Modernized Selected Acquisition Report (MSAR)

Next Generation Jammer Mid-Band (NGJ Mid-Band)

FY 2025 President's Budget

Effective: December 31, 2023

Defense Acquisition Visibility Environment

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(U) Common DoD 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
APA	Additional Performance Attribute
APB	Acquisition Program Baseline
APPN	Appropriation
APUC	Average Procurement Unit Cost
BA	Budget Authority or Budget Activity
Blk	Block
BY	Base Year
CAE	Component Acquisition Executive
CAPE	Cost Assessment and Program Evaluation
CARD	Cost Analysis Requirements Description
CCE	Component Cost Estimate
CCP	Component Cost Position
CDD	Capability Development Document
CLIN	Contract Line Item Number
CPD	Capability Production Document
CY	Calendar Year or Constant Year
DAB	Defense Acquisition Board
DAE	Defense Acquisition Executive
DAES	Defense Acquisition Executive Summary
DAVE	Defense Acquisition Visibility Environment
DoD	Department of Defense
DSN	Defense Switched Network
EMD	Engineering and Manufacturing Development
EVM	Earned Value Management
FD	Full Deployment
FDD	Full-Deployment Decision
FMS	Foreign Military Sales
FOC	Full Operational Capability
FRP	Full-Rate Production
FY	Fiscal Year
FYDP	Future Years Defense Program
ICD	Initial Capabilities Document
ICE	Independent Cost Estimate
Inc	Increment
IOC	Initial Operational Capability
IT	Information Technology
JROC	Joint Requirements Oversight Council
KPP	Key Performance Parameter
KSA	Key System Attribute

LRIP	Low-Rate Initial Production
MDA	Milestone Decision Authority
MDAP	Major Defense Acquisition Program
MILCON	Military Construction
N/A	Not Applicable
O	Objective
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
R&MF	Revolving and Management Funds
RDT&E	Research, Development, Test, and Evaluation
SAR	Selected Acquisition Report
SCP	Service Cost Position
T	Threshold
TBD	To Be Determined
TY	Then Year
U.S.	United States
U.S.C	United States Code
UCR	Unit Cost Reporting
USD(A&S)	Under Secretary of Defense (Acquisition and Sustainment)

(U) Program Description

Full Name
Next Generation Jammer Mid-Band

Short Name
NGJ Mid-Band

PNO
445

Milestone Decision Authority
Component Acquisition Executive

Lead Component
Department of the Navy

Program Executive Office
PEO Tactical Air

Joint Program
No

International Partners
Australia

Adaptive Acquisition Pathway
Major Capability Acquisition

Acquisition Type
Major Defense Acquisition Program

Acquisition Category
IC

Acquired Systems
NGJ Mid-Band

Acquisition Status
Active Acquisition

Mission
The Next Generation Jammer Mid-Band (NGJ Mid-Band) program is an electronic attack system that will provide significantly improved Airborne Electronic Attack (AEA) capabilities against advanced threats in the Mid-Band frequency range through enhanced agility and precision within jamming assignments, increased interoperability and expanded broadband capacity for greater threat coverage against a wide variety of radio frequency emitters. The Effective Isotropic Radiated Power (EIRP) in the NGJ Mid-Band system will be sufficient to provide robust jamming at standoff distances from Integrated Air Defense Systems (IADS) radars, communications, and data links. The NGJ Mid-Band system will augment and then replace the legacy AN/ALQ-99 Tactical Jamming System (fielded 1971) in the mid-band frequency range for the EA-18G, providing significantly improved radar and communication jamming performance as well as improved reliability and maintainability. The NGJ Mid-Band system will be required to engage sophisticated IADS and information operations (i.e., other electronic threat systems) in multiple areas of responsibility and across all phases of military operations. Threat operators and systems adapt and exploit available frequency ranges, employing techniques and tactics designed to confuse or otherwise defeat friendly AEA capabilities. In order to defeat these continuously evolving enemy radio frequency threats, the NGJ Mid-Band design must provide for sufficient EIRP to achieve threat systems engagement stand-off distances, support increased capacity (number of jamming assignments) as a result of increased threat density, and support agile employment by operators as well as provide a flexible system architecture that can be upgraded quickly to meet new mission demands.

(U) Responsible Office

Program Executive Officer
PEO Tactical Air
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Program Manager
Next Generation Jammer Mid-Band PMO
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(U) Executive Summary

Program Highlights Since Last Report

Since the last report, the NGJ Mid-Band program has completed the Operational Test Readiness Review (OTRR), fielded with the first fleet squadron (VAQ-133), and completed all hardware deliveries through LRIP I. Although the Operational Test (OT) Plan remains unsigned by the Director of Operational Test and Evaluation (DOT&E), data collection for OT is ongoing and nearly 700 flight hours were accrued by VX-9, the OT squadron, in 2023. A portion of OT has slid into the 2Q FY 2024 for Carrier Suitability and a live advanced Anti-Radiation Guided Missile shot. Clearing the full fight envelope was approximately 95% complete during 2023, with the remainder being for High Angle of Attack testing, which was delayed due to aircraft maintenance issues. IOC is expected to be declared in June 2024.

The program has assessed a schedule breach for IOC due to the failure to complete all OT events and a schedule breach for the FRP Decision Review due to the completion of the Beyond LRIP report. A CDD update removing the requirement to complete OT event prior to IOC declaration is with OPNAV for approval. The completion of the DOT&E Beyond LRIP report is paced by the Modeling and Simulation test results.

