

UNCLASSIFIED



Modernized Selected Acquisition Report (MSAR) Cooperative Engagement Capability (CEC)

FY 2025 President's Budget

Effective: December 31, 2023

Defense Acquisition Visibility Environment

CLEARED
For Open Publication

Aug 07, 2024

Department of Defense
OFFICE OF PREPUBLICATION AND SECURITY REVIEW

UNCLASSIFIED

Table of Contents

Common DoD Abbreviations	3
Program Description	5
Responsible Office	7
Executive Summary	8
Schedule	10
Performance	12
Acquisition Budget Estimate	13
Unit Costs	15
Life-Cycle Costs	16
Technologies and Systems Engineering	18
Performing Activities and Contracts	19
Production	23
Deliveries and Expenditures	24
International Program Aspects	25

(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 Cooperative Engagement Capability	Short Name CEC
PNO 582	Milestone Decision Authority Component Acquisition Executive
Lead Component Department of the Navy	Program Executive Office PEO Integrated Warfare Systems
Joint Program Yes	Supporting Components Department of the Army
Adaptive Acquisition Pathway Major Capability Acquisition	International Partners Australia, Canada, Japan
Acquisition Category IC	Acquisition Type Major Defense Acquisition Program
Acquisition Status Active Acquisition	Acquired Systems CEC, CEC Airborne Sustainment (AN/USG-3), CEC Airborne Sustainment (AN/USG-3B), CEC Shipboard Sustainment (AN/USG-2/2A), CEC Shipboard Sustainment (AN/USG-2B)

Mission

The Cooperative Engagement Capability (CEC) acquisition program is an ACAT IC program which is based on the Mission Needs Statement (MNS) M030-086-093 approved by the Chief of Naval Operations (CNO) on February 5, 1993. The CEC system makes it possible for multiple surface ships and aircrafts to form an air defense network for the purpose of sharing radar target measurements in real-time, thus a ?cooperative engagement.? Sharing data from all capable sensors? assets in a battle force provides increased timeliness, accuracy, and continuity for greater engagement decision and prosecution responsiveness. The CEC program provides a sensor network with Integrated Fire Control capability that significantly improves battle force air and missile defense capabilities by coordinating measurement data from air search sensors on CEC-equipped units into a single, integrated real-time, composite track air picture. The CEC sensor netting system extracts sensor-derived information and distributes a superset of the best Anti Air Warfare (AAW) sensor data to all CEC Cooperating Units (CUs) participating in Naval Carrier and Expeditionary Strike Groups. Each CU independently employs high capacity, parallel processing and advanced algorithms to combine all distributed sensor data into a fire control quality track picture improving own unit track precision, consistency and continuity; expanding detection range; and increasing reaction time. CEC also provides situational awareness by enabling longer range, cooperative, multiple or layered engagement strategies to improve strike force effectiveness and is highly resistant to jamming and delivers accurate gridlocking between CUs. CEC is comprised of the following: - AN/USG-2/2B: Shipboard designation of CEC deployed aboard CG, DDG, FFG, LPD, LHD, LHA and CVN ship platforms (AN/USG-2A configuration retired in FY21. Two AN/USG-2 configurations remain in the Fleet; One will be upgraded to AN/USG-2B in FY24 and the final AN/USG-2 configuration will

be upgraded in FY28.) - AN/USG-3/3B: Airborne designation of CEC deployed in Hawkeye, Navy Airborne Warning and Control System Aircraft (E-2C) and Advanced Hawkeye (AHE), Navy Airborne Warning and Control System Aircraft (E-2D) - AN/USG-4B: USMC Ground Mobile designation of CEC Composite Tracking Network (CTN) - AN/USG-7B: CEC designation for Shipboard Foreign Military Sales (FMS) to Australia - AN/USG-10B: CEC designation for Shipboard FMS to Japan

(U) Responsible Office**Program Executive Officer**

PEO Integrated Warfare Systems

Elizabeth S. Okano

elizabeth.s.okano.mil@us.navy.mil (primary)

(202) 781-2964 (commercial)

Program Manager

Cooperative Engagement Capability PMO

Timothy King

timothy.l.king42.mil@us.navy.mil (primary)

(202) 781-3210 (commercial)

(U) Executive Summary

Program Highlights Since Last Report

The CEC program has been in FRP for the AN/USG-2/2B (shipboard variant) since 2002 and for the AN/USG-3B (E-2D airborne variant) since 2014. Development efforts continue in order to keep pace with the security threats and ensure producibility. The program remains focused on sustainment and ensuring compatibility and interoperability.

CEC follows an evolutionary acquisition process, delivering capability in increments of hardware and/or software upgrades. This evolutionary approach actively addresses the need for future capability improvements to overmatch evolving threats.

- Initial CEC Increment II Block II capability installed on USS RICHARD M. MCCOOL JR. (LPD 29) and conducted underway testing during ship construction trials.

The quantity increased to 380 for PB25.

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

The CSDR rating as of 12/2023 is Yellow.

It was yellow for 2 reasons:

1) Overdue submission for the Prime Contractor (L3 Harris) on the 22C5218 contract. The PMO has been actively working with Prime and DCARC to resolve discrepancies within report to achieve compliance

2) Overdue submission for the Subcontractor (Sechan Electronics) on the 22C5218 contract. The PMO has been actively working with Subcontract and DCARC to resolve discrepancies within report to achieve compliance

Significant Accomplishments:

- CEC Test and Evaluation Master Plan Rev 6 Change 1 in signature cycle. Expect completion 3Q FY24
- Completed certification of CEC S/W 11.06.01 for CP 22-1 DDGs
- Completed Certification of CEC S/W 10.52 for AEGIS B/L 7 and 9 and SSDS B/L 6, 9, and 10
- Completed Combat System Ship's Qualification Trials (CSSQTs) on JS Maya (DDG 179) and JS Haguro (DDG 180)
- CEC integration with Ship Self-Defense System (SSDS) Baseline 12/EASR: Development complete. Multi-system integration continues.
- CEC integration with AEGIS Baseline 10/AMDR: Development complete. Multi-system integration continues.

Significant Issues:

- No significant issues to report

(U) History of Significant Developments Since Program Inception

Date	Description
April 2014	CEC Acquisition Decision Memorandum - Authorized entrance into FRP for the CEC AN/USG-3B (E-2D Airborne Variant) System in support of E-2D Advance Hawkeye FRP
May 2012	CEC Acquisition Decision Milestone Program Decision Memorandum - Approved the LRIP Lot 3 for up to five complete AN/USG-3B systems. Designate the CEC program as an ACAT 1C program with the Navy as the lead Component
May 2012	The USD(AT&L) memorandum of May 25, 2012 - Re-designated CEC from an ACAT 1D to

