

SPAWAR J&A No. 17-312  
SPAWAR 2.1B16  
N00039-14-R-0012

**JUSTIFICATION AND APPROVAL (J&A) TO PROCURE USING  
OTHER THAN FULL AND OPEN COMPETITION**

Upon the basis of the following justification, I, as Procuring Activity Competition Advocate, Space and Naval Warfare Systems Command (SPAWAR), hereby approve the use of other than full and open competition for the proposed contractual action pursuant to the authority of 10 U.S.C. 2304(c)(1), Only One Responsible Source (FAR Subpart 6.302-1).

**JUSTIFICATION**

1. Agency and Contracting Activity. Department of the Navy (DoN), Space and Naval Warfare Systems Command (SPAWARSYSCOM) on behalf of Program Executive Officer Command, Control, Communications, Computers and Intelligence (PEO C4I), Communications and GPS Navigation Program Office (PMW/A 170).

2. Nature/Description of Action(s). The proposed contractual action will result in a new sole source five year contract to Cubic Defense Applications, 9333 Balboa Ave., San Diego, CA 92123. The proposed contract will be Firm-Fixed-Priced (FFP) for production and provisioning items and other parts, Cost-Plus-Fixed-Fee (CPFF) for engineering services and Other Direct Costs (ODCs). This contract includes the production of up to forty-seven (47) 500 Watt (500W) High Frequency Power Amplifiers (HFPAs) for the AN/USC-61C Digital Modular Radio (DMR) system and engineering services to identify, develop, implement Engineering Change Proposals (ECPs) for product improvements, parts obsolescence, and the repair of hardware and software systems/subsystems. The total estimated value is \$5.2M over the proposed five years of the contract.

This action is a follow-on effort to DMR 500W HFPA contract, N00039-11-C-0038, awarded to Cubic Defense Applications under the authority of combined J&As 16,330 and 16,516. This FY11 contract expired on 5 March 2012. A follow-on DMR 500W HFPA contract was not previously planned because the Joint Tactical Radio System (JTRS) Airborne and Maritime/Fixed (AMF) radio program was identified to replace the DMR and become the official radio program of record for the Navy beginning in FY14. In May of 2012, the AMF program was officially terminated,

leaving DMR as the Navy's only viable solution for shipboard tactical radios.

3. Description of Supplies/Services. PEO C4I PMW/A 170 is the Navy's Program Office responsible for providing communication capabilities to the fleet. The DMR is a modular, software re-programmable radio communication system with embedded cryptography capable of providing communications functionality and interoperability with existing Navy legacy systems and future joint service and coalition communications systems. The DMR interfaces with the same standard shipboard and shore based communications equipment configurations that the legacy systems are currently using.

The DMR 500W HFPFA is a software programmable radio frequency power amplifier providing the power amplifier functionality for the DMR to communicate using High Frequency (HF) Line of Sight (LOS) and Beyond Line of Sight (BLOS) communications waveforms. The DMR 500W HFPFA is utilized exclusively onboard submarine platforms.

As part of the DMR radio communication system, the HFPFA was originally developed, produced and maintained under contract N00039-04-C-0022, CLIN 0002, executed on 17 December 2003 with General Dynamics C4 Systems. Cubic delivered the 500W HFPFA as a subcontractor under CLIN 0002.

Under the proposed FFP/CPFF contract, Cubic Corporation will be the prime contractor responsible for the manufacturing, testing, and delivery of DMR 500W HFPAs in accordance with the DMR 500W HFPFA specification that will be attached to the contract.

The base year of this contract is expected to be funded with Shipbuilding and Conversion Navy (SCN) dollars. The base year production DMR 500W HFPFA units will satisfy requirements for DMR installations on new Virginia Class submarines.

The option year procurements on this contract are expected to be funded with Other Procurement Navy (OPN) dollars. The option year production DMR 500W HFPFA units will satisfy hardware requirements for DMR system fleet modernization on multiple submarine classes including Guided Missile Submarines (SSGN), Ballistic Missile Submarines (SSBN), and Attack Submarines (SSN).

The proposed contract will also procure engineering services to identify, develop, and implement Engineering Change Proposals

(ECPs) for product improvements, parts obsolescence, and the repair of hardware and software systems/subsystems.