Improving system reliability remains the primary focus of the program. While below the requirement, hardware reliability is stable, and plans for improvement in production, hardware screening, and quality are underway. Software reliability issues with aircraft integration have been the primary degrader. During 2023, the program delivered 14 pod software builds in order to improve reliability and correct deficiencies. Mission planning issues were corrected and material defects with the Common Electronics Unit Radio Frequency cables were remedied.

The development contract was extended to complete the final items necessary for the first deployment of NGJ Mid-Band with VAQ-133 in the 4Q FY 2024. Additional software builds will be delivered to continue to improve reliability, and flight test support will continue to complete the noise and vibration testing that is necessary to support the fatigue life analysis of the system. Further, the program is on track to deliver a Liquid Cooling System Air Removal system that is intended for use in the Carrier environment.

The LRIP III contract was awarded in March 2023, and is the largest lot of NGJ Mid-Band systems to date, with 11 United States Navy (USN) and four (4) Royal Australian Air Force (RAAF) shipsets on contract. The contract also includes two (2) training pods. At the end of 2023, the government was waiting on the delivery of the Lot 4 (intended Full Rate Production Lot) proposal. This lot is for nine (9) USN and four (4) RAAF shipsets.

The first Engineering Change Proposal (ECP) for NGJ Mid-Band was started in 2023 as a risk reduction trade study. This ECP is for NGJ Mid-Band Extended (MBX). MBX is designed to increase the upper frequency limit of NGJ Mid-Band in order to counter modern and rapidly evolving threats. The Non-Recurring Engineering effort for MBX is expected to be awarded in the 4Q FY 2024.

Funding Status: FY24 Congressional marks are as follows:

- APN-5
- FY 2023 Rescission (-$4.673M)
- FY 2024 Support Equipment unjustified growth (-$5.024M)
- FY 2024 Contract Savings (-$2.520M)

Defense Cost and Resource Center Cost and Software Data Reporting (CSDR) Compliance Rating: Red Critical. At least one of the following CSDR deliverables is more than 12 months

overdue: 1 legacy cost report, 2 software reports. The program is working with Boeing to bring the CSDR reporting into compliance for the aircraft integration portion of the effort.
There are no significant software-related issues with this program at this time.

(U) History of Significant Developments Since Program Inception

Date	Description
August 2023	Initial Operational Capability Supportability Review (IOCSR) complete
August 2023	First fleet squadron manned, trained and equipped with NGJ Mid-Band
April 2023	OTRR complete.
March 2023	A sole source Fixed Price Incentive contract was awarded to The Raytheon Company for LRIP III. This contract includes the delivery of 11 USN and four RAAF shipsets, and includes two (2) training pods. One (1) each for USN and RAAF.
August 2022	First flight of production representative pods in a operationally representative environment
December 2021	LRIP II contract option was awarded for delivery of an additional five (5) shipsets.
July 2021	A 38-month sole source Fixed Price Incentive contract was awarded to The Raytheon Company for LRIP of the NGJ Mid-Band pods. This contract includes the delivery of three (3) LRIP I shipsets.
June 2021	The NGJ Mid-Band program received Milestone C approval to enter LRIP with an authorized End-Item Quantity of 17 for LRIP.
August 2020	First flight of NGJ Mid-Band pod on an EA-18G aircraft starts Developmental Flight Test program.
May 2020	NGJ Production, Sustainment, and Follow-On Development Memorandum of Understanding signed between United States and Australia, expanding partnership between the two countries on NGJ.
November 2019	A modification to the EMD contract was awarded to Raytheon for seven (7) System Demonstration Test Article shipsets (two (2) pods/shipset).
October 2017	Australia became a cooperative partner for NGJ Mid-Band development.
April 2017	Program completed Critical Design Review (CDR).
December 2016	A sole source Cost Plus Incentive Fee (CPIF) contract modification was awarded to The Boeing Company for the integration of the NGJ Mid-Band pod onto the EA-18G aircraft. This effort is in support of the EMD phase of the NGJ Mid-Band program and includes the design and manufacturing of 15 engineering change proposal 6472 A kits, and the integration, demonstration and test of NGJ Mid-Band pods on the EA-18G aircraft.
April 2016	The NGJ Mid-Band program received Milestone B approval to enter EMD.
April 2016	A 56-month sole source CPIF contract was awarded to The Raytheon Company for the EMD phase. During the performance of this contract, the NGJ Mid-Band program will conduct a CDR and begin delivery of 15 Engineering Development Models that will be used for initial testing.