Date	Description
	an ACAT 1C program with the Navy as lead component and authorized the Navy to procure the third increment of LRIPs for the CEC Airborne variant
December 2011	CEC Acquisition Decision Milestone Program Decision Memorandum - Authorized the Navy to procure one additional CEC AN/USG-3B unit as part of the FY 2011 LRIP Lot 2, approved via ADM on February 12, 2010. This decision now authorizes procurement of up to eight complete AN/UGS-3B units as CEC LRIP Lot 2. Also authorize an increase in the total CEC AN/USG-3A/B LRIP quantity to not more than 16 units
August 2010	CEC Acquisition Decision Milestone Program Decision Memorandum - Authorized the Navy to procure one additional CEC AN/USG-3B system as part of the second LRIP Lot, increasing the total CEC LRIP Lot 2 quantity authorized to 7
February 2010	CEC Acquisition Decision Milestone Program Decision Memorandum - Approved the procurement of up to two (2) additional SDP-S components, to support the E-2D Advanced Hawkeye LRIP
February 2009	CEC Acquisition Decision Milestone Program Decision Memorandum - Approved the second LRIP of up to six (6) complete AN/USG-3B systems
January 2009	CEC Acquisition Decision Milestone Program Decision Memorandum - Approved an increase in the total LRIP quantity for CEC program of an additional 14 AN/USG-3A systems
May 2005	CEC achieves FOC
April 2002	CEC MS III ADM - Approved for the AN/USG-2 Surface-based CEC system for MS III for FRP
April 2002	CEC MS III ADM - Approved the updated APB
April 2002	CEC MS III ADM - Approved the FY 2002 and FY 2003 AN/USG-3 Airborne-based CEC System LRIP quantity (5 units each year)
April 1998	Initial production of AN/USG-2 equipment was awarded
February 1998	AN/USG-2 equipment LRIP award
December 1997	Initial Operation Testing and Evaluation (IOT&E) of AN/USG-2 equipment
May 1997	CDR CEC Airborne Transceiver
December 1996	Critical Design Review (CDR) CEC Shipboard
July 1996	Preliminary Design Review CEC Shipboard
May 1995	CEC Acquisition Decision Milestone CEC Milestone (MS) I/II Navy Program Decision - Approved to proceed into EMD

(U) Schedule**(U) Schedule Events**

Events		APB Change 3 (Current) 1/19/2019 Objective / Threshold		Current Estimate 12/31/2023	Actual
Milestone II	MS II	May 1995	May 1995	-	1 May 1995
Development Contract Modification	FFO	May 1995	May 1995	-	1 May 1995
Preliminary Design Review Complete	PDR	Jul 1996	Jul 1996	-	1 Jul 1996
Baseline System Initial Operational Capability	IOC	Sept 1996	Sept 1996	-	1 Sept 1996
Critical Design Review Complete	CDR	Dec 1996	Dec 1996	-	1 Dec 1996
IOT&E (DT-IIB/OT-IIA1)					
Start (1)	IOT&E	May 1997	May 1997	-	1 May 1997
Complete (1)	IOT&E	Aug 1997	Aug 1997	-	1 Aug 1997
LRIP Decision	LRIP Decision	Feb 1998	Feb 1998	-	1 Feb 1998
Low Rate Production Contract Award	LRIP Decision	Apr 1998	Apr 1998	-	1 Apr 1998
Service Depot Support Date	MS B	Oct 2000	Oct 2000	-	1 Oct 2000
Service Final DT&E					
Complete (2)	IOT&E	May 2001	May 2001	-	1 May 2001
Start (2)	IOT&E	Jan 2001	Jan 2001	-	1 Jan 2001
IOT&E - OPEVAL (OT-IIA2)					
Complete (3)	IOT&E	May 2001	May 2001	-	1 May 2001
Start (3)	IOT&E	Mar 2001	Mar 2001	-	1 Mar 2001
Organic Support Date	OSC	Oct 2001	Oct 2001	-	1 Oct 2001
FOT&E-1 (DT-IIIA/OT-IIIA) E-2C					
Start (4)	IOT&E	Jan 2002	Jan 2002	-	1 Jan 2002
Complete (4)	IOT&E	Nov 2002	Nov 2002	-	1 Nov 2002
Milestone III	MS III	Apr 2002	Apr 2002	-	1 Apr 2002
Full Rate Production Contract Award	FRP Decision	Apr 2002	Apr 2002	-	1 Apr 2002
FOT&E-2 (DT-IIIB/OT-IIIB) E-2C					
Start (6)	IOT&E	Mar 2004	Mar 2004	-	1 Mar 2004
Complete (6)	IOT&E	Apr 2004	Apr 2004	-	1 Apr 2004
Full Operational Capability	FOC	May 2005	May 2005	-	1 May 2005
Airborne IOC	IOC	May 2005	May 2005	-	1 May 2005
AN/USG-3B Full Rate Production Decision for E-2D	FRP Decision	Apr 2014	Apr 2014	-	1 Apr 2014

Notes

All events listed in the APB are completed.

Schedule Baseline Deviation Explanation

None

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

None

(U) Performance**(U) Performance Attributes**

Interoperability		
Information Exchange Requirements (IER) (2)		KPP
Current Estimate 12/31/2023		100% of top-level IER's designated critical
Demonstrated Performance -		100% of top-level IER's designated critical
APB Change 3 (Current) 1/19/2019	Objective	100% of top-level IERs.
	Threshold	100% of top-level IERs designated critical
Track File Consistency (2)		KPP
Current Estimate 12/31/2023		Integration will improve track file consistency as measured in each host system
Demonstrated Performance -		Integration will improve track file consistency as measured in each host system
APB Change 3 (Current) 1/19/2019	Objective	CEC integration will improve track file consistency as measured in each host system
	Threshold	CEC integration must not degrade track file consistency (0% degradation) as measured in each host system

(U) Requirement Source:

Sponsor(s): None

1. Document Type Not Provided

Notes: CEC Increment 1 CPD as validated by JROC memorandum dated August 12, 2016 which replaces the 2011 Change 1 CEC ORD, which was rescinded.

Notes

CEC Security Classification Guide approved on 12 Aug 2022. Current classification notes Operational Availability (Ao) as UNCLASSIFIED, however, Ao will be reported in the classified annex with the performance/KPP/KSA data.

Performance Deviation Explanation

None

(U) Acquisition Budget Estimate**(U) Total Acquisition Estimates and Quantities**

Category (\$M) Base Year: 2002	APB Change 3 (Current) 1/19/2019 CY\$ obs Objective / Threshold		Current Estimate PB 2025 CY\$ obs / TY\$ obs	
RDT&E	3,326.9	3,662.3	3,379.8	3,854.2
Procurement	2,104.2	2,314.6	2,080.4	2,824.0
MILCON	0.0	0.0	0.0	0.0
O&M	0.0	0.0	0.0	0.0
R&MF	-	-	-	-
Total Acquisition	5,431.1	-	5,460.2	6,678.2
Program Acquisition Unit Cost	15.171	16.696	14.369	17.574
Average Procurement Unit Cost	6.415	7.057	5.944	8.069
Program End-Item Quantity				
Development	30		30	
Procurement	328		350	
O&M-Acquired	-		-	

Budget Notes

None

Quantity Notes

The quantity increased to 380 for PB25.

