

**CLEARED
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Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

Selected Acquisition Report (SAR)



Next Generation Jammer Low Band (NGJ Low Band)

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

Next Generation Jammer Low Band (NGJ LB)

DoD Component

Navy

Responsible Office

Program Manager

Name: CAPT David J. Rueter

Phone: 301-757-7994

Email: david.j.rueter.mil@us.navy.mil

Mission and Description

Next Generation Jammer Low Band (INC 2) (NGJ Low Band) addresses Airborne Electronic Attack (AEA) capability and sufficiency gaps against enemy threats operating in the lower frequency bands of the electromagnetic spectrum and increases survivability and lethality of 4th and 5th generation platforms and strike weapons. NGJ Low Band will provide the ability to effectively engage enemy threats from increased stand-off distances, employ increased capacity (number of jamming assignments) against enemy targets, and support agile employment by operators. NGJ Low Band will augment and ultimately replace the legacy AN/ALQ-99 Tactical Jamming System in the low frequency spectrum. Operating in concert with the EA-18G's electronic receiver and through the aircraft's on-board mission computers, NGJ is designed to provide EA capability when employed in an independent, standoff, modified escort, and escort role. NGJ Low Band is designed to be a single pod mounted on the EA-18G's center station (station 6).

Executive Summary

NGJ Low Band

Program Highlights Since Last Report

In December 2020, the Assistant Secretary of the Navy (Research, Development, and Acquisition) (ASN(RD&A)) signed the Milestone B ADM for the Next Generation Jammer Low Band (NGJ LB) program authorizing entry into the EMD phase as an ACAT IB program and approved an LRIP quantity of up to 45 shipsets. The EMD contract was awarded in December 2020. This award was subsequently followed by two protest periods to the Government Accounting Office (GAO), followed by a third protest period to the Court Of Federal Claims (COFC). The COFC issued an oral decision on April 8 2022 and enjoined the Department of Navy (DoN) from executing the awarded contract. Negotiations between the parties and the Department of Justice ensued, resulting in a stipulation agreement by all parties on June 10 2022. The stipulation agreement included the direction from the COFC to terminate the original contract for the convenience of the government and re-open discussions after an Independent Review Team (IRT) reviewed the NGJ LB Request for Proposals (RFP) and specification to ensure they accurately reflected the DoN's requirements. A program deviation report for a schedule deviation was submitted to the MDA. A revised APB will be submitted for approval when closer to finalizing the contract award.

Status: NGJ LB RDT&E was Congressionally marked in FY 2023 for "primary hardware development delay due to EMD protest" (-\$146.350M) and "systems engineering excess to need due to EMD protest" (-\$19.920M). The NGJ LB Modular Open Systems Architecture approach requires the Prime Contractor to develop and comply with a Government-approved Open System Management Plan, to include identification of Commercial-Off-the-Shelf/Non-development Item components, their functionality and proposed use in the system, and provide copies of license agreements related to the use of these components for Government approval prior to use.

There are no known 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
Jun 2022	Independent Review Team (IRT) chartered per stipulation agreement
Jun 2022	Stipulation Agreement between the DoN and EMD contract offerors
Apr 2022	COFC enjoined the Navy from moving forward with the current EMD award
Oct 2021	Protest to the COFC
May 2021	Second EMD contract protest filed with GAO
May 2021	EMD contract stop work lifted
May 2021	Second EMD contract stop work put in place
Feb 2021	Initial protest submitted to the GAO; stop work order initiated
Dec 2020	EMD Contract award
Dec 2020	NGJ Low Band program received Milestone B approval to enter EMD

Schedule

NGJ Low Band

Events	Milestone Baseline Objective	Current Baseline Objective/Threshold		Current Estimate/Actual	Deviation
Milestone B	Dec 2020	Dec 2020	Jun 2021	8 Dec 2020	
Critical Design Review	Oct 2021	Oct 2021	Oct 2022		
Milestone C	Aug 2026	Aug 2026	Aug 2027		
Operational Test Readiness Review	Sep 2028	Sep 2028	Sep 2029		
Initial Operational Test & Evaluation	Oct 2028	Oct 2028	Jun 2029		
Initial Operational Capability	Jul 2029	Jul 2029	Jan 2030		
Full Rate Production	Jun 2030	Jun 2030	Dec 2030		

Notes

A revised APB will be submitted for approval when closer to finalizing the contract award.