(U) Schedule

(U) Schedule Events

Events		APB Change 2 (Milestone) 6/28/2021 Objective	APB Change 2 (Current) 6/28/2021 Objective / Threshold		Current Estimate 12/31/2023	Actual
Milestone A	MS A	Jul 2013	Jul 2013	Jan 2014	-	2 Jul 2013
Preliminary Design Review	PDR	Oct 2015	Oct 2015	Apr 2016	-	29 Oct 2015
Milestone B	MS B	Mar 2016	Mar 2016	Sept 2016	-	15 Apr 2016
Critical Design Review	CDR	Mar 2017	Mar 2017	Sept 2017	-	27 Apr 2017
Milestone C	MS C	Jun 2021	Jun 2021	Jun 2021	-	8 Jun 2021
Operational Test Readiness Review	IOT&E	Apr 2023	Apr 2023	Oct 2023	-	17 Apr 2023
Initial Operational Capability	IOC	Sept 2023	Sept 2023	Mar 2024	Jun 2024*	-
Full Rate Production Decision Review	FRP Decision	Nov 2023	Nov 2023	May 2024	Aug 2024*	-

* Baseline Deviation

Notes

None

Schedule Baseline Deviation Explanation

IOC estimate changed from September 2023 to June 2024 due to the completion of Operational Test data collection. FRP estimate changed from November 2023 to August 2024 to allow for thorough analysis of the test data for the Beyond LRIP report. The MDA was notified of a schedule deviation. A revised APB will be submitted for approval at FRP.

(U) Current Significant Schedule Risks and Risks Identified at Milestones/Decisions

Event	Date	Description
FRP	5/31/2024	The MDA has been notified of a schedule deviation.

(U) Performance

(U) Performance Attributes

Materiel Availability		KPP
Current Estimate 12/31/2023		>=.90
Demonstrated Performance -		-
APB Change 2 (Current) 6/28/2021	Objective	REDACTED
	Threshold	REDACTED
APB Change 2 (Milestone) 6/28/2021	Objective	REDACTED
Operational Availability		**KPP**
Current Estimate 12/31/2023		>=0.37
Demonstrated Performance -		-
APB Change 2 (Current) 6/28/2021	Objective	REDACTED
	Threshold	REDACTED
APB Change 2 (Milestone) 6/28/2021	Objective	REDACTED

(U) Requirement Source:

Sponsor(s): None

1. Document Type Not Provided
   Notes: Capability Development Document dated November 18, 2020

Notes

- Operational Availability remains low due to early failures discovered with new assets and software failures driven by integration issues with the EA-18G and Array Power Supplies. Quality issues are being addressed with the manufacturing facility and suppliers, with additional screening processes being put in place. Software corrections are currently in development and will be introduced before the completion of Initial Operational Test and Evaluation.
- Materiel Availability cannot be demonstrated until Materiel Support Decision, which is expected in FY 2027. Operational Availability will be demonstrated at the completion of operational test.

Performance Deviation Explanation

None

(U) Acquisition Budget Estimate

(U) Total Acquisition Estimates and Quantities

Category ($M) Base Year: 2016	APB Change 2 (Milestone) 6/28/2021 CY$ obs Objective	APB Change 2 (Current) 6/28/2021 CY$ obs Objective	APB Change 2 (Current) 6/28/2021 CY$ obs Threshold	Current Estimate PB 2025 CY$ obs	Current Estimate PB 2025 TY$ obs
RDT&E	3,899.9	3,899.9	4,289.9	3,915.3	4,234.4
Procurement	3,939.5	3,939.5	4,333.5	4,197.5	5,976.8
MILCON	7.1	7.1	7.8	6.7	7.9
O&M	0.0	0.0	0.0	-	-
R&MF	-	-	-	-	-
Total Acquisition	7,846.5	7,846.5	-	8,119.5	10,219.1
Program Acquisition Unit Cost	58.122	58.122	63.934	60.145	75.697
Average Procurement Unit Cost	30.539	30.539	33.593	32.539	46.332
Program End-Item Quantity					
Development	6	6		6	
Procurement	129	129		129	
O&M-Acquired	-	-		-	

Budget Notes

PB 2025 funding profile includes Next Generation Jammer Mid-Band Extended development beginning in FY 2024.

Quantity Notes

None

Cost Baseline Deviation Explanation

None

(U) Risk and Sensitivity Analysis

Current Procurement Estimate Risks (12/31/2023)	
1	After review of the programmatic and technical baseline at Milestone C, the MDA directed NGJ Mid-Band 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 production estimate was determined to be highly sensitive to the array cost. The array costs were estimated based on actual data from NGJ Mid-Band using Learn and Rate curves from historical production data.

2	During the negotiations of LRIP III contract there was a significant increase to price due to sub-vendor material cost, extended procurement times, and manpower rate increases. If price increases continue in future production lots, then NGJ Mid-Band shipsets unit price will increase, and individual lot quantities may have to be reduced, resulting in delayed fleet fielding.
Current Baseline Risks (6/28/2021)	
None	

(U) Unit Costs

(U) Current Estimate Compared with Current Baseline

Category (CY$M) Base Year: 2016	Current Baseline 06/28/2021	Current Estimate PB 2025	% Change
Program Acquisition Unit Cost			
Acquisition Cost	7,846.5	8,119.5	
Program Quantity	135	135	
PAUC	58.122	60.145	3.48%
Average Procurement Unit Cost			
Procurement Cost	3,939.5	4,197.5	
Procurement Quantity	129	129	
APUC	30.539	32.539	6.55%

(U) Current Estimate Compared with Original Baseline

An Original Cost Baseline and Acquisition Budget Estimate must be defined to display this comparison

Notes

None

(U) Life-Cycle Costs

(U) Operating and Support and Disposal Cost Estimates Compared with Baseline

Category ($M) Base Year: 2016	APB Change 2 (Milestone) 6/28/2021 CY$ obs Objective	APB Change 2 (Current) 6/28/2021 CY$ obs Objective / Threshold		Current Estimate CY$ obs / TY$ obs	
Total O&S	1,431.3	1,431.3	1,574.4	1,451.1	2,405.1
Total Disposal	-	-	-	2.3	4.9

(U) Current Cost Estimate Sources

Operating and Support Cost
Type: Component Cost Position
Approved by: DASN (AP&B), DASN Budget, May 26, 2021

Disposal/Demilitarization Cost
Type: No estimate. Not Applicable

Operating and Support Baseline Deviation Explanation

None

Cost Notes

ALQ-99 (Antecedent) Assumption Final Fiscal Year Operational is undetermined. Estimated in Service through 2035.