Cost Baseline Deviation Explanation

None

(U) Risk and Sensitivity Analysis

Current Procurement Estimate Risks (12/31/2023)	
1	Multi-system interoperability remains a technical risk with cost implications to the CEC program. To mitigate these risks the CEC program is continuing their evolutionary acquisition approach of delivering capability in increments, reducing technical and cost risk, while maintaining effectiveness and producibility.
2	Base Year-Total Acquisition Cost \$5,460.2M, Average Procurement Unit Cost (APUC) \$5.949M, Program Acquisition Unit Cost \$14.398M
3	Then Year-Total Acquisition Cost \$6,687.2M
Current Baseline Risks (1/19/2019)	

(1) Base Year-Total Acquisition Cost \$5431.1M, Average Procurement Unit Cost (APUC) \$6.415M, Program Acquisition Unit Cost \$15.171M. (2) Then Year-Total Acquisition Cost \$6416.1M, Average Procurement Unit Cost (APUC) \$8.383M, Program Acquisition Unit Cost \$17.922M. (3) Interoperability remains a technical risk with cost implications to the CEC program. To mitigate these risks the CEC program is continuing their evolutionary acquisition approach of delivering capability in increments, reducing technical and cost risk, while maintaining effectiveness and producibility. (4) Track File Concurrence (TFC) Performance Shortfall: required software updates to resolve shortfalls. (5) Cybersecurity Vulnerabilities in Deployed CEC Assets. (6) Common Array Block-Shipboard (CAB-S) Antenna Late Delivery.

Original Baseline Risks (7/10/1995)

(1) Base Year-Total Acquisition Cost \$2221.9M, Average Procurement Unit Cost (APUC) \$6.611M, Program Acquisition Unit Cost \$12.142M. (2) Then Year-Total Acquisition Cost \$2573.1M, Average Procurement Unit Cost (APUC) \$8.222M, Program Acquisition Unit Cost \$14.061M. (3) At program inception, interoperability between combat systems and tactical data links was a known risk with cost implications. To mitigate these risks the CEC program began pursuing an evolutionary acquisition process that would deliver capability in increments, reducing technical and cost risk, while maintaining effectiveness and producibility.

(U) Unit Costs**(U) Current Estimate Compared with Current Baseline**

Category (CY\$M) Base Year: 2002	Current Baseline 01/19/2019	Current Estimate PB 2025	% Change
Program Acquisition Unit Cost			
Acquisition Cost	5,431.1	5,460.2	
Program Quantity	358	380	
PAUC	15.171	14.369	-5.29%
Average Procurement Unit Cost			
Procurement Cost	2,104.2	2,080.4	
Procurement Quantity	328	350	
APUC	6.415	5.944	-7.34%

(U) Current Estimate Compared with Original Baseline

Category (CY\$M) Base Year: 1995	Original Baseline 07/10/1995	Current Estimate PB 2025	% Change
Program Acquisition Unit Cost			
Acquisition Cost	2,221.9	4,973.8	
Program Quantity	183	380	
PAUC	12.142	13.089	7.80%
Average Procurement Unit Cost			
Procurement Cost	1,150.3	1,895.1	
Procurement Quantity	174	350	
APUC	6.611	5.419	-18.03%

The Current Estimate's constant-year dollars have been converted from Base Year 2002 to Base Year 1995 using the National Defense Budget Estimates for FY 2023 (Green Book).

Notes

None

(U) Life-Cycle Costs

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

Category (\$M) Base Year: 2002	APB Change 3 (Current) 1/19/2019 CY\$ obs Objective / Threshold		Current Estimate CY\$ obs / TY\$ obs	
Total O&S	1,757.6	1,933.4	1,340.0	3,332.9
Total Disposal	-	-	5.8	-

(U) Current Cost Estimate Sources

Operating and Support Cost

Type: Gate 6 Cost Estimate Update

Approved by: NAVSEA 05C, January 18, 2024

Note: NAVSEA 05C Estimate dated January 2024 completed in coordination with required Gate 6 review;

O&S Cost Notes

a. Disposal/Demilitarization Cost Estimate and Source of

Estimate: \$12.7TY\$M; NAVSEA 05C Estimate dated January 2024 completed in coordination with required Gate 6 review

b. Sustainment Strategy: Sustainment strategy efforts include: Maintenance and repair of CEC fielded systems

(AN/USG-2, Land Based Test Sites, AN/USG-3), Integrated Logistics Support, Software Trouble Reports, Original Equipment Manufacturer Design Agent support, In-Service Engineering, Diminishing Manufacturing Supply Material Shortages, Obsolescence Management.

c. For Each Acquired System or System Variant:

i. Quantity to Sustain: 380

ii. First Operational Fiscal Year: FY 1994

iii. Final Operational Fiscal Year: FY 2056

iv. Unit Expected Service Life: 20 years

d. Antecedent System(s) O&S Costs: No Antecedent

Disposal/Demilitarization Cost

Type: No estimate. Not Applicable

Operating and Support Baseline Deviation Explanation

None

Cost Notes

Deviation Explanation: As a result of, estimate completed for Gate 6 review, programmatic updates include: increase of 16 additional units (PB25) and increase in sustainment duration until FY56

(increase of 2 years). Additionally, updated Joint Inflation Calculator (JIC) from version dated 6/2/22 to version dated 11/17/23. The current estimate includes both internal and external funds based on the Gate 6 estimate. Primary reason for deviation is that sunk amounts in sunk years are updated to match funding/expenditures (this program methodology has been in place for years). Only sunk amounts for program office (internal) cost types are received, while sunk year's expenditures for external organizations (ex. NAVSUP) are not received.

(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: 2002							
System	Unit-Level Manpower	Unit Operations	Maintenance	Sustaining Support	Continuing System Improvements	Other	Total
CEC	-	39.4	599.9	315.3	385.4	-	1,340.0
Program	-	39.4	599.9	315.3	385.4	-	1,340.0

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

No Data

(U) Operating and Support Cost Estimate Assumptions

No Data

Additional O&S Estimate Assumptions

None

Antecedent Estimate Assumptions

None

O&S Annual Cost Calculation Memo

None

(U) Technologies and Systems Engineering

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

Event	Date	Description
Current	12/31/2023	Canada CEC Software Certification
Current	12/31/2023	DDG 1000 Capability Integration ? AMIIP
Current	12/31/2023	GEF (SBC) Availability
Current	12/31/2023	E-2D DSSC 5.3 Alignment

(U) Performing Activities and Contracts**(U) External Government Activities**

None

(U) Contracts and Efforts

Contract Title	Contract Number / Effort	Contractor	Phase
DRS Laurel Technologies	N00024-15-C-5228 / 0	DRS Laurel Technologies	Production
DRS Laurel Technologies	N00024-17-C-5201 / 0	DRS Laurel Technologies	Production
L3 Technologies	N00024-22-C-5218 / 0	L3 Technologies	Production
Raytheon	N00024-20-C-5203 / 0	Raytheon	Production
Raytheon	N00024-19-C-5200 / 0	Collins	Production

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

Contract Number: N00024-15-C-5228 **Order Number:** -
Contract Title: DRS Laurel Technologies **Strategy:** -
CAGE: 0ERB9 - DRS Laurel Technologies **Contracting Office:** -
City, State/Province: Johnstown, PA

