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Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

Selected Acquisition Report (SAR)



Guided Multiple Launch Rocket System/ Guided Multiple Launch Rocket System Alternative Warhead (GMLRS/GMLRS AW)

FY 2024 President's Budget

**Defense Acquisition Visibility Environment
(DAVE)**

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Common Acronyms and Abbreviations

\$B - Billions of Dollars
\$K - Thousands of Dollars
\$M - Millions of Dollars
ACAT - Acquisition Category
Acq O&M - Acquisition-Related Operations and Maintenance
ADM - Acquisition Decision Memorandum
APB - Acquisition Program Baseline
APPN - Appropriation
APUC - Average Procurement Unit Cost
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
FMS - Foreign Military Sales
FOC - Full Operational Capability
FRP - Full Rate Production
FY - Fiscal Year
FYDP - Future Years Defense Program
ICE - Independent Cost Estimate
Inc - Increment
IOC - Initial Operational Capability
JROC - Joint Requirements Oversight Council
KPP - Key Performance Parameter
LRIP - Low Rate Initial Production
MDA - Milestone Decision Authority
MDAP - Major Defense Acquisition Program
MILCON - Military Construction
N/A - Not Applicable
O&M - Operations and Maintenance
O&S - Operating and Support
ORD - Operational Requirements Document
OSD - Office of the Secretary of Defense
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
U.S. - United States
UCR - Unit Cost Reporting
USD(A&S) - Under Secretary of Defense (Acquisition and Sustainment)
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

Program Information

Program Name

Guided Multiple Launch Rocket System/Guided Multiple Launch Rocket System Alternative Warhead

DoD Component

Army

Responsible Office

Program Manager

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Mission and Description

Description: The mission of the Guided Multiple Launch Rocket System/Guided Multiple Launch Rocket System Alternative Warhead (GMLRS/GMLRS AW) is to attack/neutralize/suppress/destroy targets using indirect precision fires. GMLRS/GMLRS AW provides Field Artillery units with medium- and long-range (70+ kilometers (Km)) fires while supporting brigade, division, corps, Army, theater, Joint/Coalition Forces and Marine Air-Ground Task Forces in full, limited or expeditionary operations. The GMLRS/GMLRS AW rocket is a solid propellant artillery rocket deployed from the M270A1 and the High Mobility Artillery Rocket System mobile launch vehicles. GMLRS/GMLRS AW uses an Inertial Measuring Unit with Global Positioning System assistance to guide the rocket to a specific point to deliver effects on target. GMLRS/GMLRS AW is transported and fired in a Launch Pod Container that consists of six rockets. The current GMLRS family of munitions consists of three fielded variants: Dual-Purpose Improved Conventional Munition (DPICM), Unitary and Alternative Warhead (AW). A modification to the existing system, Extended Range (ER) GMLRS, is currently in development and will carry both the Unitary and AW payloads to a maximum objective range of 200 Km. GMLRS DPICM: The GMLRS DPICM has a range of 70+ Km and contains 404 M101 grenades to engage area or imprecisely located targets. The GMLRS DPICM was an international cooperative development program with five nations (U.S., United Kingdom, France, Germany, and Italy). GMLRS DPICM no longer meets the threshold reliability requirement and has been transferred to Condition Code N (For Emergency Combat Use Only). Combatant Commanders (COCOM) have been briefed and accept GMLRS DPICM degraded reliability. Production was terminated to comply with the July 9, 2008 Department of Defense Policy on Cluster Munitions and Unintended Harm to Civilians. GMLRS Unitary: The GMLRS Unitary is equipped with a single 200-pound unitary high explosive warhead with a range of 70+ Km to engage point targets with reduced collateral damage. The M31A2 configuration with Insensitive Munition Propulsion System (IMPS) was cut into production beginning in 2019. GMLRS AW: The GMLRS AW is a non-cluster munition with a range of 70 + km developed to engage area or imprecisely located targets. GMLRS AW eliminates the probability of Unexploded Ordnance (UXO) and satisfies UXO requirements as defined in the November 30, 2017, Department of Defense Policy on Cluster Munitions. The latest configuration, the M30A2 with Insensitive Munition Propulsion System (IMPS), began production in 2019. Extended Range (ER) GMLRS: ER GMLRS development began in FY 2018 to extend the maximum range capability. Development and production of ER GMLRS is being executed as an engineering change proposal (ECP) modification to the existing rocket.

Executive Summary

GMLRS/GMLRS AW

Program Highlights Since Last Report

Successful GMLRS 2022 Configuration Steering Board (CSB) was conducted on September 28, 2022 with no recommended program changes. The first three system qualification tests (SQT) for Extended Range GMLRS (ER GMLRS) was conducted at White Sands Missile Range (WSMR) in October 2022. The program continues SQT flight testing in 2Q FY23 with Operational Testing planned in 3Q FY23. The GMLRS Full Rate Production (FRP) 18 / FY23 Production Contract awarded on October 21, 2022 as an Indefinite Delivery/Indefinite Quantity Contract (IDIQ).