(U) Operating and Support Variance with Prior Estimate

No Data

(U) Operating and Support Cost Element Structure Estimates by Acquired System

(CY$M) Base Year: 2016							
System	Unit-Level Manpower	Unit Operations	Maintenance	Sustaining Support	Continuing System Improvements	Other	Total
NGJ Mid-Band	-	-	759.2	287.9	404.0	-	1,451.1
Program	-	-	759.2	287.9	404.0	-	1,451.1

(U) Annual Operating and Support Costs per Unit Compared with Antecedent System

(CY$M) Base Year: 2016							
System	Unit-Level Manpower	Unit Operations	Maintenance	Sustaining Support	Continuing System Improvements	Other	Total
NGJ Mid-Band	-	-	0.4	0.2	0.2	-	**0.8**
ALQ-99 (Antecedent)	0.1	-	0.5	0.1	0.1	0.0	**0.8**

(U) Operating and Support Cost Estimate Assumptions

System	Quantity to Sustain	Unit Expected Service Life (Years)	Unit of Measure	Fiscal Years Operational
NGJ Mid-Band	135	20.0	Shipset = 2 Pods	2024 - 2050
ALQ-99 (Antecedent)	180	60.0	Shipset = 2 Pods	1971 - 2035

Additional O&S Estimate Assumptions

- Contractor Logistics Support / Interim Contractor Support covering the total system through the EMD until four (4) years after IOC (Initial).
- Product Support Strategy will consider Organizational, Intermediate, and Depot level maintenance capabilities; Organic maintenance support (future). Interim Support Strategy: Organizational (O) Level to Original Equipment Manufacturer.
- Sustainment Strategies for AN/ALQ-249(V)1: Long Term Support Strategy includes transition into Organic capability utilizing Captains of Industry, Public Private Partnerships, and Performance Based Agreements supported by analysis.
- The unit of measure (system) is defined as a shipset, which consists of 2 pods.
- Pod usage is tied to the EA-18G platform. The pod structure service life is limited to the Integrated Structure Assembly includes an overhaul at 4,000 hours and an end of usable life at 7,200 hours. The estimated pod structure life is sufficient to meet the program of record and support the current EA-18G Program of Record as estimated attrition does not occur prior to EA-18G program.
- Total System Operating Years: 1,808. Operating years are calculated based on Mid-Band units required to support the EA-18G per Program of Record.

Antecedent Estimate Assumptions

- Antecedent program: ALQ-99 Tactical Jamming System
- The dataset used in the antecedent costs were reported based on 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 Mid-Band system, and is not normalized to specific Mid-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, Naval Air Warfare Center

Weapons Division Point Mugu, Naval Sea Systems Command Crane, and Center for Naval Aviation Technical Training.
- Total O&S Cost for ALQ-99 in CY16$ is $1409.9M.
- Average Annual Cost per System ALQ-99 (Antecedent) is $0.765M

O&S Annual Cost Calculation Memo

Annual O&S Costs = Unitized cost x Total Operating Years x 1M = .803 x 1808 x 1000,000 = $1451.1M

(U) Technologies and Systems Engineering

(U) Current Significant Technical Risks and Risks Identified at Milestones/Decisions

Event	Date	Description
FRP	5/31/2024	If system reliability remains low, then the NGJ Mid-Band program will experience decreased system operational availability, increased maintenance times for the fleet, and higher repair costs.

(U) Performing Activities and Contracts

(U) External Government Activities

None

(U) Contracts and Efforts

Contract Title	Contract Number / Effort	Contractor	Phase
NGJ Mid-Band LRIP I and LRIP II	N00019-21-C-0053 / 1	Raytheon	Production
NGJ Mid-Band LRIP III	N00019-23-C-0037 / 1	Raytheon	Production

(U) Contract and Effort Identification, Price, Quantity and Performance

Contract Number:	N00019-21-C-0053	**Order Number:**	-
Contract Title:	NGJ Mid-Band LRIP I and LRIP II	**Strategy:**	FAR 15: Negotiated Contracts
CAGE:	4U884 - Raytheon	**Contracting Office:**	NAVAIR
City, State/Province:	El Segundo, CA		
Effort Number:	1	**Supported Phase:**	Production
Type:	Fixed-Price Incentive (Firm Target)	**Award Date:**	July 2, 2021
Latest Modification Date:	January 18, 2024	**Definitization Date:**	July 2, 2021
Latest Modification No.:	P00023	**Work Start Date:**	July 2, 2021
Technical Data Rights:	Unlimited Rights		
Notes:	The Contract Data Requirements List (CDRL) includes Cost and Software Data Reporting (CSDR). Contractor Performance Report (CPR) data effective January 2024.		