Effort Number: 0 **Supported Phase:** Production
Type: Firm-Fixed-Price **Award Date:** December 7, 2022
Latest Modification Date: - **Definitization Date:** February 25, 2015
Latest Modification No.: P00075 **Work Start Date:** -
Technical Data Rights: -

Notes: The Firm Fixed Price (FFP) portion of the Contract N00024-15-C-5228 includes production and testing for AN/USG-2B (Shipboard), AN/USG-3B (Airborne), AN/USG-4B (USMC) Cooperative Engagement Capability (CEC) systems and backfit kits to convert AN/USG-2/2A to AN/USG-2B. The Cost Plus Fixed Fee (CPFF) portion of the contract includes Engineering Services in support of the manufacture, assembly and testing of the CEC production systems under this contract.
 The 396 Delivery to Date reflects the number of principal items actually delivered to date. The 2 Original Quantity reflects the number of principal items procured under the initial contract. The 78 Current Quantity reflects the number of Principal items procured with the latest authorized modification. P00075 Updated delivery dates of SUBCLINs 6001AF, 6001AH, 6034AE, 6034AF, 6034AJ, 6034AL, 6034AM, 6034AP, 6034AQ, 6034AR to 25 Aug 2023.
 The CDRL does not include CSDRs.

Initial Price (TY\$M)		Current Price (TY\$M)		Estimate at Completion (TY\$M)		Initial	Current	Delivered
Target / Ceiling		Target / Ceiling		Contractor / PM		Quantity	Quantity	Quantity
2.0	2.0	114.7	227.0	-	-	2	78	396

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

Contract Number:	N00024-17-C-5201	Order Number:	-
Contract Title:	DRS Laurel Technologies	Strategy:	-
CAGE:	0ERB9 - DRS Laurel Technologies	Contracting Office:	-
City, State/Province:	Johnstown, PA		
Effort Number:	0	Supported Phase:	Production
Type:	Firm-Fixed-Price	Award Date:	December 21, 2022
Latest Modification Date:	-	Definitization Date:	August 24, 2017
Latest Modification No.:	P00025	Work Start Date:	-
Technical Data Rights:	-		
Notes:	<p>This CEC SDP Production (FY 2017 - FY 2023) contract is a follow-on to the CEC Signal Data Processor ? Sierra II Chip (SDP-S) Production (FY 2011 - FY 2016) contract and includes the manufacture, assembly, test, and repair of a SDP assembly for the Cooperative Engagement Transmission Processing Set. Total contracted quantity is 163 SDP-S. 157 units, including initial quantity of 3, and 6 units that require A7 and A8 CCAs have been delivered to date and one (1) SDP remains to be delivered. Contract CLIN/SLIN SDP deliveries have all been met. Contractor is delivering remaining borrow / payback items.</p> <p>The CDRL does not include CSDRs.</p>		

Initial Price (TY\$M)		Current Price (TY\$M)		Estimate at Completion (TY\$M)		Initial Quantity	Current Quantity	Delivered Quantity
Target / Ceiling		Target / Ceiling		Contractor / PM				
0.5	82.0	17.0	82.0	-	-	3	163	156

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

Contract Number:	N00024-22-C-5218	Order Number:	-
Contract Title:	L3 Technologies	Strategy:	-
CAGE:	1BRA6 - L3 Technologies	Contracting Office:	-
City, State/Province:	-		
Effort Number:	0	Supported Phase:	Production
Type:	Firm-Fixed-Price	Award Date:	October 31, 2022
Latest Modification Date:	-	Definitization Date:	July 21, 2022
Latest Modification No.:	P00013	Work Start Date:	-
Technical Data Rights:	-		
Notes:	<p>FY2022 ? 2027 CEC Production and Sustainment Contract, N00024-22-C-5218, was a competitively awarded 18 July 2022. This contract consolidates USG-xB Repair and SDP Production and supports Navy, Marine Corps, and future Foreign Military Sales requirements. The contract is a fixed-price incentive (firm target), firm-fixed-price, cost-plus-incentive-fee, cost-plus-fixed-fee, cost-plus-award-fee, and cost reimbursement contract for CEC system production, repair, and sustainment.</p> <p>The CEC System Production/Repair contract provides manufacturing, assembling, modification, testing, integration, and repair of CEC AN/USG-xB systems, spares, and INCO (comprised of CEC Hardware and SDP minus shipboard antenna). This does not include production of the Planar Array Antenna Assembly (PAAA), Antenna Environmental Control Unit (AECU), or the Shipboard Active Antenna (SBAA), but may include repair of these items. Contractor is currently experiencing Fleet delivery delays</p>		

for SDPs and Spares due to known obsolescence issues and challenges meeting FAU. Government continues to work with Contractor for solutions to obsolescence and to assist Contractor in meeting delivery schedules by providing additional GFM as borrow / payback.
The CDRL includes CSDRs.

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
3.4	3.4	118.5	79.2	-	-	-	-	-

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

Contract Number:	N00024-20-C-5203	Order Number:	-
Contract Title:	Raytheon	Strategy:	-
CAGE:	00724 - Raytheon	Contracting Office:	-
City, State/Province:	-		
Effort Number:	0	Supported Phase:	Production
Type:	Firm-Fixed-Price	Award Date:	December 12, 2022
Latest Modification Date:	-	Definitization Date:	May 7, 2020
Latest Modification No.:	P00030	Work Start Date:	-
Technical Data Rights:	-		
Notes:	<p>The Firm Fixed Price (FFP) portion of the Contract N00024-20-C-5203 includes the manufacture, assembly, and test of the Planar Array Antenna Assembly (PAAA) for the Cooperative Engagement Transmission Processing Set. The Cost Plus Fixed Fee (CPFF) portion of the contract includes Engineering Services in support of the design, manufacture, assembly and testing of the PAAA production systems under this contract.</p> <p>The CDRL includes CSDRs.</p>		

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
32.7	32.7	137.7	137.7	-	-	12	52	-

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

Contract Number:	N00024-19-C-5200	Order Number:	-
Contract Title:	Raytheon	Strategy:	-
CAGE:	00724 - Collins	Contracting Office:	-
City, State/Province:	-		
Effort Number:	0	Supported Phase:	Production
Type:	Firm-Fixed-Price	Award Date:	December 13, 2022
Latest Modification Date:	-	Definitization Date:	May 8, 2019
Latest Modification No.:	P00069	Work Start Date:	-
Technical Data Rights:	-		
Notes:	<p>The FY 2019 - FY 2024 Design Agent/Engineering Services (DA/ES) contract N00024-19-C-5200 is a competitively awarded follow on to the N00024-13-C-5212 and</p>		

includes design, development, integration, test, and maintenance to system capabilities for all baselines applicable to the CEC System, supporting the evolution and maintenance of the CEC System and Single Source Library required for CEC Design Agent.

The N00024-19-C-5200 contract includes development environment infrastructure that supports the complete CEC System development, verification, and support. The Contractor shall maintain the CEC hardware and Software Development Environment (SDE) and testing infrastructure and provide requisite facility and security infrastructure to support existing CEC baselines. Support provided by the Contractor under this contract shall include Program Management, Systems Engineering, Software Development, System Tech Refresh and Obsolescence Update Support, Test and Analysis, Quality Assurance (QA), Configuration Management (CM), ILS, Reliability and Maintainability (R&M), System Safety, System Security, and Cost Estimation.