History of Significant Developments Since Program Initiation

History of Significant Developments Since Program Initiation	
Date	Significant Development Description
Mar - 2022	GMLRS FY22 production option awarded as a UCA with an NTE value of \$918.256M Firm Fixed Price with additional Cost Plus CLINs. Procures 5,790 AW, 1,002 Unitary and 2,496 RPRR rockets for US and international customers.
Dec - 2021	Extended Range (ER) GMLRS System Critical Design Review (CDR) conducted all Critical Issues closed.
May - 2021	Successful Extended Range GMLRS (ERG) Engineering Design Test 3 test flight conducted, all objectives met in end-to-end test event.
Apr - 2021	GMLRS Enhanced Alternate Warhead (EAW) Award - W9124P-19-9-0001, as a Other Transaction Agreement (OTA) and Cost Plus Fixed Fee (CPFF) Contract with a \$78.9M budget.
Mar - 2021	GMLRS FY21 Production Contract Award - W31P4Q-21-D-0003, as a Firm Fixed Price contract for procurement of 11,136 rockets. This requirement includes the increase of AW warhead tooling to maximize the capacity to 9,402 warheads per guidance from Army Capability Manager and Army G8. Procurement of AW rockets prioritized over Unitary (66,289 AW and 18,413 Unitary) per guidance in Final FY2023/2027 Total Munitions Requirements (TMR) guidance dated August 25, 2021.
Jul - 2019	Missile Supplemental Notice 19-08 Issued on GMLRS DPICM reclassified to Code N (for emergency combat use only).
May - 2019	Per guidance from Army Capability Manager and Army G8 in the FY22-26 TMR, PM STORM has directed the prime contractor to increase AW maximum capacity to 9,402 warheads for the FY21 Production contract Procurement of AW rockets prioritized over Unitary (66,289 AW and 18,423 Unitary) per guidance in Final FY2022/2026 Total Munitions Requirements (TMR) guidance.
Mar - 2019	ER GMLRS Modification Phase III development and qualification contract awarded to complete the system.
Aug - 2018	ER GMLRS Phase II development contract awarded to finalize performance requirements definition and complete the system.
Jun - 2018	The JROC approved an updated GMLRS AW CDD in lieu of CPD which changed the GMLRS Maximum Range (Objective) KPP to 200-Km.
Jun - 2017	The AAE approved and signed the Extended Range (ER) GMLRS modification memorandum, which was directed by The Deputy Secretary of Defense the Army, conducted a 140-Km range, multi-domain, GMLRS improvement program.
Jun - 2017	The Army Acquisition Executive approved ER GMLRS as a modification program memorandum.

Jun - 2017	The GMLRS/GMLRS AW program experienced breaches in RDT&E costs and PAUC as the result of additional Army funding in FY 2018 through FY 2022 to support modification and testing of the ER GMLRS. A PDR submitted to the MDA.
Dec - 2016	GMLRS AW approved for Full Materiel Release.
May - 2015	The GMLRS AW program successfully completed the combined Milestone C and FRP Decision Review on April 8, 2015. The GMLRS AW Cost Position approved on April 15, 2015. The ADM to enter into Production and Deployment and begin FRP and the revised APB approved by the AAE on May 20, 2015.
Dec - 2014	The GMLRS AW program successfully completed all testing for the EMD phase, and IOT&E completed. The reliability assessed at 0.97 for IOT&E and an overall reliability of 0.99 for EMD. This exceeds the CDD requirement of 0.95.
Feb - 2012	Milestone B Decision Review executed, approving entry into EMD.
Apr - 2011	The GMLRS AW Sole Source J&A for the EMD Contract to Lockheed Martin Missiles and Fire Control-Dallas (LMMFC-D) approved by the AAE.
Feb - 2011	GMLRS RDT&E funding increase caused a Total RDT&E cost breach. The increase funded technological enhancements to the GMLRS Unitary based on emerging requirements currently in the Joint Capabilities Integration Development System process. Future increments of GMLRS will utilize these enhancements to further reduce collateral damage and expand target options for the Warfighter.
Feb - 2010	The GMLRS class Justification & Approval (J&A) approved, for the procurement of continued FRP of the GMLRS Unitary for FY 2010 through FY 2012.
Dec - 2009	The GMLRS DPICM program completed its last production.
Sep - 2009	AAE granted GMLRS AW approved to enter into the Technology Development at Milestone A.
Dec - 2008	GMLRS Unitary FRP Decision approved and IOC was achieved.
Jun - 2008	A GMLRS AW Directed Requirement Memorandum signed by the Army Deputy Chief of Staff for Operations, Plans and Training validating the requirement for GMLRS AW.
May - 2007	GMLRS Unitary Milestone C and LRIP Decision ADM approved the Acquisition Strategy and APB.
Apr - 2007	The GMLRS program successfully obtained Nunn-McCurdy Certification, the DAE signed an ADM approving the continuation of the restructured GMLRS program as ACAT IC. The DAE directed GMLRS to restructure the program to Buy-to-additional rocket quantities as can be afforded in each year, FY 2008 through FY 2013. The DAE further instructed the PM actively pursue the potential for a multi-year procurement strategy beginning with Full Rate Production.
Feb - 2007	The PEO Missiles and Space submitted a Program Deviation Report (PDR) to the MDA, provided notification that the GMLRS program anticipates a critical Nunn -McCurdy unit cost breach. Consequently, the GMLRS program completed an intense review by a certification team composed of five separate Integrated Product Teams.
Jan - 2007	Title 10, U.S. Code, requirement for Insensitive Munition (IM) compliant. JROC approved IM waiver for FY 2007 through FY 2008. GMLRS program incorporated the development and procurement of an IM Warhead for Unitary and investigated other IM related improvements. The GMLRS program submitted an IM Plan of Action and Milestones and a request for IM waiver as part of the PEO Missiles and Space IM Strategic Plan.
Sep - 2006	Deliveries of GMLRS Urgent Materiel Release (UMR) Unitary rockets began. Deliveries in response to a second request received from U.S. Central Command for additional UMR Unitary rockets for use in theater.