Initial Price (TY $M) Target / Ceiling		Current Price (TY $M) Target / Ceiling		Estimate at Completion (TY $M) Contractor / PM		Initial Quantity	Current Quantity	Delivered Quantity
171.6	179.2	420.9	414.6	424.0	426.3	3	8	3

Work Completed (%):	86.91%
Cost Variance (TY$M):	-4.2
Schedule Variance (TY$M):	-10.6

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Unfavorable Cumulative Cost Variance is driven by unanticipated risk associated with hardware engineering (Non-Recurring Engineering (NRE)) and production hardware support. The large amount of unfavorable cost performance has been off-set by the favorable performance due to delayed onboarding of Program Management Office resources from System Demonstration Test Article to LRIP and lower than expected engineering labor for supplier support levels.

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

Unfavorable Cumulative Schedule Variance driven by late delivery of LRIP II hardware (Arrays, Common Electronics Unit, and Power Distribution Unit) to the pod and late Mid-Band material. In addition to unanticipated complexities of the NRE activities associated with Servo Electronic Unit Instruction Random Access Memory design updates, Drain Voltage Power Supply, Array Control Interface, and Frequency Converter Module Circuit Card Assembly updates.

(U) Contract and Effort Identification, Price, Quantity and Performance

Contract Number:	N00019-23-C-0037	**Order Number:**	-
Contract Title:	NGJ Mid-Band LRIP III	**Strategy:**	FAR 15: Negotiated Contracts
CAGE:	4U884 - Raytheon	**Contracting Office:**	NAVAIR
City, State/Province:	El Segundo, CA		
Effort Number:	1	**Supported Phase:**	Production
Type:	Fixed-Price Incentive (Firm Target)	**Award Date:**	March 30, 2023
Latest Modification Date:	January 19, 2024	**Definitization Date:**	March 30, 2023
Latest Modification No.:	P00006	**Work Start Date:**	March 30, 2023
Technical Data Rights:	Unlimited Rights		
Notes:	The LRIP III contract includes 11 United States Navy (USN) and four (4) Royal Australian Air Force (RAAF) shipsets and two (2) training pods. One (1) each for USN and RAAF. The Contract Data Requirements List (CDRL) includes Cost and Software Data Reporting (CSDR). Contractor Performance Report (CPR) data effective January 2024.		

Initial Price (TY $M) Target / Ceiling		Current Price (TY $M) Target / Ceiling		Estimate at Completion (TY $M) Contractor / PM		Initial Quantity	Current Quantity	Delivered Quantity
650.4	660.4	675.3	674.8	686.7	681.1	15	15	-

Work Completed (%):	21.46%
Cost Variance (TY$M):	+7.6
Schedule Variance (TY$M):	+105.2

Factors Contributing to Cost Variance and Projected Effects on Program Costs

Unfavorable Cumulative Cost Variance is driven by lower than expected program management support to date and positive attrition rates due to early receipt of material.

Factors Contributing to Schedule Variance and Projected Effects on Program Schedule

Unfavorable Cumulative Schedule Variance driven by early receipt of material which is early to need date and excess material pegged to LRIP III from LRIP I/II.

(U) Production

(U) Low-Rate Initial Production

	Original LRIP Determination	Current LRIP Determination
Total LRIP Quantity	30	34
Date	4/5/2016	10/6/2023
Reference	NGJ Mid-Band Milestone B ADM	NGJ Mid-Band Authorized LRIP Quantity Correction ADM
LRIP Period	FY 2019 - 2021	FY 2021 - 2023
Total Procurement Quantity	131	129
LRIP Percentage of Total	22.9%	26.4%

Rationale if LRIP Quantity Exceeds 10% of Total Procurement Quantity (Current Determination)

The Current Total LRIP Quantity is more than 10% of the total production quantity in order to provide production-representative NGJ Mid-Band systems in support of Initial Operational Test and Evaluation. These assets are needed to ensure adequate and efficient manufacturing capability while maintaining the industrial base. The LRIP quantity will permit an orderly increase to ramp up for FRP and reduce risk. This will posture the current planned NGJ Mid-Band production rate maximum/optional economic rate of 14 shipsets per year during FRP.

LRIP Notes

- ADM signed by MDA on March 28, 2023, approving NGJ Mid-Band quantity up to 19 shipsets.
- ADM signed by MDA on October 6, 2023, approving NGJ Mid-Band quantity up to 34 shipsets due to delay in operational test and risk mitigation for a production gap.

(U) Deliveries and Expenditures

(U) Acquisition Funding

	Total Estimate	Actual to Date	Actual, Percent Complete
Years Appropriated	28	15	53.6%
Appropriations (TY, $M)	10,219.1	4,984.2	48.8%
Expenditures (TY, $M)	10,219.1	4,504.6	44.1%

(U) End Items Delivered

	Total Required	Planned to Date	Actual to Date	Actual, Percent Complete
Development	6			
NGJ Mid-Band		6	6	
Procurement	129			
NGJ Mid-Band		4	4	
Total	**135**	**10**	**10**	**7.4%**

Notes

None

(U) International Program Aspects

General Memo

The NGJ Mid-Band program is executing under an International Cooperative Program (ICP) established between the U.S. DoD and Australian Department of Defence (ADOD). The NGJ Production, Sustainment, and Follow-On Development (PSFD) Memorandum of Understanding (MOU) was signed May 21, 2020, enabling establishment of a cooperative production line and life-cycle sustainment partnership for the NGJ weapon system.