The Design Agent/Engineering Services (FY 2019 - FY 2024), N00024-19-C-5200 has the following efforts:

1) CEC Capabilities for Integration with AEGIS Advanced Capability Build (ACB) 20 with a period of performance of 8 May 2019 through 30 September 2022; 2) CEC Facilities Management (FY 2019 Design Agent); 3) Advanced Studies and Integration (FY 2019); 4) Software Sustainment (FY 2019); 5) CEC Facilities Management (FY 2020 Design Agent); 6) Advanced Studies and Integration (FY 2021); 7) Software Sustainment (FY 2021); 8) CEC Facilities Management (FY 2021 Design Agent); 9) Provisioned Item Order; 10) Advanced Studies and Integration (FY2 2022); 11) Software Sustainment (FY 2022).

The Design Agent/Engineering Services (FY 2019 - FY 2024), N00024-19-C-5200, Effort 0, is a cumulative total of CLINs 0001, 0002, 0100, 0300, 1002, 1100, 1300, 2002, 0700, 2100, 2300, 2500, 3002, and 1400.

The following methodology ensures values for Design Agent/Engineering Services Competitive FY 2019 - FY 2024 DA/ES Efforts are not double counted. The PM's Estimated Price (\$133.00M) reported for the FY 2019 - FY 2024 DA/ES Effort 0 is not reflected in the Contract Cost Report section. Open Efforts are reported separately, and when completed, moved into the Completed Contracts line.

PM and Contractor Estimated Ceiling Price is Target Cost (\$263.36M) plus Maximum Fee (\$15.98M).

The Current Negotiated Contract Cost (\$125.66M) is the current dollar value (excluding fee of profit) on which contractual agreement was reached as of the reflected report period.

The EVM effort for CLIN 001 was completed in Sep 2022 and there is no further EVM data to report beyond Sep 2022.

The CDRL includes CSDRs.

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
8.0	279.3	199.1	350.2	-	-	-	-	-

(U) Production**(U) Low-Rate Initial Production**

	Original LRIP Determination	Current LRIP Determination
Total LRIP Quantity	7	84
Date	3/2/1998	10/31/2013
Reference	LRIP 1 ADM	LRIP 14 ADM
LRIP Period	FY 1998 - 1998	FY 1998 - 2013
Total Procurement Quantity	7	84
LRIP Percentage of Total	100.0%	100.0%

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 due to the requirements to meet ship installation schedules, outfit Land Based Test Sites in preparation for completion of Operational Testing (OT), and to maintain the Minimum Sustaining Rate for production of CEC systems pending completion of OT and entry into FRP.

LRIP Notes

None

(U) Deliveries and Expenditures**(U) Acquisition Funding**

	Total Estimate	Actual to Date	Actual, Percent Complete
Years Appropriated	40	40	100.0%
Appropriations (TY, \$M)	6,678.2	6,678.2	100.0%
Expenditures (TY, \$M)	6,678.2	5,276.0	79.0%

(U) End Items Delivered

	Total Required	Planned to Date	Actual to Date	Actual, Percent Complete
Development	30			
CEC		-	30	
Procurement	350			
CEC		-	231	
Total	380	-	261	68.7%

Notes

Assumed that all funding through FY 2024 is appropriated (O&M values not included). The above data is current as of March 13, 2024

(U) International Program Aspects**General Memo**

None

Exportability and Business Issues

None

Is design for international exportability
planned?

-

Industry/Partner Exportability Cost-Sharing?

-

Program Protection: Technology Security and Foreign Disclosure Issues

None

(U) Agreements

No International Agreements have been defined for CEC



UNCLASSIFIED

Modernized Selected Acquisition Report Supplement

Cooperative Engagement Capability (CEC)

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

UNCLASSIFIED

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
Cooperative Engagement Capability

Short Name
CEC

PNO
582

Lead Component
Navy

AAF Pathway
MCA

Acquisition Type
MDAP

Acquired Systems
CEC

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

Cooperative Engagement Capability

Major Software Efforts

Title	Status	Fielding Date	Description

Major Engineering Changes

Title	Original Need Date	Fielding Date	Description, Rationale and Program Impacts

Funding Sources (Acquisition)

Acquisition Funding Notes

External Customer Procurement funding (SCN, APN, etc.) is provided by multiple platform offices for CEC Shipset(s) as specifically noted.

Cooperative Engagement Capability

Category	Account	BA	Line Item	Program Element	RDT&E Project	Shared	Sunk
RDT&E	1319N	07	0607658N - Cooperative Engagement Capability (CEC)	0607658N	2039 - COOP Engagement		
Procurement	1810N	02	2606 - Cooperative Engagement Capability	0204228N	-		
Procurement	1611N	02	2122 - DDG-51	0204222N	-		
Note: Line Item is provided by external customer procurement funding for CEC Shipset(s)							
Procurement	1611N	02	2119 - DDG 1000	0204222N	-		
Procurement	1611N	03	3041 - LHA Replacement	0204112N	-		
Procurement	1611N	03	3041 - LHA Replacement	0204411N	-		
Procurement	1611N	03	3035 - LHD-1 AMPHIBIOUS ASSAULT SHIP	0204411N	-		
Procurement	1611N	03	3035 - LHD-1 AMPHIBIOUS ASSAULT SHIP	0888888N	-		
Procurement	1611N	03	3036 - LPD-17	0888888N	-		
Procurement	1611N	03	3036 - LPD-17	0204411N	-		
Procurement	1611N	03	3010 - LPD Flight II	0204411N	-		
Procurement	1611N	02	2086 - CVN Refueling Overhauls	0204112N	-		
Procurement	1611N	02	2086 - CVN Refueling Overhauls	0702898N	-		
Procurement	1611N	02	2086 - CVN REFUELING OVERHAULS	0888888N	-		

Cooperative Engagement Capability

Category	Account	BA	Line Item	Program Element	RDT&E Project	Shared	Sunk
Procurement	1611N	02	2001 - Carrier Replacement Program	0204112N	-		
Procurement	1611N	02	2001 - CARRIER REPLACEMENT PROGRAM	0888888N	-		
Procurement	1611N	02	2001 - Carrier Replacement Program	0702898N	-		
Procurement	1611N	02	2128 - FFG-Frigate	0204224N	-		
Procurement	1109N	04	4640 - Air Operations C2 Systems	0206313M	-		

Funding Sources (Operating and Support)

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

Operating and Support Funding Notes

Cooperative Engagement Capability

Category	Account	BA	Line Item	Program Element	RDT&E Project	Shared	Sunk
Procurement	1810N	02	2606 - Cooperative Engagement Capability	0204228N	-		
Procurement	1810N	02	2606 - Cooperative Engagement Capability	0204228N	-		
O&M	1804N	01	1C1C - Combat Communications and Electronic Warfare	0702827N	-		
O&M	1106N	01	1A1A - Operational Forces	0206626M	-		
O&M	1106N	01	1A1A - Operational Forces	0206313M	-		