Sep - 2005	The first combat fire mission was conducted using GMLRS Unitary rockets against enemy positions in Iraq. At a distance of greater than 50 Km, eight rockets fired, destroying insurgent strongholds and killing enemy insurgents. Collateral damage to adjacent structures was minimal.
Jun - 2005	The Test and Evaluation Master Plan (TEMP) supporting the GMLRS DPICM Full Rate Production Decision, approved by the Director of Operational Test and Evaluation.
Mar - 2004	The GMLRS Unitary Test and Evaluation Master Plan was approved.
Nov - 2003	The JROC Memorandum published and accepted the Army's proposed change to the threshold average hazardous dud rate for sub-munitions. The change amends performance requirements for ranges between 20-60 kilometers (Km) to less than 2 percent with an objective of 0 percent. The threshold average hazardous dud rate must be less than 4 percent with an objective of 0 percent for ranges between 15-20 kilometers (Km) and 60-70 Km.
Mar - 2003	Army System Acquisition Review Council approved entry into LRIP for GMLRS DPICM and entry into System Development and Demonstration for GMLRS Unitary and Acquisition Decision Memorandum signed.
Dec - 2002	The GMLRS program was re-designated ACAT IC.
Dec - 2001	A special Army Systems Acquisition Review Council (ASARC) was held, during which the Acting Army Acquisition Executive (AAE) and the Vice Chief of Staff of the Army reviewed the Nunn-McCurdy Unit Cost breach and initiated Secretary of Defense certification procedures.
Nov - 2000	The GMLRS program restructured due to development problems experienced by the previous guidance set subcontractor
Sep - 1998	A Memorandum of Understanding was finalized between the U.S., United Kingdom, Ireland, Germany, France and Italy, which resulted in a November 1998 EMD contract award for the international development program to produce a common product with sharing and minimizing costs and risks
Jun - 1998	Milestone II Decision Review executed, approving GMLRS Dual Purpose Improved Conventional Munition (DPICM) entry into EMD.

Schedule

GMLRS/GMLRS AW

Events	Milestone Baseline Objective	Current Baseline Objective/Threshold		Current Estimate/Actual	Deviation
GMLRS Milestone II EMD Complete	Mar 1998	Mar 1998	Sep 1998	Jul 1998	
DPICM-Milestone C (1)	Mar 2003	Mar 2003	Sep 2003	Mar 2003	
DPICM-Full Rate Production Decision (1)	Mar 2005	Jun 2005	Dec 2005	Jun 2005	
DPICM-Initial Operational Capability (1)	Nov 2006	Dec 2005	Jun 2006	Dec 2005	
UNITARY-Milestone B (1)	Mar 2003	Mar 2003	Sep 2003	Mar 2003	
UNITARY-Milestone C (2)	Sep 2006	May 2007	Nov 2007	May 2007	
UNITARY-Full Rate Production Decision (2)	Sep 2008	Sep 2008	Mar 2009	Dec 2008	
UNITARY-Initial Operational Capability (2)	Mar 2008	Aug 2008	Feb 2009	Dec 2008	

Alternative Warhead-Milestone B (2)		Dec 2011	Jun 2012	Feb 2012	
Alternative Warhead-Milestone C (3)		May 2015	May 2015	May 2015	
Alternative Warhead-Full Rate Production Decision (3)		May 2015	May 2015	May 2015	
Alternative Warhead-Initial Operational Capability (3)		Dec 2016	Jun 2017	Nov 2016	

Notes

FRP 14 deliveries delayed due to delay of IMPS motors (corrosion detected on metal structure) from a subcontractor causing a overlapping of deliveries. Deliveries completed April 18, 2022.

