

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

Contract Identification

Appropriation: Procurement
Contract Name: SM-6 FRP
Contractor: RMS Missile Systems (RMS)
Contractor Location: 1151 Hermans Road
 Tucson, AZ 85756
Contract Number: N00024-13-C-5407/0
Contract Type: Firm Fixed Price (FFP)
Award Date: January 31, 2013
Definitization Date: September 26, 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
276.8	N/A	89	564.8	N/A	182	564.8	564.8

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to contract modification P00014 which awarded the FY 2014 contract option on June 25, 2014.

Cost and Schedule Variance Explanations

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

Notes

On January 31, 2013, Raytheon Missile Systems was awarded a contract for Long Lead Material for the FY 2013 FRP contract. The base contract (FY 2013) was definitized on September 26, 2013. The FY 2014 contract option was awarded on June 25, 2014.

Contract Identification

Appropriation: Procurement
Contract Name: SM-6 FRP 17/18
Contractor: Raytheon
Contractor Location: 1151 East Hermans Road
 Tucson, AZ 85756
 Tucson, AZ 85756
Contract Number: N00024-17-C-5409/1
Contract Type: Firm Fixed Price (FFP)
Award Date: September 28, 2018
Definitization Date: September 28, 2018

Contract Price

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
564.5	N/A	250	564.5	N/A	250	564.5	564.5

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.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	518	521	2331	22.35%
Total Program Quantity Delivered	518	521	2331	22.35%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	11529.2	Years Appropriated	16
Expended to Date	3121.0	Percent Years Appropriated	64.00%
Percent Expended	27.07%	Appropriated to Date	4901.1
Total Funding Years	25	Percent Appropriated	42.51%

The above data is current as of March 12, 2019.

Operating and Support Cost

Cost Estimate Details

Date of Estimate:	May 13, 2013
Source of Estimate:	CAPE ICE
Quantity to Sustain:	1800
Unit of Measure:	Missile
Service Life per Unit:	30.00 Years
Fiscal Years in Service:	FY 2013 - FY 2054

Since the SM-6 is a wooden round (a concept that pictures a weapon as being completely reliable and, while deployed on board a ship, having an infinite shelf life while at the same time requiring no special handling, storage, surveillance, or maintenance by ships force personnel), Personnel Costs are unnecessary for missile operation.

The average annual cost per missile assumes 1800 All Up Rounds over a 30 year life cycle. The program received additional funding for an emergent requirement to procure 180 SM-6 Block IA missiles per year starts in FY 2024 for which the O&S cost estimate has not yet been updated. The program expects the average annual cost per missile to remain unchanged with this new requirement.

Unit Level Consumption includes Range and Target Costs, as well as Post Flight Analysis.

Intermediate Maintenance consists of Intermediate Level Maintenance facility costs.

Depot Maintenance includes Depot Maintenance and Refurbishment.

Sustaining Support includes Sustaining Investment and Software Maintenance.

Indirect Costs includes Installation and Personnel Support.

Sustainment Strategy

SM-6 will leverage the proven and mature STANDARD Missile product support infrastructure. No unique storage, transportation, handling facilities, or launching systems will be required. The All Up Round will be considered a "wooden round" on board ship, with no Operational Level Maintenance (O-Level) required. In the future, a shipboard portable Maintenance Built-In-Test (MBIT) capability will allow a team to come aboard and test or install new software into the SM-6 round.

Antecedent Information

For reporting purposes, SM-2 is the antecedent by definition of the closest analogous system to SM-6. The SM-6 program meets a different threat set and demonstrates enhanced capabilities in comparison to the SM-2 program.

SM-2 Cost/Missile/Year based on average quantity serviced in FY 2015, converted to BY 2004\$. SM-2 BLK IIIA/IIIB FY 2015 PB is the basis for the SM-2 average annual cost per missile.

Annual O&S Costs BY2004 \$K			
Cost Element	SM-6		SM-2 (Antecedent)
	Average Annual Cost Per Missile		Average Annual Cost Per Missile
Unit-Level Manpower		0.000	0.000
Unit Operations		3.000	1.500
Maintenance		3.200	5.000
Sustaining Support		2.100	1.200
Continuing System Improvements		0.000	0.000
Indirect Support		0.200	0.500
Other		0.000	0.000
Total		8.500	8.200

Item	Total O&S Cost \$M			
	SM-6			SM-2 (Antecedent)
	Current Production APB Objective/Threshold	Current Estimate		
Base Year	443.0	487.3	460.3	N/A
Then Year	863.9	N/A	845.9	N/A

Equation to Translate Annual Cost to Total Cost

Average Annual Missile O&S Cost = Total O&S Cost / number of missiles / number of operational missile years.

Total O&S Cost = \$460.3M (BY04\$)

Number of missiles = 1800

Number of operational years = 30 year life cycle

Differences in Annual Cost per Missile and Total O&S Cost are due to rounding issues.

The program received additional funding for an emergent requirement to procure 180 SM-6 Block IA missiles per year starts in FY 2024 for which the O&S cost estimate has not yet been updated. The program expects the average annual cost per missile to remain unchanged and expects to be updated in the next Independent Logistics Assessment (ILA) cycle.

O&S Cost Variance		
Category	BY 2004 \$M	Change Explanations
Prior SAR Total O&S Estimates - Dec 2017 SAR	460.3	
Programmatic/Planning Factors	0.0	
Cost Estimating Methodology	0.0	
Cost Data Update	0.0	
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	0.0	
Other	0.0	

Total Changes	0.0
Current Estimate	460.3

Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 2004 \$M):

The Army is responsible for demilitarization of all DoD missile systems at the end of the missile service life, including the STANDARD missile. Disposal costs are not identified at this time.