Acquisition Estimate and Quantity Summary

Cooperative Engagement Capability

Acquisiton Estimates

Category	PB 2025	Current Base Year		Original Base Year		Report Fiscal Year
		TY (\$M)	CY2002 (\$M)	CY1995 (\$M)	CY2024 (\$M)	
RDT&E		3,854.2	3,379.8	3,078.7		5,514.4
Procurement		2,824.0	2,080.4	1,895.1		3,394.3
MILCON		-	-	-		-
O&M		-	-	-		-
Total Acquisition		6,678.2	5,460.2	4,973.8		8,908.7
PAUC		17.574	14.369	13.089		23.444
APUC		8.069	5.944	5.414		9.698

Acquisiton End-Item Quantities

System	PB 2025	Development	Procurement
CEC		30	350
Total		30	350

Unit Description

Quantity increased to 380 for PB25 for the CEC Enterprise which includes AN/USG-2/2A, AN/USG-2B, AN/USG-3, AN/USG-3B"

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

Appropriation	Prior	2024	2025	2026	2027	2028	2029	To Complete	Total
RDT&E	3,362.3	87.1	99.9	78.2	78.1	76.2	72.4	-	3,854.2
Procurement	2,187.9	81.7	82.1	66.5	80.4	90.6	82.0	153.0	2,824.0
MILCON	-	-	-	-	-	-	-	-	-
O&M	-	-	-	-	-	-	-	-	-
PB 2025 Total	5,550.1	168.8	181.9	144.7	158.5	166.8	154.4	153.0	6,678.2

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Cooperative Engagement Capability

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 CY2002 (\$M)
Total		3,817.2	3,817.2	-	3,347.2
1994		203.200	203.2	0.906343	224.2
1995		154.100	154.1	0.923809	166.8
1996		256.400	256.4	0.939413	272.9
1997		224.700	224.7	0.950934	236.3
1998		200.800	200.8	0.958723	209.4
1999		189.800	189.8	0.970010	195.7
2000		179.800	179.8	0.984208	182.7
2001		173.400	173.4	0.997712	173.8
2002		106.700	106.7	1.007796	105.9
2003		107.100	107.1	1.022570	104.7
2004		91.100	91.1	1.051114	86.7
2005		114.000	114.0	1.078779	105.7
2006		99.800	99.8	1.112394	89.7
2007		55.000	55.0	1.139640	48.3
2008		53.400	53.4	1.160428	46.0
2009		44.200	44.2	1.175329	37.6
2010		65.800	65.8	1.192958	55.2
2011		59.650	59.7	1.221443	48.8
2012		60.000	60.0	1.241700	48.3
2013		52.490	52.5	1.254738	41.8
2014		60.000	60.0	1.272468	47.2
2015		42.560	42.6	1.288478	33.0
2016		73.800	73.8	1.312393	56.2
2017		78.700	78.7	1.336948	58.9
2018		90.190	90.2	1.369696	65.8
2019		126.190	126.2	1.396076	90.4
2020		106.120	106.1	1.447415	73.3
2021		86.420	86.4	1.512468	57.1
2022		81.700	81.7	1.591483	51.3
2023		88.140	88.1	1.638862	53.8
2024		87.140	87.1	1.676274	52.0
2025		99.890	99.9	1.711832	58.4
2026		78.210	78.2	1.747781	44.7
2027		78.120	78.1	1.784484	43.8
2028		76.200	76.2	1.821958	41.8
2029		72.420	72.4	1.860220	38.9

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Cooperative Engagement Capability

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

2040A - Research, Development, Test & Eval, Army					
fiscal year		Other/ Unallocated	Total TY(\$M)	Weighted Rate	Total CY2002 (\$M)
Total		37.0	37.0	-	32.5
1994			-	0.908174	-
1995			-	0.925931	-
1996			-	0.942475	-
1997			-	0.953259	-
1998			-	0.960916	-
1999		9.700	9.7	0.971891	10.0
2000			-	0.986577	-
2001			-	0.999544	-
2002			-	1.010324	-
2003			-	1.029258	-
2004			-	1.053724	-
2005			-	1.084152	-
2006			-	1.114536	-
2007			-	1.141436	-
2008			-	1.163296	-
2009		8.600	8.6	1.178162	7.3
2010		5.200	5.2	1.195986	4.3
2011		5.000	5.0	1.219498	4.1
2012		5.600	5.6	1.238712	4.5
2013		2.400	2.4	1.259774	1.9
2014		0.500	0.5	1.284043	0.4

Annual Acquisition Estimates by Appropriation Account

(Aligned to Budget Position: PB 2025)

Cooperative Engagement Capability

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

1810N - Other 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 CY2002 (\$M)
Total	1,193.3	29.8	-	-	-	268.5	1,491.6	-	1,195.8
1994							-	0.917542	-
1995							-	0.933429	-
1996							-	0.945174	-
1997							-	0.955968	-
1998	53.840	1.346				12.114	67.3	0.964080	69.8
1999	65.120	1.628				14.652	81.4	0.976233	83.4
2000	47.360	1.184				10.656	59.2	0.989805	59.8
2001	29.120	0.728				6.552	36.4	1.003065	36.3
2002	67.200	1.680				15.120	84.0	1.016437	82.6
2003	56.800	1.420				12.780	71.0	1.036532	68.5
2004	52.960	1.324				11.916	66.2	1.062106	62.3
2005	53.680	1.342				12.078	67.1	1.092009	61.4
2006	20.000	0.500				4.500	25.0	1.128193	22.2
2007	30.400	0.760				6.840	38.0	1.152752	33.0
2008	31.120	0.778				7.002	38.9	1.171485	33.2
2009	27.360	0.684				6.156	34.2	1.186928	28.8
2010	40.000	1.000				9.000	50.0	1.209869	41.3
2011	49.120	1.228				11.052	61.4	1.227559	50.0
2012	32.160	0.804				7.236	40.2	1.247091	32.2
2013	25.120	0.628				5.652	31.4	1.264167	24.8
2014	28.480	0.712				6.408	35.6	1.280991	27.8
2015	48.640	1.216				10.944	60.8	1.299464	46.8
2016	22.480	0.562				5.058	28.1	1.322988	21.2
2017	21.600	0.540				4.860	27.0	1.351089	20.0
2018	24.240	0.606				5.454	30.3	1.381878	21.9
2019	33.760	0.844				7.596	42.2	1.415412	29.8
2020	26.656	0.666				5.998	33.3	1.465251	22.7
2021	21.040	0.526				4.734	26.3	1.536932	17.1
2022	20.816	0.520				4.684	26.0	1.602116	16.2
2023	26.560	0.664				5.976	33.2	1.648496	20.1
2024	30.144	0.754				6.782	37.7	1.685863	22.4
2025	21.312	0.533				4.795	26.6	1.721614	15.5
2026	25.808	0.645				5.807	32.3	1.757768	18.4
2027	26.336	0.658				5.926	32.9	1.794681	18.3
2028	26.904	0.673				6.053	33.6	1.832369	18.4
2029	27.480	0.687				6.183	34.4	1.870849	18.4
2030	30.952	0.774				6.964	38.7	1.910137	20.3