Standard Range GMLRS Enhanced AW Warhead Dev./Qual. AMTC took longer to award contract.

Extended Range GMLRS Enhanced AW Qual. Effort not funded pushed back to FY24-28 POM.

FRP 15 - Deliveries in progress; end of delivery period moved to left from April 2023 to December 2022 by overlapping FRP 14 and 15 deliveries.

Deviation Explanation

No deviations for this program/subprogram

Performance

GMLRS/GMLRS AW

Performance Characteristics					
Milestone Baseline	Current Baseline Objective/Threshold	Demonstrated Performance	Current Estimate/Actual	Deviation	
(APA)DPICM - (Expected Fractional Damage [EFD])					
	30%	0.3	Meets objective	0.3	
(KPP)UNITARY - Effectiveness (1)					
	30%	Functional Kill	Meets Threshold	0.3	
(KPP)Alternative Warhead - Effectiveness (2)					
	30%	Functional Kill	Meets Threshold	Meets Threshold	
(KPP)DPICM - Hazardous Dud Rate (1)					
	0%	2%/4%	Does not meet threshold	1.71%/3.75%	
(KPP)Alternative Warhead - Hazardous Dud Rate (2)					
	0%	<1%	Meets Objective	0	
(APA)DPICM - Max (Km) (1)					
	70	60	Exceeds Objective	70	
(APA)UNITARY - Max (Km) (2)					
	70	60	Exceeds Threshold	70	
(APA)Alternative Warhead - Max (Km) (3)					
	70	60	70 Meets Objective	70	
(APA)DPICM - Min (Km) (1)					
	10	15	Meets Objective	10	
(APA)UNITARY - Min (Km) (2)					
	10	15	Meets Threshold	15	
(APA)Alternative Warhead - Min (Km) (3)					
	10	15	Meets Threshold	15	
(KPP)DPICM - Reliability (1)					
	.95	0.92	Does not meet threshold	0.89	
(KPP)UNITARY - Reliability (2)					
	.95	0.92	Meets Threshold	0.93	
(KPP)Alternative Warhead - Reliability (3)					
	.95	0.92	Exceeds Threshold	0.99	

Requirement Reference

ORD dated November 14, 2003 (includes Dual Purpose Improved Conventional Munitions), Multiple Launch Rocket System Guided Unitary Rocket ORD dated May 16, 2007 (in lieu of CPD), and GMLRS System Alternative Warhead Increment III CDD dated November 8, 2011

Deviation Explanation

No deviations for this program/subprogram

Notes

GMLRS DPICM is NOT coded as a breach since it has been out of production since 2005. The ten year shelf-life has been extended to 18 years. Remaining GMLRS DPICM rockets have been transferred to Condition Code N (For Emergency Wartime Use Only). COCOM Commanders have been briefed and accept GMLRS DPICM degraded reliability. The GMLRS Reliability Working Group Testing completed reliability Testing July 13, 2022. The GMLRS DPICM Demonstrated Performance in Reliability is 0.89. The GMLRS Reliability Working Group conducted a GMLRS DPICM Reliability Scoring Conference on July 13, 2022. The GMLRS DPICM Reliability was assessed at 0.89 (155 Flight Success / 175 Flight Attempts). The GMLRS Unitary Demonstrated Performance in Reliability is 0.93. The GMLRS Reliability Working Group conducted a GMLRS Unitary Reliability Scoring Conference on July 13, 2022. The GMLRS Unitary Reliability was assessed at 0.93 (195 Flight Success / 210 Flight Attempts). The GMLRS AW Demonstrated Performance in Reliability is 0.99. The GMLRS Reliability Working Group conducted a GMLRS AW Reliability Scoring Conference on July 13, 2022. The GMLRS AW Reliability was assessed at 0.99 (105 Flight Success / 106 Flight Attempts). GMLRS AW CDD in lieu of CPD update approved June 27, 2018 (JROCM 068-18), to increase Maximum (Objective) Range KPP from 70Km to 200Km in support of Extended Range GMLRS and includes all variants of the GMLRS Family of Munitions.