Exportability and Business Issues

Both nations committed financial and non-financial resources to the NGJ Mid-Band program, providing flexibility for budget planning, ability to leverage each nation's workforce, and ability to utilize equipment and facilities in both nations. Under the ICP, both the USN and RAAF benefit from commonality of configuration to ensure interoperability of the NGJ Mid-Band system.

Is design for international exportability planned?	Yes	**Industry/Partner Exportability Cost-Sharing?**	No

Program Protection: Technology Security and Foreign Disclosure Issues

NGJ Mid-Band leadership is responsible for ensuring program protection activities are integrated into the program and that program personnel support program protection development and implementation efforts. The NGJ Mid-Band PM has appointed a Program Protection Lead responsible for the coordination and execution of activities related to Cybersecurity and Systems Security Engineering, including but not limited to: Risk Management Framework, Software Assurance, Information Assurance, and Supply Chain Risk Management. The Program Protection Lead establishes and chairs an Integrated Product Team which includes Subject Matter Experts from Cybersecurity, Software, Product Support, Systems Engineering, Test and Evaluation, Software, and Program Security.

(U) Agreements

Activity Date	Type	Agreement Number	International Partner(s)	Quantity	Funding (TY$M)
5/21/2020	ICP MOU	N/A	Australia (AT)	-	-
5/21/2020	ICP MOU	N/A	Australia (AT)	4	194.3
10/18/2017	ICP MOU	N/A	Australia (AT)	-	145.0

(U) Agreement Information

Partner(s):	Australia (AT)	**Activity Date:**	5/21/2020
Type:	International Cooperative Program: Memorandum of Understanding	**Agreement Number:**	N/A
Notes:	None		

Australia (AT)

Fiscal Year	Funding (TY$M)	Quantity
Total	-	-

(U) Agreement Information

Partner(s): Australia (AT) **Activity Date:** 5/21/2020

Type: International Cooperative Program: Memorandum of Understanding **Agreement Number:** N/A

Notes: Under the PSFD MOU, ADOD provided funding for the procurement of four (4) NGJ-MB shipsets, support equipment, spares, and training under the LRIP III contract.

Australia (AT)

Fiscal Year	Funding (TY$M)	Quantity
2023	194.3	4
Total	**194.3**	**4**

(U) Agreement Information

Partner(s): Australia (AT) **Activity Date:** 10/18/2017

Type: International Cooperative Program: Memorandum of Understanding **Agreement Number:** N/A

Notes: As a Cooperative program, the NGJ-MB MOU provided $145.0M of shared funding contributions from the Royal Australian Air Force (RAAF) towards the development of the NGJ-MB system. As such, MOU shared funding does not directly result in end items for the RAAF.

Australia (AT)

Fiscal Year	Funding (TY$M)	Quantity
2018	30.0	-
2019	42.9	-
2020	5.0	-
2021	27.1	-
2022	40.0	-
Total	**145.0**	**-**

Modernized
Selected Acquisition Report
Supplement

Next Generation Jammer Mid-Band
(NGJ Mid-Band)

FY 2025 President's Budget
As of: December 31, 2023

MSAR Supplement Sections

Program Description

Program Use of the Adaptive Acquisition Framework

Technologies and Systems Engineering

Funding Sources (Acquisition)

Funding Sources (Operating and Support)

Acquisition Estimate and Quantity Summary

Annual Acquisition Estimates by Appropriation Account

Acquired System Annual End-Item Quantities by Appropriation Account

Nuclear Costs

Operational Fielding Plan

O&S Independent Cost Estimate

Annual Operating and Support Estimates by Cost Element

Program Description

Full Name
Next Generation Jammer Mid-Band

Short Name
NGJ Mid-Band

PNO
445

Lead Component
Navy

AAF Pathway
MCA

Acquisition Type
MDAP

Acquired Systems
NGJ Mid-Band

Related Programs

Full Name	PNO	Pathway	Type	ACAT/ BCAT	Acquisition Status	Costs in SAR? Acq	O&S

Program Use of the Adaptive Acquisition Framework

This acquisition is accomplished by a single program in the Major Capability Acquisition Pathway.

Technologies and Systems Engineering

Next Generation Jammer Mid-Band

Major Software Efforts

Title	Status	Fielding Date	Description

Major Engineering Changes

Title	Original Need Date	Fielding Date	Description, Rationale and Program Impacts
Mid-Band Extended (MBX)	Dec 2027		MBX will be developed as an Engineering Change Proposal to the current NGJ Mid-Band system that will extend the frequency coverage to counter key emerging threats. MBX provides increased Airborne Electronic Attack capabilities to the warfighter to address critical threats in the radio frequency spectrum.

Funding Sources (Acquisition)

Acquisition Funding Notes

Funding includes Next Generation Jammer Mid-Band Extended (MBX) development beginning in FY 2024.

Next Generation Jammer Mid-Band

Category	Account	BA	Line Item	Program Element	RDT&E Project	Shared	Sunk
RDT&E	1319N	05	0604274N - Next Generation Jammer (NGJ)	0604274N	0557 - Next Generation Jammer		
Note:	Funding includes Next Generation Jammer Mid-Band Extended (MBX) development.						
Procurement	1506N	05	0591 - Next Generation Jammer (NGJ)	0204154N	-		
MILCON	1205N	01	00620258 - Next Generation Jammer Facility	0712876N	-		x

Funding Sources (Operating and Support)

Note: Budget lines fund activites executed by the Program Office or Sustainment Office.