Cooperative Engagement Capability

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

1810N - Other 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 CY2002 (\$M)
2031	23.776	0.594				5.350	29.7	1.950250	15.2
2032	14.536	0.363				3.271	18.2	1.991205	9.1
2033	10.400	0.260				2.340	13.0	2.033020	6.4

Cooperative Engagement Capability

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

2031A - Aircraft Procurement, Army									
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 CY2002 (\$M)
Total	389.3	-	-	-	-	-	389.3	-	316.3
1994							-	0.923029	-
1995							-	0.938229	-
1996							-	0.951249	-
1997							-	0.961739	-
1998							-	0.970817	-
1999							-	0.978189	-
2000	35.000						35.0	0.991073	35.3
2001	14.700						14.7	1.002651	14.7
2002	27.600						27.6	1.016614	27.1
2003	33.300						33.3	1.038703	32.1
2004	27.900						27.9	1.067843	26.1
2005	-						-	1.097429	-
2006	-						-	1.127313	-
2007	-						-	1.150259	-
2008	-						-	1.168553	-
2009	7.700						7.7	1.185374	6.5
2010	12.600						12.6	1.205865	10.4
2011	16.300						16.3	1.227954	13.3
2012	15.600						15.6	1.248742	12.5
2013	14.900						14.9	1.270949	11.7
2014	13.100						13.1	1.290184	10.2
2015	16.000						16.0	1.310505	12.2
2016	16.300						16.3	1.329333	12.3
2017	19.900						19.9	1.356230	14.7
2018	16.900						16.9	1.386619	12.2
2019	13.800						13.8	1.431011	9.6
2020	21.200						21.2	1.489705	14.2
2021	18.000						18.0	1.557710	11.6
2022	30.650						30.7	1.617141	19.0
2023	17.800						17.8	1.659989	10.7

Cooperative Engagement Capability

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

1109N - Procurement, Marine Corps									
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 CY2002 (\$M)
Total	34.1	66.1	-	-	-	-	100.2	-	68.6
1994							-	0.922595	-
1995							-	0.940479	-
1996							-	0.953914	-
1997							-	0.959375	-
1998							-	0.967543	-
1999							-	0.979806	-
2000							-	0.992915	-
2001							-	1.004157	-
2002							-	1.011981	-
2003							-	1.034961	-
2004							-	1.066407	-
2005							-	1.096888	-
2006							-	1.131567	-
2007							-	1.153515	-
2008	1.020	1.980					3.0	1.172172	2.6
2009	5.440	10.560					16.0	1.188072	13.5
2010	-	-					-	1.215342	-
2011	3.842	7.458					11.3	1.230266	9.2
2012	1.292	2.508					3.8	1.249806	3.0
2013	-	-					-	1.266039	-
2014	-	-					-	1.282646	-
2015	0.646	1.254					1.9	1.302133	1.5
2016	0.238	0.462					0.7	1.326398	0.5
2017	0.408	0.792					1.2	1.353834	0.9
2018	2.856	5.544				-	8.4	1.381802	6.1
2019	0.884	1.716				-	2.6	1.417521	1.8
2020	-	-				-	-	1.473140	-
2021	0.425	0.825				-	1.3	1.546353	0.8
2022	-	-				-	-	1.613980	-
2023	1.877	3.643				-	5.5	1.657285	3.3
2024	5.226	10.144				-	15.4	1.693999	9.1
2025	4.396	8.534				-	12.9	1.729783	7.5
2026	1.527	2.963				-	4.5	1.766109	2.5
2027	1.571	3.049				-	4.6	1.803197	2.6
2028	1.438	2.792				-	4.2	1.841064	2.3
2029	0.972	1.888				-	2.9	1.879726	1.5

Cooperative Engagement Capability

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

1611N (BLS Hist) - Shipbuilding and Conversion, 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 CY2002 (\$M)
Total	674.4	16.9	-	-	-	151.7	843.0	-	499.6
1994							-	0.936123	-
1995	12.400	0.310				2.790	15.5	0.946639	16.4
1996	9.120	0.228				2.052	11.4	0.956813	11.9
1997	-	-				-	-	0.971430	-
1998	28.000	0.700				6.300	35.0	0.993292	35.2
1999	7.920	0.198				1.782	9.9	1.009091	9.8
2000	12.800	0.320				2.880	16.0	1.034731	15.5
2001	10.720	0.268				2.412	13.4	1.070323	12.5
2002	13.680	0.342				3.078	17.1	1.076417	15.9
2003	5.280	0.132				1.188	6.6	1.138693	5.8
2004	5.520	0.138				1.242	6.9	1.180000	5.8
2005	6.560	0.164				1.476	8.2	1.232303	6.7
2006	11.120	0.278				2.502	13.9	1.275763	10.9
2007	18.160	0.454				4.086	22.7	1.334385	17.0
2008	12.880	0.322				2.898	16.1	1.379834	11.7
2009	16.160	0.404				3.636	20.2	1.422045	14.2
2010	6.080	0.152				1.368	7.6	1.471451	5.2
2011	13.648	0.341				3.071	17.1	1.519722	11.2
2012	9.520	0.238				2.142	11.9	1.554585	7.7
2013	26.000	0.650				5.850	32.5	1.587100	20.5
2014	5.120	0.128				1.152	6.4	1.619238	4.0
2015	8.960	0.224				2.016	11.2	1.656557	6.8
2016	28.720	0.718				6.462	35.9	1.698919	21.1
2017	24.032	0.601				5.407	30.0	1.747653	17.2
2018	22.432	0.561				5.047	28.0	1.804582	15.5
2019	13.560	0.339				3.051	17.0	1.871728	9.1
2020	32.520	0.813				7.317	40.7	1.948855	20.9
2021	26.696	0.667				6.007	33.4	2.027650	16.5
2022	14.800	0.370				3.330	18.5	2.098451	8.8
2023	36.328	0.908				8.174	45.4	2.147830	21.1
2024	22.888	0.572				5.150	28.6	2.193907	13.0
2025	33.984	0.850				7.646	42.5	2.240061	19.0
2026	23.816	0.595				5.359	29.8	2.287102	13.0
2027	34.256	0.856				7.708	42.8	2.335131	18.3
2028	42.160	1.054				9.486	52.7	2.384169	22.1
2029	35.824	0.896				8.060	44.8	2.434237	18.4
2030	13.960	0.349				3.141	17.5	2.485356	7.0
2031	14.240	0.356				3.204	17.8	2.537548	7.0
2032	14.520	0.363				3.267	18.2	2.590837	7.0

Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

Cooperative Engagement Capability

1319N - Research, Development, Test & Eval, Navy				
fiscal year	CEC			Total
Total	22			22
Undistributed				-
1994	16			16
1995	5			5
1996				-
1997				-
1998				-
1999				-
2000				-
2001				-
2002				-
2003				-
2004				-
2005				-
2006				-
2007	1			1

Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

Cooperative Engagement Capability

2040A - Research, Development, Test & Eval, Army				
fiscal year	CEC			Total
Total	8			8
Undistributed				-
1994				-
1995				-
1996				-
1997				-
1998				-
1999				-
2000				-
2001				-
2002				-
2003				-
2004				-
2005				-
2006				-
2007				-
2008				-
2009	5			5
2010	3			3

Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

Cooperative Engagement Capability

1810N - Other Procurement, Navy				
fiscal year	CEC			Total
Total	118			118
Undistributed				-
1994				-
1995				-
1996				-
1997				-
1998	5			5
1999	5			5
2000	3			3
2001	6			6
2002	4			4
2003	6			6
2004	4			4
2005	3			3
2006	3			3
2007	5			5
2008	4			4
2009	4			4
2010	4			4
2011	5			5
2012				-
2013	2			2
2014	2			2
2015	4			4
2016	1			1
2017	1			1
2018	1			1
2019	2			2
2020	1			1
2021	2			2
2022	2			2
2023	3			3
2024	5			5
2025	3			3
2026	4			4
2027	5			5

Cooperative Engagement Capability

1810N - Other Procurement, Navy				
fiscal year	CEC			Total
2028	5			5
2029	5			5
2030	6			6
2031	3			3

Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

Cooperative Engagement Capability

2035A - Other Procurement, Army				
fiscal year	CEC			Total
Total	105			105
Undistributed				-
1994				-
1995				-
1996				-
1997				-
1998				-
1999				-
2000	6			6
2001	1			1
2002	5			5
2003	6			6
2004	6			6
2005	2			2
2006	3			3
2007				-
2008				-
2009				-
2010				-
2011	5			5
2012	5			5
2013	5			5
2014	5			5
2015	5			5
2016	5			5
2017	6			6
2018	5			5
2019	6			6
2020	6			6
2021	12			12
2022	5			5
2023	6			6

Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

Cooperative Engagement Capability

1109N - Procurement, Marine Corps				
fiscal year	CEC			Total
Total	18			18
Undistributed				-
1994				-
1995				-
1996				-
1997				-
1998				-
1999				-
2000				-
2001				-
2002				-
2003				-
2004				-
2005				-
2006				-
2007				-
2008				-
2009	10			10
2010				-
2011				-
2012				-
2013				-
2014				-
2015				-
2016				-
2017				-
2018				-
2019				-
2020				-
2021				-
2022				-
2023	2			2
2024	3			3
2025	3			3

Acquired System Annual End-Item Quantities by Appropriation Account

(Aligned to Budget Position: PB 2025)

Cooperative Engagement Capability

1611N (OSD Compt) - Shipbuilding and Conversion, Navy				
fiscal year	CEC			Total
Total	109			109
Undistributed				-
1994				-
1995	1			1
1996	1			1
1997				-
1998	3			3
1999	1			1
2000	2			2
2001	2			2
2002	2			2
2003	1			1
2004	1			1
2005	1			1
2006	2			2
2007	3			3
2008	2			2
2009	3			3
2010	1			1
2011	3			3
2012	2			2
2013	5			5
2014	1			1
2015	2			2
2016	5			5
2017	4			4
2018	4			4
2019	3			3
2020	6			6
2021	4			4
2022	3			3
2023	6			6
2024	4			4
2025	5			5
2026	4			4
2027	5			5

Cooperative Engagement Capability

1611N (OSD Compt) - Shipbuilding and Conversion, Navy				
fiscal year	CEC			Total
2028	6			6
2029	5			5
2030	2			2
2031	2			2
2032	2			2

Nuclear Costs

Cooperative Engagement Capability

Program's Use of Department of Energy Resources

None

Operational Fielding Plan

Cooperative Engagement Capability

System: CEC

Fielding and Inventory Notes

CEC Fielding Plan and Inventory

fiscal year	Store	Field	Expend/Loss	Decommission	Inventory
2023					
2024		11		7	4
2025		13		11	6
2026		12		6	12
2027		10		1	21
2028		2		1	22
2029		8			30

O&S Independent Cost Estimate

Cooperative Engagement Capability

Independent and Current Cost Estimate Comparison

Category	CY2002 (\$M)	Independent Cost Estimate 7/19/2022	Current Estimate 1/18/2024	Variance with ICE (%)
Unit-Level Manpower				-
Unit Operations		39.4	39.4	0%
Maintenance		644.4	599.9	-7%
Sustaining Support		324.1	315.3	-3%
Continued System Improvements		409.2	385.4	-6%
Other				-
Total O&S		1,417.1	1,340.0	-5%

Independent Cost Estimate Source

Event: Sustainment Review - Navy Gate 7
 Type: Independent Cost Estimate
 Approved by: NAVSEA 05C, July 19, 2022
 Note: Internal + External FY25+ To-go only - Includes taxes

Current Cost Estimate Source

Type: Gate 6 Estimate Update
 Approved by: NAVSEA 05C, January 18, 2024
 Note: Update to Gate 7 model reflecting PB25 quantities and update to JIC.
 Internal + External FY25+ To-go only - Includes taxes

Cost Estimate Variance Explanation

Reasons for decrease in cost:

- Earlier procurement/phasing of units
- Earlier decommission of legacy units (more expensive units to maintain)
- Update to JIC (was dated 6/2/22, now dated 11/17/23)
- Additional units are significantly less expensive to maintain (airborne and ground mobile vs shipboard units)

Annual Operating and Support Estimates by Cost Element

Cooperative Engagement Capability

System: CEC

Source for TY-CY Conversion: JIC dated 11/17/23

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 CY2002 (\$M)
Total	-	39.4	599.9	315.3	385.4	-	1,340.0
2025		2.183	30.915	13.470	27.452		74.0
2026		2.312	31.145	13.609	23.899		71.0
2027		2.400	31.813	13.694	23.972		71.9
2028		2.395	32.089	13.703	21.517		69.7
2029		2.396	32.245	13.725	18.794		67.2
2030		2.457	33.803	13.812	18.875		68.9
2031		2.511	34.161	13.896	10.221		60.8
2032		2.488	34.624	13.952	10.267		61.3
2033		2.482	34.634	13.962	9.599		60.7
2034		2.296	33.684	13.883	9.661		59.5
2035		2.022	33.441	12.887	9.723		58.1
2036		1.879	30.801	12.809	9.785		55.3
2037		1.693	28.469	11.806	9.848		51.8
2038		1.563	25.793	11.735	9.911		49.0
2039		1.372	21.017	10.737	9.974		43.1
2040		1.180	18.063	9.725	10.038		39.0
2041		1.042	16.545	9.420	10.102		37.1
2042		0.925	14.581	8.494	10.166		34.2
2043		0.793	13.537	8.415	10.230		33.0
2044		0.702	11.944	8.384	10.295		31.3
2045		0.571	11.050	8.304	10.360		30.3
2046		0.507	9.125	7.357	10.425		27.4
2047		0.350	8.472	7.166	10.491		26.5
2048		0.229	7.140	6.003	10.557		23.9
2049		0.229	6.885	6.021	10.623		23.8
2050		0.169	5.336	5.969	8.240		19.7
2051		0.115	3.488	5.489	8.297		17.4
2052		0.060	1.956	5.439	8.355		15.8
2053		0.054	1.391	5.455	8.413		15.3
2054		0.006	1.042	5.328	8.471		14.8
2055		-	0.396	5.320	8.391		14.1
2056		-	0.344	5.320	8.405		14.1