Deviation Explanation

Performance

NGJ Low Band

Performance Characteristics				
Milestone Baseline	Current Baseline Objective/Threshold	Demonstrated Performance	Current Estimate/Actual	Deviation
(KPP) - Material Availability (Am): Am is a measure of the percentage of the total inventory of the NGJ systems operationally capable of performing an assigned mission at a given time, based on material condition.				
	This data has been marked as CUI and has been removed	This data has been marked as CUI and has been removed		TBD
(KPP) - Operational Availability (Ao): Ao is the percentage of time an operationally assigned system is available for operational use.				
	This data has been marked as CUI and has been removed	This data has been marked as CUI and has been removed		TBD

Requirement Reference

Capability Development Document dated August 11, 2015

Deviation Explanation

No deviations for this program/subprogram

Notes

None

Acquisition Budget Estimate

NGJ Low Band

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	2020	2,046.4	2,046.4	2,251	2,056.2	2,545.5	
Procurement	2020	2,070	2,070	2,277	1,956.5	2,950.7	
MILCON	2020	0	0	0			
Acq. O&M	2020	0	0	0			
Total		4,116.4	4,116.4		4,012.7	5,496.2	
PAUC	2020	30.492	30.492	33.541	29.724	40.712	
APUC	2020	15.333	15.333	16.866	14.493	21.857	

Appropriation Category Deviation Explanations

PAUC Deviation Explanation

APUC Deviation Explanation

Budget Notes

Total End Item Quantity

Quantity Category	Current APB Quantity	Current Estimate Quantity
Development	0	0
Procurement	135	135
O&M-Acquired		

Quantity Notes

Unit Cost

NGJ Low Band

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Category (\$M) Base Year:2020	Current UCR Baseline	Current Estimate	% Change
Program Acquisition Unit Cost			
Cost	4,116.4	4,012.7	
Quantity	135	135	
Unit Cost	30.492	29.724	-2.52%
Average Procurement Unit Cost			
Cost	2,070.0	1,956.5	
Quantity	135	135	
Unit Cost	15.333	14.493	-5.48%
Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Category (\$M) Base Year:2020	Original UCR Baseline	Current Estimate	% Change
Program Acquisition Unit Cost			
Cost	4,116.4	4,012.7	
Quantity	135	135	
Unit Cost	30.492	29.724	-2.52%
Average Procurement Unit Cost			
Cost	2,070.0	1,956.5	
Quantity	135	135	
Unit Cost	15.333	14.493	-5.48%
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

NGJ Low Band

Risk and Sensitivity Analysis	
Current Procurement Cost(December - 2022)	No change
Original Baseline Estimate (December - 2020)	
Current Baseline Estimate (December - 2020)	None

Original Baseline Estimate (December 2020)

After review of the programmatic and technical baseline at Milestone B, the MDA directed the NGJ Low Band program to use the SCP as the funding requirement. The OSD CAPE performed an ICE, which independently validated the SCP. Despite using different methodologies, both estimates were well within the bounds of estimating error both in total and for each individual phase of the life cycle cost estimate. The development estimate will be sensitive to software, transmitter group and Controller-Receiver-Exciter (CRE) design, and engineering design module asset procurement. The production estimate was determined to be highly sensitive to the technical inputs associated with the transmitter group CRE cost. The transmitter group and CRE costs were estimated based on analogies to NGJ Mid-Band with program specific adjustments for complexity. The Learn and Rate curves were based on analysis of historical production data.

Schedule Risk		
Other	2023-12-31	Full impact of the protest periods on the EMD contract will be determined after the COFC proceedings and associated stipulation actions.
Technical Risks		

Low Rate Initial Production**NGJ Low Band**

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	12/08/2020	12/08/2020
Approved Quantity	45	45
Reference	NGJ Low Band Navy Milestone B ADM	NGJ Low Band Navy Milestone B ADM
Start Year		
End Year		

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

The Current Total LRIP Quantity is more than 10% of the total production quantity in order to provide production representative NGJ Low Band systems in support of IOT&E, ensure adequate and efficient manufacturing capability while maintaining the industrial base, and permit an orderly increase, and hence reduced risk, in the NGJ Low Band production rate leading to the current planned maximum/optimal economic production rate.

Notes

Contracts & Efforts

Contract Data	
Contract Number	N00019-21-C-0021
Effort Number	1
Modification Number	
Award Date	12/18/2020
Definitization Date	12/18/2020
Order Number	
CAGE Code/CAGE Legal Name	06401/L3 Technologies, INC Communication Systems-West
Contract Title	EMD Operational Prototype
Contract Address	Salt Lake City, UT
Contracting Office	NAVAIR
Supported Phase	Development
Contract Strategy	FAR 15 (Negotiated)
Contract Type	Cost-Plus-Incentive-Fee
Modification Date	
Work Start Date	
Technical Data Rights	Unlimited Rights to Technical Data--Noncommercial Items & Software
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 is terminated for the convenience of the government. This will be the last SAR report to include this contract.