**Table 1: DMR 500W HFPAs Estimated Follow-On Production Quantities**

Fiscal Year	Estimated Production Quantity
FY-15	10
FY-16	5
FY-17	4
FY-18	13
FY-19	15
<b>Total</b>	<b>47</b>

4. Identification of Statutory Authority. 10 U.S.C. 2304(c) (1), Only One Responsible Source (FAR Subpart 6.302-1) and no other supplies or services will satisfy agency requirements.

5. Demonstration of Contractor's Unique Qualifications.

a. Cubic Corporation is the original designer and sole production manufacturer of the submarine specific DMR 500W HFPAs equipment. Cubic initially designed, developed, and produced six first article DMR 500W HFPAs as a subcontractor to General Dynamics (GD) on contract N00039-04-C-0022, which was awarded on 17 December 2003. A DMR 500W HFPAs production CLIN was incorporated into that contract on 27 September 2006 and 32 additional DMR 500W HFPAs were produced by Cubic Corporation and delivered via GD.

Subsequently, two other sole source contracts for DMR 500W HFPAs have been awarded to Cubic Corporation to meet SCN and other customer DMR system requirements. On 15 November 2007, N00039-08-C-0010 was awarded for a quantity of seven (7) units and contract N00039-11-C-0038 was awarded on 5 April 2011 for 11 units.

Cubic Corporation developed all of the DMR 500W HFPAs hardware components, the operating software, and the HFPAs control software interfaces. Cubic Corporation is currently the only PA manufacturing source with the detailed knowledge of and extensive experience with the DMR 500W HFPAs design data and software source code that is necessary to produce the DMR 500W HFPAs. This type of knowledge and experience is necessary because the overall HF solution must use the existing DMR terminal, architecture, and operating interfaces. This "inside the box" technical knowledge and integration approach is

required to preserve the form, fit and functionality of the DMR 500W HFPA equipment in the currently deployed DMR environments.

To qualify Cubic as the submarine DMR 500W HFPA manufacturer, the Government invested over \$4.5M. The qualification included the procurement of six (6) prototype units, shock and vibrate testing, and electrical compatibility testing for the prototypes. The Government would need to make a similar financial investment to qualify a second DMR 500W HFPA manufacturer. The investment required to qualify a second DMR 500W HFPA manufacturer would represent a substantial duplication of costs which cannot reasonably be expected to be recovered through a competitive contract award given the fact that the base year value of this proposed contractual action is estimated to be less than \$1M and the total contract value is estimated at \$5.2M, if all procurement options are exercised.

b. Government estimates indicate it would take another vendor approximately two years to be able to successfully manufacture and test a form, fit, and function HFPA replacement. This estimate is based upon the recorded development metrics, required testing events, and progress of the delivery of existing HFPA prototypes by Cubic Corporation under the above identified contract. A delay of two years is unacceptable to the U.S. Navy due to SCN fielding requirements. Failure to timely deliver production DMR 500W HFPA units will force the shipyards to delay critical modernization work or pursue costly alternative workarounds.

In addition, the radio rooms for the new construction Block IV Virginia Class submarine platform have already been designed using the DMR 500W HFPA solution.

Relying on a solution utilizing alternative or legacy communications equipment will involve a re-design of the submarine radio communication suite, forcing submarines to be late for their respective battle group deployments and significantly impacting fleet capability and readiness.

Accordingly, Cubic Corporation is the only responsible source currently capable of providing DMR 500W HFPA without an unacceptable delay in fulfilling agency requirements.

6. Government-wide Point of Entry (GPE)/FedBizOpps Announcement/Potential Sources. This effort was synopsisized on 22 April 2014 in accordance with FAR Part 5. No responses were received.

7. Determination of Fair and Reasonable Cost. The Contracting Office will determine if the costs to the Government for this acquisition are fair and reasonable in accordance with FAR Part 15. The contractor will be required to provide certified cost and pricing data of which the Contracting Office will perform a cost analysis. In addition, the Government will utilize historical cost data from contract N00039-04-C-0022, in order to aid in the determination of fair and reasonable pricing.

8. Description of Market Research. Market research, in accordance with FAR Part 10, was conducted via a FedBizOpps sources sought notification (MKTSVY-0E4A0E) announcement released 15 November 2013, soliciting inquiries from interested parties. In response to this sources sought notification, three potential vendors submitted information:

Cubic Corporation, San Diego, CA  
Elbit Systems of America (ESA), Fort Worth, TX  
Milpower, Inc., El Cajon, CA

During the Government's evaluation of the respondents, only one company, Cubic Corporation, was deemed capable of meeting the Government's technical and delivery requirements. The other respondents did not have an off-the-shelf product that meets the Government's technical requirements and delivery schedule.