Acquisition Budget Estimate

GMLRS/GMLRS AW

Total Acquisition Cost

		Milestone APB	Current Baseline		Budget Estimate PB 2024		
Category	Base Year	Objective (BY\$M)	Objective (BY\$M)	Threshold (BY\$M)	BY\$M	TY\$M	Deviation
RDT&E	2003	485.4	826.7	909.4	1,231.8	1,555.4	Yes
Procurement	2003	9,294.8	4,367.1	4,803.8	10,845.5	15,921	Yes
MILCON	2003	0	0	0			
Acq. O&M	2003	0	0		19.5	30.5	
Total		9,780.2	5,193.8		12,096.8	17,506.9	
PAUC	2003	.070	.118	.130	.116	.168	
APUC	2003	.066	.100	.110	.104	.153	

Appropriation Category Deviation Explanations

RDT&E	In FY18, the GMLRS program experienced deviations to RDT&E cost due to additional funding to support modification and testing of the ER GMLRS program. Additionally, deviations to Procurement and O&S also occurred due to increased quantities. A Program Deviation Report dated February 12, 2018 was acknowledged by ASA(ALT) on April 13, 2018. An updated Army Cost Position (ACP) is being prepared to support an APB update in FY23.
Procurement	The GMLRS/GMLRS AW program experienced a deviation to Procurement baseline as a result of increased quantities. The RDT&E and Procurement cost deviations were previously reported in the December 2019 SAR. A Program Deviation Report dated February 12, 2018 was acknowledged by the Army Acquisition Executive on April 13, 2018. With ER GMLRS past Critical Design Review and Army G-3/5/7 guidance on inclusion of ER GMLRS in the FY 2028 Army TMR, an Army Integrated Product Team (IPT) has been formed to begin the process of developing a recommendation to the Army Acquisition Executive to revise the Acquisition Program Baseline (APB). The IPT held a kickoff meeting on December 15, 2021. The PMO has submitted a Cost Analysis Requirements Description to support Deputy Assistant Secretary of the Army (Cost & Economics) preparation of an Army Cost Position (ACP) to serve as the basis for the anticipated revision to the APB. The Cost Review Board Working Group is expected to complete development of the ACP in September 2022. The Program office anticipates an Acquisition Decision Memorandum (ADM) course of action to re-baseline the program following the deviations. The Cost Review Board scheduled to complete in September 2022.

PAUC Deviation Explanation**APUC Deviation Explanation****Budget Notes**

The following tranche funding will increase FY22 funding from \$862.7M to \$1130.5M, total increase \$267.8M, \$7.2M UKS2 Supplemental, \$6.2M UKS5 Supplemental, \$254.4M UKS6 Supplemental, \$267.8M Total Supplemental Funding Army Acquisition Executive approved Current APB, May 20, 2015. Revised Program Office Estimate is under development to support an updated Army Cost Position to support an update to the current APB.

Total End Item Quantity

Quantity Category	Current APB Quantity	Current Estimate Quantity
Development	376	437
Procurement	43560	104070
O&M-Acquired		

Quantity Notes

The Deputy Chief of Staff, G-8 rescinded the GMLRS Army Procurement Objective on November 16, 2018 and replaced it with the Army Total Munitions Requirement (TMR). The estimate for Procurement quantity therefore changes annually when the TMR is published. Based on the FY 2028 TMR, the combined GMLRS quantity has changed from 87,174 to 76,211 rockets updated quantities will be reflected in the GMLRS December 2022 SAR submission. The total quantity accounts for prior procurement of 2,472 GMLRS DPICM rockets not captured in the current TMR. RDTE - Revised 376 increase to 431 (55 estimated EAW)- due to increased emerging requirements.

Unit Cost**GMLRS/GMLRS AW**

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Category (\$M) Base Year:2003	Current UCR Baseline	Current Estimate	% Change
Program Acquisition Unit Cost			
Cost	5,193.8	12,096.8	
Quantity	43,936	104507	
Unit Cost	.118	.116	-1.91%
Average Procurement Unit Cost			
Cost	4,367.1	10,845.4	
Quantity	43,560	104,070	
Unit Cost	.100	.104	4.21%
Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Category (\$M) Base Year:2003	Original UCR Baseline	Current Estimate	% Change
Program Acquisition Unit Cost			
Cost	4,578.4	12,096.8	
Quantity	43,795	104507	
Unit Cost	.105	.116	10.24%
Average Procurement Unit Cost			
Cost	3,966.7	10,845.5	
Quantity	43,560	104,070	
Unit Cost	.091	.104	14.52%
Cost Growth Details			
Current Baseline PAUC Breach Explanation			
Current Baseline APUC Breach Explanation			
Original Baseline PAUC Breach Explanation			
Original Baseline APUC Breach Explanation			
Impacts of Schedule Changes on Unit Cost			
Impacts of Performance Changes on Unit Cost			
Actions Taken or Proposed to Control Future Cost Growth			