Operating and Support Funding Notes

O&S Estimate includes PRE and PRL funding within the 1A4N BLI. PRE and PRL are budgeted through the PB 2025 FYDP.

Next Generation Jammer Mid-Band

Category	Account	BA	Line Item	Program Element	RDT&E Project	Shared	Sunk
O&M	1804N	01	1A4N - Air Systems Support	0204154N	-		

Acquisition Estimate and Quantity Summary

Next Generation Jammer Mid-Band

Acquisiton Estimates

Category PB 2025	TY ($M)	Current Base Year CY2016 ($M)	Original Base Year CY2016 ($M)	Report Fiscal Year CY2024 ($M)
RDT&E	4,234.4	3,915.3	3,915.3	4,968.7
Procurement	5,976.8	4,197.5	4,197.5	5,326.7
MILCON	7.9	6.7	6.7	8.5
O&M	-	-	-	-
Total Acquisition	10,219.2	8,119.5	8,119.5	10,304.0
PAUC	75.698	60.145	60.145	76.326
APUC	46.332	32.539	32.539	41.293

Acquisiton End-Item Quantities

System PB 2025	Development	Procurement
NGJ Mid-Band	6	129
Total	**6**	**129**

Unit Description

AN/ALQ-249 Next Generation Jammer Mid-Band (NGJ-MB) Shipset (2 pods per shipset).

Current and Future Years Defense Program Summary, TY($M)

Appropriation	Prior	2024	2025	2026	2027	2028	2029	To Complete	Total
RDT&E	3,956.4	40.5	86.7	66.0	58.4	26.4	-	-	4,234.4
Procurement	1,015.1	503.6	455.9	447.4	478.3	417.3	423.3	2,236.0	5,976.8
MILCON	7.9	-	-	-	-	-	-	-	7.9
O&M	-	-	-	-	-	-	-	-	-
PB 2025 Total	**4,979.5**	**544.1**	**542.6**	**513.4**	**536.7**	**443.7**	**423.3**	**2,236.0**	**10,219.2**

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Next Generation Jammer Mid-Band

Source for TY$-CY$ Conversion: ASN FMB-6 Inflation Rates and Outlay Factors for DA, DoN and DW accounts: 17 Jan 2024

1319N - Research, Development, Test & Eval, Navy					
fiscal year		Other/ Unallocated	Total TY($M)	Weighted Rate	Total CY2016 ($M)
Total		**4,234.4**	**4,234.4**	**-**	**3,915.3**
2010		111.725	111.7	0.927776	120.4
2011		83.680	83.7	0.949929	88.1
2012		154.873	154.9	0.965683	160.4
2013		153.311	153.3	0.975823	157.1
2014		153.123	153.1	0.989612	154.7
2015		221.149	221.1	1.002063	220.7
2016		373.502	373.5	1.020662	365.9
2017		558.349	558.3	1.039759	537.0
2018		584.545	584.5	1.065227	548.8
2019		345.578	345.6	1.085743	318.3
2020		480.684	480.7	1.125670	427.0
2021		435.381	435.4	1.176262	370.1
2022		235.882	235.9	1.237713	190.6
2023		64.658	64.7	1.274560	50.7
2024		40.477	40.5	1.303656	31.0
2025		86.721	86.7	1.331310	65.1
2026		65.986	66.0	1.359268	48.5
2027		58.423	58.4	1.387812	42.1
2028		26.399	26.4	1.416956	18.6

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Next Generation Jammer Mid-Band

Source for TY$-CY$ Conversion: ASN FMB-6 Inflation Rates and Outlay Factors for DA, DoN and DW accounts: 17 Jan 2024

1506N - Aircraft Procurement, Navy									
fiscal year	End Item Recurring Flyaway	Non-End Item Recurring Flyaway	Non-Recurring Flyaway	Initial Spares	Depot Activation	Other/ Unallocated	Total TY($M)	Weighted Rate	Total CY2016 ($M)
Total	**4,712.8**	**-**	**103.2**	**225.7**	**271.7**	**663.5**	**5,976.8**	**-**	**4,197.5**
2010							-	0.943810	-
2011							-	0.962541	-
2012							-	0.976381	-
2013							-	0.986832	-
2014							-	0.999725	-
2015							-	1.015397	-
2016							-	1.037900	-
2017							-	1.060055	-
2018							-	1.081494	-
2019							-	1.111329	-
2020							-	1.155166	-
2021	130.784			29.181	7.621	25.328	192.9	1.208151	159.7
2022	162.927		39.989	40.803	8.701	43.776	296.2	1.255716	235.9
2023	386.595		9.507	67.542	16.834	45.537	526.0	1.290388	407.6
2024	326.669			84.758	43.658	48.525	503.6	1.319260	381.7
2025	338.821			2.658	63.152	51.253	455.9	1.347197	338.4
2026	369.168			0.726	37.379	40.093	447.4	1.375488	325.2
2027	376.920				59.414	41.967	478.3	1.404373	340.6
2028	356.010				12.100	49.186	417.3	1.433865	291.0
2029	363.088				9.170	51.020	423.3	1.463976	289.1
2030	370.714				6.901	37.036	414.7	1.494720	277.4
2031	378.498				6.787	36.752	422.0	1.526109	276.5
2032	386.447					37.523	424.0	1.558157	272.1
2033	394.563					29.816	424.4	1.590878	266.8
2034	371.590					30.443	402.0	1.624287	247.5
2035			12.468			31.082	43.6	1.658397	26.3
2036			20.400			31.735	52.1	1.693223	30.8
2037			20.831			32.401	53.2	1.728781	30.8

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Next Generation Jammer Mid-Band

Source for TY$-CY$ Conversion: ASN FMB-6 Inflation Rates and Outlay Factors for DA, DoN and DW accounts: 17 Jan 2024

1205N - Military Construction, Navy					
fiscal year		Other/ Unallocated	Total TY($M)	Weighted Rate	Total CY2016 ($M)
Total		**7.9**	**7.9**	**-**	**6.7**
2010			-	0.949386	-
2011			-	0.970712	-
2012			-	0.985054	-
2013			-	0.999086	-
2014			-	1.014072	-
2015			-	1.042654	-
2016			-	1.066954	-
2017			-	1.094436	-
2018			-	1.135052	-
2019		7.930	7.9	1.178716	6.7

Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

Next Generation Jammer Mid-Band

1319N - Research, Development, Test & Eval, Navy				
fiscal year	NGJ Mid-Band			Total
Total	**6**			**6**
Undistributed				-
2020	6			6

Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

Next Generation Jammer Mid-Band

1506N - Aircraft Procurement, Navy				
fiscal year	NGJ Mid-Band			Total
Total	**129**			**129**
Undistributed				-
2020				-
2021	3			3
2022	5			5
2023	11			11
2024	9			9
2025	10			10
2026	11			11
2027	11			11
2028	10			10
2029	10			10
2030	10			10
2031	10			10
2032	10			10
2033	10			10
2034	9			9

Nuclear Costs

Next Generation Jammer Mid-Band

Program's Use of Department of Energy Resources

None

Operational Fielding Plan

Next Generation Jammer Mid-Band

System: NGJ Mid-Band

Fielding and Inventory Notes

Fielding asset allocation and squadron transition priorities are tiered readiness based. Initial squadron fielding will be three systems (shipsets) allowing for basic capability. As allowed by asset supply, Squadrons will be allocated at levels equal to full allocation of five systems (shipsets). No limits are placed on operational squadron transitions per fiscal year.

NGJ Mid-Band Fielding Plan and Inventory

fiscal year	Store	Field	Expend/Loss	Decommission	Inventory
2023					7
2024		7			14
2025		3			17
2026		8			25
2027		9			34
2028		13			47
2029		11			58

O&S Independent Cost Estimate

Next Generation Jammer Mid-Band

Independent and Current Cost Estimate Comparison

Category CY2016 ($M)	Independent Cost Estimate 5/26/2021	Current Estimate 5/26/2021	Variance with ICE (%)
Unit-Level Manpower	-		-
Unit Operations	-		-
Maintenance	759.2	759.2	0%
Sustaining Support	287.9	287.9	0%
Continued System Improvements	404.0	404.0	0%
Other			-
Total O&S	**1,451.1**	**1,451.1**	**0%**

Independent Cost Estimate Source

Event: Milestone C
Type: Component Cost Position
Approved by: DASN (AP&B), DASN (Budget), May 26, 2021
Note: The next ICE will be provided for FRP Decision Review.

Current Cost Estimate Source

Type: Component Cost Position
Approved by: DASN (AP&B), DASN (Budget), May 26, 2021
Note: The last approved estimate was completed at Milestone C in May 2021. The NAVAIR Cost and Schedule Analysis Department developed a Component ICE that

Cost Estimate Variance Explanation

Annual Operating and Support Estimates by Cost Element

Next Generation Jammer Mid-Band

System: NGJ Mid-Band

Source for TY-CY Conversion: OSD Guidance and Inflation Indices

Operating and Support Cost Elements							
fiscal year	1.0 Unit-Level Manpower	2.0 Unit Operations	3.0 Maintenance	4.0 Sustaining Support	5.0 Continuing System Improvements	Other	Total CY2016 ($M)
Total	**-**	**-**	**759.2**	**287.9**	**404.0**	**-**	**1,451.1**
2024			7.567	3.244	3.710		14.5
2025			11.139	4.363	3.710		19.2
2026			23.954	6.116	3.710		33.8
2027			26.559	9.660	3.710		39.9
2028			33.141	10.327	20.757		64.2
2029			39.842	11.543	20.757		72.1
2030			34.722	15.525	20.757		71.0
2031			36.328	16.940	20.757		74.0
2032			36.818	15.218	20.757		72.8
2033			35.362	14.612	20.757		70.7
2034			36.203	14.915	20.757		71.9
2035			41.570	15.180	20.757		77.5
2036			42.108	16.032	20.757		78.9
2037			47.155	14.631	20.757		82.5
2038			48.280	14.896	20.757		83.9
2039			46.777	15.748	20.757		83.3
2040			46.232	16.619	20.757		83.6
2041			40.164	15.180	20.757		76.1
2042			30.093	13.232	20.757		64.1
2043			32.994	11.258	20.757		65.0
2044			23.420	9.925	20.757		54.1
2045			20.141	8.057	20.757		49.0
2046			13.901	5.638	3.109		22.6
2047			3.689	2.843	3.109		9.6
2048			0.513	2.078	3.109		5.7
2049			0.513	2.078	3.109		5.7
2050			-	2.078	3.109		5.2