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**NGJ Low Band**

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Developmen			0	0.00%
t Production			135	0.00%
<hr/>				
Total Program Quantity Delivered	0	0	135	0.00%

Expended and Appropriated (TY \$M)				
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Years Appropriated to date: 8

Total Years Appropriated Funding (Current Baseline): 25

Percent Years Appropriated: 32.00%

Then-Year Funding Appropriated as Percentage of Total Acquisition Estimate: 9.800%

Then-Year Funding Expended as Percentage of Total Acquisition Estimate: 6.400%

Total Acquisition Cost: 5,496.18

Deliveries & Expenditures Notes: This data is current as of March 13, 2023

Operating and Support Costs

NGJ Low Band

O&S Cost Breakdown:

Category (BY\$ Million)	NGJ Low Band
Unit-Level Manpower	.0
Unit Operations	.0
Maintenance	430.0
Sustaining Support	257.2
Continued System Improvements	242.3
Other	
Total	929.5

Cost Estimate Source: CCP dated November 23, 2020

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	934	1,027.4	929.5	1,409.0	

Note:

O&S Cost Deviation Explanation

Operating and Support Costs - Disposal and Unitized Costs**NGJ Low Band****Annual Unitized O&S Cost Definition and Calculation Relative to Total O&S Cost:**

Sustainment Factors	System Name: Next Generation Jammer Low Band	Antecedent System Name: ALQ-99
Quantity to Sustain	135	
Unit of Measure	Shipset, consists of 1 pod	
Unit Expected Service Life	20	

Base Year:

Annual Unitized O&S Cost by Category Base Year \$ Unit:(\$M)	System Name: Next Generation Jammer Low Band	Antecedent System Name: ALQ-99
Unit-Level Manpower	0.0	
Unit Operations	0.0	
Maintenance	0.3	
Sustaining Support	0.2	
Continued System Improvements	0.2	
Other	0.0	
Total O&S	0.7	0.0

Disposal/Demilitarization Cost Estimate

(Base Year \$Millions)	System Name: Next Generation Jammer Low Band	Antecedent System Name: ALQ-99
Total Disposal	\$2.0	

Cost Estimate Source - Disposal	
Type:	Component Cost Position
Approval Authority and Date:	DASN(APB), DASN(Budget) 11/23/2020
Note:	
Disposal Cost Notes:	
Disposal/Demilitarization costs projected to be \$2.0M CY 2020\$ (\$4.1M TY\$). Source of estimate is CCE.	
Additional O&S Estimate Assumptions:	

Sustainment Strategy:

- Developmental Support Strategy utilizes Contractor Logistics Support (CLS) for on-site test support, spares, and repairs and initiates a Public-Private Partnership at contract award between the Contractor and Naval Surface Warfare Center (NSWC) Crane to develop and maintain the product support package through the completion of IOT&E.
- Interim Support Strategy consists of O- Level to Original Equipment Manufacturer (OEM) support, as well as material and services through Captains of Industry (COI) support, and early provisioning from the completion of IOT&E through IOC plus four (4) years.
- Long Term Support Strategy is transitioning into three-level Organic maintenance capability and utilizing a variety of Performance Based Acquisitions (PBAs) supported by analysis.
- Unit of measure (system) is defined as a shipset, which consists of 1 pod

Antecedent Estimate Assumptions:

- Antecedent program: ALQ-99 Tactical Jamming System
- The dataset used in the antecedent costs below are reported FY 2008 costs, which are most representative of steady state prior to de-commissioning EA-6B squadrons.
- The dataset includes data from the ALQ-99 system, which covers a larger frequency spectrum than the NGJ Low-Band system, and is not normalized to specific low-band data.
- Due to data limitations, the antecedent is represented in dollars per aircraft operating years based on Primary Aircraft Authorization.
- Data sources: Decision Knowledge Programming for Logistics Analysis and Technical Evaluation, Naval Visibility and Management of Operating and Support Costs database, and various technical sources, including Naval Air Systems Command AIR 4.2.2, Naval Air Warfare Center Weapons Division Point Mugu, Naval Sea Systems Command Crane, and Center for Naval Aviation Technical Training.