Risk and Sensitivity Analysis**GMLRS/GMLRS AW**

Risk and Sensitivity Analysis
Current Procurement Cost (December - 2022)
Revised Original Estimate (June - 2007)
<p>The GMLRS program successfully obtained its Nunn-McCurdy certification on April 26, 2007, when the DAE approved the ADM to restructure the GMLRS program as ACAT IC program. The DAE directed GMLRS to restructure the program to “buy-to-budget” additional rocket quantities as can be afforded each given year, FY 2008 through FY 2013. The majority of the Nunn-McCurdy breach is a direct result of fact-of-life decrements imposed on GMLRS. The GMLRS program experienced a 70% reduction in procurement quantities between the FY 2007 PB and the FY 2008 PB request. GMLRS FY 2007 PB funded 140,004 rockets (Army Acquisition Objective), while the FY 2008 PB request supports the acquisition of 43,560 systems (Acquisition Procurement Objective). After the certification there was a low to moderate risk. The Revised Original Estimate included the GMLRS Unitary production. The May 2, 2007 ADM for GMLRS Unitary Milestone C and LRIP approved the Acquisition Strategy and the APB. It further stated the program is fully funded and the GMLRS program costs are affordable throughout the life cycle.</p>
Current Baseline Estimate (May - 2015)
No risks are identified to the Current Baseline Estimate.

Schedule Risk		
Technical Risks		

Low Rate Initial Production

GMLRS/GMLRS AW

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	03/24/2003	01/07/2013
Approved Quantity	13,998	4,445
Reference	Milestone C ADM (DPICM)	Acquisition Strategy (AW)
Start Year	2003	2003
End Year	2005	2015

Rationale if quantity exceeds 10% of the total number of articles to be procured:

Notes

Contracts & Efforts

Contract Data	
Contract Number	W31P4Q-19-C-0065
Effort Number	3
Modification Number	P00033
Award Date	03/28/2019
Definitization Date	04/17/2020
Order Number	
CAGE Code/CAGE Legal Name 64059	Lockheed Martin Corporation
Contract Title	GMLRS Extended Range Phase 3
Contract Address	Grand Prairie, TX
Contracting Office	DoD - Department of Defense
Supported Phase	Development
Contract Strategy	FAR 15 (Negotiated)
Contract Type	Firm-Fixed-Price
Modification Date	May 17, 2022
Work Start Date	March 29, 2019
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TY\$M)

Initial Target Price	Current Target Price	
Initial Ceiling Price	Current Ceiling Price	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

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Contract Notes:

Contract Type(s): FFP GMLRS ER Phase 3 was definitized on April 17, 2020 for \$150.0M (FFP) with an Period of Performance (PoP) completion date of November 11, 2021 (The current schedule estimate shows the PoP completion in May 2022). Extended Range is a development effort and does not have delivery quantities. Production is expected to begin in FY23. Lockheed Martin agreed to a Corporate commitment to expend Capital and IRAD funds on the ER GMLRS effort. The majority of the remaining component qualification testing, and all the system level Engineering Development Testing (EDT), is IRAD funded and currently underway. As a result, the prime is not spending Army funds and the consequence is that RDTE funds disbursements are lagging OSD goals. P00016 was issued to add a partial FY21 funding increment of \$16M. Overall contract value does not change. Contract is funded to \$117,738,692. Cost proposal from Prime, for extension to November 2023, proposal to be delivered to the government August 5, 2021. Modification P00033 to Contract W31P4Q19C0065 incorporating a No Cost Extension until 31 August 2023.

Factors Contributing to Cost Variance and Projected Effects on Program Costs**Factors Contributing to Schedule Variance and Projected Effects on Program Schedule**

Contract Data	
Contract Number	W31P4Q-18-C-0049
Effort Number	2
Modification Number	P00087
Award Date	03/31/2020
Definitization Date	03/31/2020
Order Number	
CAGE Code/CAGE Legal Name	46059/Lockheed Martin Corporation
Contract Title	GMLRS FRP 15 Option 2
Contract Address	GRAND PRAIRIE, TX
Contracting Office	DoD - Department of Defense
Supported Phase	Production
Contract Strategy	FAR 15 (Negotiated)
Contract Type	Fixed-Price Incentive (Successive Targets)
Modification Date	April 28, 2022
Work Start Date	March 31, 2020
Technical Data Rights	
Work Completed	83.12%

Contracts/Effort Price, Quantity, and Performance (TY\$M)		
Initial Target Price	Current Target Price	
\$1,134.6	\$1,138.7	
Initial Ceiling Price	Current Ceiling Price	
\$1,177.2	\$1,181.5	
Contractor EAC	PM EAC	
\$966.4	\$921.7	
Initial Quantity	Current Quantity	Delivered Quantity
11100	11226	3258
BAC	BCWP	ACWP
\$968	\$804.6	\$763.8
BCWS	Cost Variance	Schedule Variance

\$904.1	\$40.8	-\$99.5
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Contract Notes:

Contract Type(s): FPIF/CPFF. W31P4Q-18-C-0049, Option 2; FRP 15 (Mod P00041) was awarded as an option and remains in general scope of the original contract, modification to the FRP 13 instrument for procurement of 9,246 tactical rockets and 1,800 RRPR, this requirement is in support of Army, USMC, Germany, Romania, Singapore and South Korea. POP Extension to October 31, 2022 Modification (P00082) executed 28 Jan 2022 extending delivery schedule to December 2022 as result of IMPS Motor delays on FRP 14. Modification (P00087) executed 28 Apr 2022 moving 432 GMLRS Rockets from Apr 2022 to December 2022 as a result of IMPS motors delays. Modification (P00093) executed 26 Jul 2022 to delay the delivery of 283 IMPS Pods from July 2022 to Oct 2022 as a result of IMPS Motor delays.

Factors Contributing to Cost Variance and Projected Effects on Program Costs**Factors Contributing to Schedule Variance and Projected Effects on Program Schedule**

Contract Data	
Contract Number	W31P4Q-21-D-0003
Effort Number	
Modification Number	P00011
Award Date	03/26/2021
Definitization Date	
Order Number	
CAGE Code/CAGE Legal Name	64059/Lockheed Martin Corporation
Contract Title	GMLRS FY 21 Production
Contract Address	Grand Prairie, TX
Contracting Office	DoD - Department of Defense
Supported Phase	Production
Contract Strategy	FAR 15 (Negotiated)
Contract Type	Firm-Fixed-Price
Modification Date	November 24, 2021
Work Start Date	December 15, 2022
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TYSM)		
Initial Target Price	Current Target Price	
Initial Ceiling Price	Current Ceiling Price	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

Contract Notes:

Contract Type(s):FFP. FRP 16 is named GMLRS FY21 Production and was awarded as a new contract on March 26, 2021. Addition of Germany Detent Kits GMLRS FY 2021 (FRP 16) is an IDIQ award which supports US Army GMLRS (5,796 rockets) and LCRRPR (2,022 rockets), and GMLRS rockets for USMC (1,176), Romania (324) and Germany (1,818) with procurement of 11,136 total tactical and training rockets. The contract provides a priced production option available for exercise to support the FY 2022 FRP requirements with multiple quantity points priced for added ordering flexibility.

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

Contract Data	
Contract Number	W31P4Q-21-D-0003
Effort Number	1
Modification Number	P00017
Award Date	03/31/2022
Definitization Date	
Order Number	W31P4Q-22-F-0098
CAGE Code/CAGE Legal Name	64059/LOCKHEED MARTIN
Contract Title	GMLRS FY22 Production
Contract Address	GRAND PRAIRIE, TX
Contracting Office	DoD - Department of Defense
Supported Phase	Production
Contract Strategy	FAR 15 (Negotiated)
Contract Type	Cost-Plus-Award-Fee
Modification Date	March 31, 2022
Work Start Date	February 13, 2023
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TYSM)		
Initial Target Price	Current Target Price	
\$918.3	\$918.3	
Initial Ceiling Price	Current Ceiling Price	
\$918.3	\$918.3	
Contractor EAC	PM EAC	
Initial Quantity	Current Quantity	Delivered Quantity
9288		
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

Contract Notes:

GMLRS FY22 Production (FRP 17) Delivery Order was awarded March 2022 for 6,792 GMLRS and 2,496 Training Rockets. The contract was awarded as an Undefined Contract Action (UCA) with a Not to Exceed (NTE) value of \$918.3M. The Delivery Order was definitized on 30 June 2022 for \$916.6M. GMLRS rockets support USMC, Romania, Taiwan, Singapore and Jordan with procurement of 9,288 total tactical and training rockets.

Factors Contributing to Cost Variance and Projected Effects on Program Costs**Factors Contributing to Schedule Variance and Projected Effects on Program Schedule**

Contract Data	
Contract Number	W9124P-19-9-0001
Effort Number	
Modification Number	4
Award Date	04/29/2021
Definitization Date	
Order Number	
CAGE Code/CAGE Legal Name	4CUP1/KORD Technologies, LLC
Contract Title	GMLRS Enhanced Lethality Alternative Warhead
Contract Address	HUNTSVILLE, AL
Contracting Office	
Supported Phase	Development
Contract Strategy	10 USC 2371b (OTA)
Contract Type	Cost-Plus-Fixed-Fee
Modification Date	August 13, 2021
Work Start Date	April 29, 2021
Technical Data Rights	
Work Completed	

Contracts/Effort Price, Quantity, and Performance (TYSM)		
Initial Target Price	Current Target Price	
Initial Ceiling Price	Current Ceiling Price	
\$78.9		
Contractor EAC	PM EAC	
\$78.9	\$78.9	
Initial Quantity	Current Quantity	Delivered Quantity
BAC	BCWP	ACWP
BCWS	Cost Variance	Schedule Variance