9. Any Other Supporting Facts. None identified.

10. Listing of Interested Sources. The following responded to the Request for Information (RFI):

Cubic Corporation, San Diego, CA  
Elbit Systems of America (ESA), Fort Worth, TX  
Milpower, Inc., El Cajon, CA

The Government has not received any responses to the pre-solicitation notice issued on 22 April 2014.

11. Actions to Remove Barriers to Competition. This work requires the vendor to have detailed knowledge of and extensive experience with the DMR 500W HFPA design data and software source code that is necessary to produce the DMR 500W HFPA. Based on the market research conducted in November 2013, there are no companies capable of providing a solution that meets the DMR 500W HFPA requirements without substantial duplication of costs that would not be recoverable through competition for the reasons explained above. As the original designer and sole

production manufacturer of the DMR 500W HFFA equipment, Cubic Corporation possesses the requisite knowledge and ability to satisfactorily produce and deliver a fully qualified DMR 500W HFFA.

The Government is pursuing delivery of Level 3 engineering drawings for the DMR 500W HFFA. These drawings will complete the Technical Data Package (TDP) required to support full and open competition on any future DMR 500W HFFA procurement(s) and/or legacy system maintenance.

Further, following this procurement, it is expected that the DMR 500W HFFA will be fully fielded on all U.S. Navy submarines. Any requirements for DMR 500W HFFAs on future SCN submarines should be able to be fulfilled by repurposing assets from submarines that are decommissioned. Therefore, no further procurements are expected beyond the five years of this anticipated sole source contract for the DMR 500W HFFA.

12. Statement of Delivery Requirements. The period of performance for the proposed acquisition is from the effective date of contract award through FY19. Deliveries are required at a rate of four(4) per month starting one year after the effective date of contract award in the base year and one year after each option year procurement award.

13. Total Estimated Dollar Value of the Acquisition Covered by this J&A. The total estimated cost of this acquisition is \$5,200,000.00. Funding is provided separately for each individual option year exercise.

**Table 2: Estimated Dollar Value**

		Estimated Dollar Value					
	Funding	Base Yr. FY15	Option Yr1 FY16	Option Yr2 FY17	Option Yr3 FY18	Option Yr4 FY19	Total
HFFA EQUIPMENT	SCN	(b)(5)					
HFFA EQUIPMENT	OPN						
HFFA EQUIPMENT	OMN						
Engineering Services	RDTE						
<b>Total</b>							\$5,200,000

**TECHNICAL AND REQUIREMENTS CERTIFICATION (FAR 6.303-2(b))**

I certify that the facts and representations under my cognizance, which are included, form a basis for this justification and are complete and accurate.

**Technical Cognizance:**

(b)(6) 8/14/14  
DATE  
CAPT MARK V. GLOVER  
Program Manager, Communications and GPS Navigation (PMW/A 170)

**Requirements Cognizance:**

(b)(6) 5 SEP 14  
DATE  
RDML C. D. BECKER  
Program Executive Officer Command, Control, Communications, Computers and Intelligence (PEO C4I)

**REVIEW FOR LEGAL SUFFICIENCY (NMCAG 5206.303-90)**

I have determined this Justification is legally sufficient.

*for* (b)(6) 9-9-14  
DATE  
(b)(6)  
Legal Counsel, SPAWAR 3.1

**CONTRACTING OFFICER CERTIFICATION (FAR 6.303-2(a)(12))**

I certify that this Justification is accurate and complete to the best of my knowledge and belief.

(b)(6) 9-9-14  
DATE  
ED DAVENPORT *for*  
Procuring Contracting Officer, Code 2.1B1

**APPROVAL BLOCK (FAR 6.304 AND DFARS 206.304)**

(b)(6) 9-10-14  
DATE  
TIMOTHY K. DOWD  
Executive Director, Code 02

\*ALL QUESTIONS REGARDING THIS J&A ARE TO BE REFERRED TO (b)(6)  
PMW/A 170 DMR Assistant Program Manager (APM) at 619-524-7618