Contract Notes:

Contract Type(s): CPFF. GMLRS Enhanced Alternative Warhead (EAW) was awarded April 29, 2021 as an OTA, CPFF contract with a \$78.9M budget. The contractor will provide program, requirements, risk, integration, and production management and work alongside subcontractors to perform studies, analysis, and development of the GMLRS Enhance Alternative Warhead (EAW) for existing AW target sets and expanded target sets. The contractor will then work to integrate the new warhead, Electronic Safe Arm Fuze (ESAF), and Side-Mounted Proximity Sensor (SMPS) solutions into existing M30A2 rocket and qualify those components for future use in the XM403 Extended Range GMLRS (ERG) rocket. Qualification testing will be performed using the M30A2 GMLRS missile system as a baseline. This is a prototype project because the contractor will develop a physical and virtual model of GMLRS EAW to evaluate the technical feasibility, manufacturing feasibility, and military utility of enhanced lethality capabilities of GMLRS AW.

Factors Contributing to Cost Variance and Projected Effects on Program Costs**Factors Contributing to Schedule Variance and Projected Effects on Program Schedule**

External Government Activities

Activity Title		Government Entity		Supported Phase
CAGE		Work Start Date		
City		State/Province:		
Notes				

Deliveries and Expenditures**GMLRS/GMLRS AW**

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	401	400	437	91.53%
Production	52,113	46,468	104,070	44.65%
Total Program Quantity Delivered	52514	46,868	104,507	44.85%

Expended and Appropriated (TY \$M)

Years Appropriated to date: 25

Total Years Appropriated Funding (Current Baseline): 9,773.139

Percent Years Appropriated: 0.26%

Then-Year Funding Appropriated as Percentage of Total Acquisition Estimate: 56.10%

Then-Year Funding Expended as Percentage of Total Acquisition Estimate: 40.31%

Total Acquisition Cost: 17,506.9

Deliveries & Expenditures Notes:

Operating and Support Costs

GMLRS/GMLRS AW

O&S Cost Breakdown:

Category (BY\$ Million)	GMLRS/AW
Unit-Level Manpower	
Unit Operations	4.4
Maintenance	290.6
Sustaining Support	443.6
Continued System Improvements	29.8
Other	
Total	768.4

Cost Estimate Source:

Approved by: Center for Army Analysis, July 31, 2018

O&S Cost Notes:

Total Program O&S Cost Compared with Baseline					
	Current Baseline				
	Objective (BY\$M)	Threshold (BY\$M)	Current Estimate (BY\$M)	Current Estimate (TY\$M)	Deviation
Total O&S	204.8	225.3	768.4	768.4	

Note:

Total O&S Cost = Average Annual Cost per Rocket Pod x Number of Rocket Pods (6 rockets per pod) x Life per Rocket Pod = \$1.7721K x 17,345 Rocket Pods x 25 years = \$768.4 (BY2003 \$M). The total O&S Cost deviation was initially reported in the December 2017 SAR and is due to an increase in quantities from 43,560 to 104,070 to support the Total Munitions Requirements.

O&S Cost Deviation Explanation

Significant cost growth to O&S has occurred due to changes made during CRBWG. SRP was previously funded using PROC dollars until 2 years after production of that variant ended. SRP now shown in OMA even for variants that remain in production. In addition, assumption for shelf life has been increased to 25 years. This creates higher levels of inventory that are sustained for a longer period of time.

Operating and Support Costs - Disposal and Unitized Costs**GMLRS/GMLRS AW****Annual Unitized O&S Cost Definition and Calculation Relative to Total O&S Cost:**

Sustainment Factors	System Name: GMLRS	Antecedent System Name:
Quantity to Sustain	104,070	
Unit of Measure	Rockets	
Unit Expected Service Life	25	

Base Year:

Annual Unitized O&S Cost by Category Base Year \$ Unit:(\$M)	System Name: GMLRS	Antecedent System Name:
Unit-Level Manpower	0.0	
Unit Operations	0.0	
Maintenance	0.7	
Sustaining Support	0.9	
Continued System Improvements	0.1	
Other	0.0	
Total O&S	1.6	0.0

Disposal/Demilitarization Cost Estimate

(Base Year \$Millions)	System Name: DIPICM	System Name: UNITARY	System Name:GMLRS AW
Total Disposal	3.3	45.3	82.1

Cost Estimate Source - Disposal	
Type:	Program Office Estimate
Approval Authority and Date:	COL Guy Yelverton 02/06/2023
Note:	
None	
Disposal Cost Notes:	
None	
Additional O&S Estimate Assumptions:	

Sustainment Strategy:
Antecedent Estimate Assumptions: