

1 **Request for Solutions:**

2  
3 **Radio Frequency Generation (RFGEN) Subsystem Development and**  
4 **Integration (SDI) Prototype Project**

5 **22 June 2020**

6 **1. Purpose and Authority**

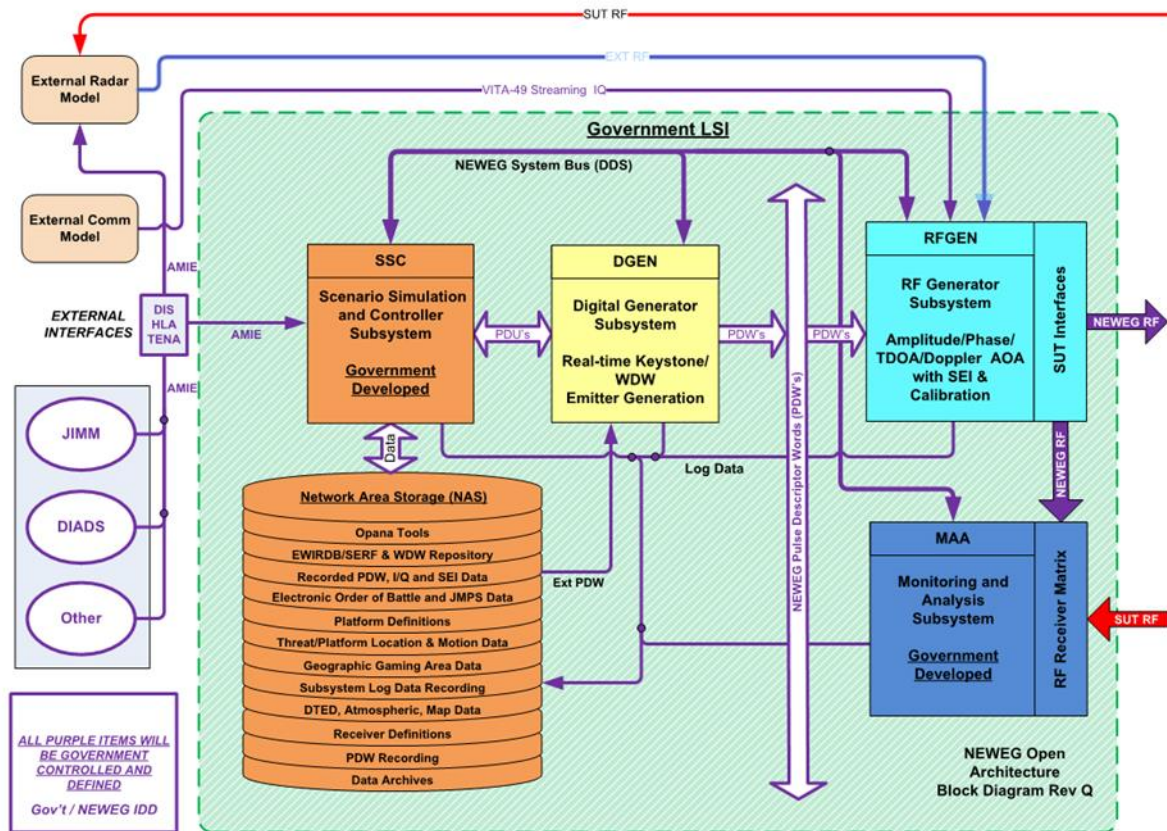
7  
8 This Request for Solutions (RFS) is issued on behalf of Naval Air Warfare Systems  
9 Command (NAVAIR) who desires to identify and select capable vendors that can further  
10 advance its capabilities in the areas of electronic threat simulation and measurement  
11 focusing specifically on advances in the areas of system concept, architecture  
12 development, and requirements definition. The overall goal is to meet the increasingly  
13 critical requirements for current and future Department of Defense (DOD) aircraft, which  
14 contain electronic combat support systems. To meet this goal, NAVAIR is developing a  
15 new simulator program called Next Generation Electronic Warfare Environment  
16 Generator (NEWEG), which consists of a single configurable set of unclassified  
17 subsystems. The set contains one Scenario Simulation and Control (SSC) subsystem,  
18 one or more Digital Generation (DGEN) subsystems, one or more Radio Frequency  
19 Generation (RFGEN) subsystems, and a Measurement and Analysis (MAA) subsystem.  
20 NEWEG is currently being developed in two Blocks: A and B. The RFGEN system will  
21 be developed, demonstrated and assessed as part of Block B. The unclassified RFGEN  
22 prototype project will focus on the continued development and testing of the RFGEN  
23 subsystem.

24  
25 The objective of the RFGEN SDI prototype project is to adapt and expand previous  
26 research, development, and initial proof-of-principle prototyping conducted by NAVAIR  
27 to date. The RFGEN prototype project will design, develop, fabricate, assemble,  
28 integrate, and test variants of the initial proof-of-principle RFGEN prototype capability.  
29 Specifically, the RFGEN prototype project will develop and demonstrate a specific  
30 aircraft mission. Location tailored variants of NEWEG RFGEN subsystem capabilities  
31 that will generate the radio frequency (RF) signal with the proper emitter modulations in  
32 frequency, amplitude, time, Doppler, and phase, as directed by the Pulse Descriptor  
33 Words (PDW) from the Digital Generation (DGEN). The RFGEN will transmit these  
34 signals either free-space radiation or by direct-injection using RF-over-fiber devices or  
35 RF cabling to the System Under Test (SUT). For direct-inject mode, the RFGEN will  
36 translate the time of arrival, amplitude, phase, and Doppler frequency from the SUT to  
37 each port. The RFGEN will perform pulse arbitration based on available resources and  
38 real-time calibration. The RFGEN will also apply calibrations to the RF command word.

39  
40 The tailored aircraft, mission, and location variant design and development tasks  
41 associated with the RFGEN prototype project will be tested (demonstrated and  
42 assessed) with NEWEG systems at different DOD locations to include, but not limited  
43 to: (1) Air Station ASIL facility, Patuxent River NAS, MD, (2) Atlantic Test Range  
44 Facility, Patuxent River NAS, MD, (3) Benfield Anechoic Facility (BAF), Edwards AFB,

45 CA, (4) Electronic Combat Simulation and Evaluation Laboratory, NBVC Pt. Mugu, CA,  
 46 (5) Electronic Combat Range, NAS China Lake, CA, and (6) JPRIMES facility, Eglin  
 47 AFB, FL.

48 The graph below illustrates the operational view (OV) of the NEWEG and each  
 49 subsystem to include the RFGEN prototype.



50  
 51 **2. Summary and Background**

52  
 53 **2.1. Overview**

54 The RFGEN subsystem, along with Scenario Simulation and Control (SSC) and Digital  
 55 Generation (DGEN) subsystems, comprises the primary components of the NEWEG  
 56 system. The RFGEN accepts the control and communication inputs from the SSC  
 57 subsystem, digital inputs from the DGEN subsystem, and other site inputs as required,  
 58 processes the inputs into the corresponding RF outputs, and outputs the RF to the  
 59 System under Test (SUT) (or an external high power amplifier for free-space radiation)  
 60 and MAA subsystem.

61  
 62 The RFGEN subsystem comprises two types of rack assemblies, the User Interface  
 63 Bay, which serves as the primary interface to the SSC and DGEN subsystems, and one  
 64 or more, up to six, Emitter Generation (EG) Bays, which serve as the primary interface  
 65 to the SUT. A single User Interface Bay is required to support the RFGEN, but multiple

66 Emitter Generation Bays can be used as needed to support the complexity of the RF  
67 outputs required for any site.

68

69 The RFGEN subsystem comprises control, digital, and RF hardware. Inputs such as  
70 control messages from the SSC and PDWs from the DGEN (and other site interfaces)  
71 flow into the RFGEN's control hardware to the digital hardware and from the digital  
72 hardware to the RF hardware. The RF hardware processes these inputs to generate RF  
73 and output it to the SUT and MAA.

74 The control hardware comprises a control computer, test equipment including a fast  
75 tuning receiver, Ethernet switches, and timing and control generation (TCG) and  
76 distribution devices. The control components are connected via Ethernet and use  
77 control software to provide configuration, status, and control during a scenario,  
78 calibration, or self-test execution as well as signal measurement, streaming external I/Q  
79 data, and digitization of external RF signals. The control hardware should include a web  
80 interface with the ability to access, control, and monitor the RFGEN Subsystem via a  
81 web user interface.

82 This interface should include:

- 83 • Ability to view a graphical, color-coded, system and subsystem status overview
- 84 • Ability to create reports based on current system hardware and status
- 85 • Ability to create SUT definitions (define the number of antennas, antenna  
86 position/frequency/orientation/polarization – including Spinner capabilities)
- 87 • Ability to select and initiate subsystem calibrations
- 88 • Ability to calibrate ports in any order
- 89 • Ability to view complete calibration history and measurements performed
- 90 • Ability to auto-discover digital boards
- 91 • Ability to access RFGEN remotely via a web browser without additional software  
92 required.

93 The User, through the User Interface Bay, should have the ability to:

- 94 • View/delete calibration data on a per-port/channel basis from a web interface
- 95 • Backup/restore calibration data from a web interface
- 96 • Export calibration data to CSV from the web interface
- 97 • Cancel individual calibrations and RF BIT tests without canceling the entire test  
98 list
- 99 • Modify diagnostic configuration file settings without restarting the application.

100 The control hardware should provide simplified SUT reconfiguration with the following  
101 capabilities:

- 102 • Ability to change SUT configurations via the web user interface “on-the-fly” (i.e.,  
103 without the need to reconfigure HW, perform a power cycle, or reinitialize the  
104 SW, etc.)
- 105 • Ability to change SUT configuration without the need for recalibration
- 106 • The receiver configuration setup should support split-band RF Ports.

107

108 The digital hardware comprises an RF Resource Manager (RFRM) card in the control  
 109 computer, BIT controller CCAs in the RF BIT monitor drawer in the User Interface  
 110 Bay and RF combiner drawer(s) in the Emitter Generation Bay(s), and various CCAs  
 111 in the VPX chassis in the RFGEN drawer(s) in the Emitter Generation Bay(s).

112 The RFRM should have the ability to:

- 113 • Support pulse arbitration based on the SUT, Azimuth, and Frequency parameters
- 114 of the received pulse
- 115 • Filter pulse based on SUT receiver sensitivity
- 116 • Record a minimum of 100,000 PDWs.

117 For the RF hardware, the RFGEN subsystem’s modular, scalable, and reconfigurable  
 118 architecture uses Direct Digital Synthesis (DDS) signal generation technology  
 119 capable of generating high fidelity RF signatures with low spurious, low noise, and  
 120 wide instantaneous bandwidth (IBW). The RF generation hardware is housed in up to  
 121 two RFGEN VPX chassis per Emitter Generation Bay. It comprises four different Line  
 122 Replaceable Component (LRC) types: a Local Oscillator (LO) slice, an Up Converter  
 123 (UC) slice, an Ultra-Low band (ULB) slice, and a Millimeter Wave (mmW) slice.

124 RFGEN calibration should have the ability to:

- 125 • Define a user-selectable calibration test suite
- 126 • Define user-selectable calibration points within specific calibrations.

127 RFGEN should have the ability to:

- 128 • Accept streaming IQ data (MIDAS 1000 format) from an external simulator and
- 129 generate an RF output at the SUT ports
- 130 • Accept RF pulsed data from an external source and route the signal to the SUT
- 131 ports
- 132 • Accept user-generated antenna response data and apply it to a SUT receive
- 133 antenna (Measured Model)

134 The LO slice provides the necessary emitter tuning, and the UC slice applies the  
 135 unique amplitude, frequency, phase, and time characteristics for each port. The  
 136 RFGEN can employ a single LO slice to drive multiple UC slices within a Port Group,  
 137 or if required, the RFGEN can employ LO/UC pairs for every port. The base UC slice  
 138 supports the core Electronic Warfare (EW) band of 0.5 to 18 GHz, while the ULB and  
 139 mmW slices convert the core output into 20 to 500 MHz and 18 to 40 GHz bands,  
 140 respectively.

141 The Emitter Generation Bays contain the core emitter generation hardware, housed  
 142 in up to two RF VPX chassis. Each bay also includes a rack RF combiner unit  
 143 (RFCU) drawer to combine the inputs from all the RF VPX chassis into the outputs  
 144 required for the SUT.

145

146 Table 1.0: RFGEN Key Performance Parameters

No.	Basic EW Stimulator Parameter	Threshold Value	Objective Value
1	Pulse Density	5.0 MPPS	8.0 MPPS
2	Frequency Coverage	70MHz to 40GHZ	20MHz to 40 GHz

3	Specific Threat Scenario Signals	<ul style="list-style-type: none"> <li>• 2ea (70MHz to 500MHz)</li> <li>• 2ea (500MHz to 2GHz)</li> <li>• 20ea (2GHz to 18GHz)</li> <li>• 2ea (18GHz to 40GHz)</li> </ul>	
4	Pulse Dropout	<0.2% per emitter, with no pulse dropout during the main antenna beam and the first $\pm 3$ side lobes	
5	Broadband Noise	-88 dBm/MHz (nominal)	-90 dBm/MHz (nominal)
6	Port-to-Port Phase Accuracy	$\leq 3^\circ$ RMS	$\leq 1^\circ$ RMS
7	Harmonics and Spurious	$\leq -65$ dBc (nominal)	$\leq -70$ dBc
8	FM Deviation	$\pm 500$ MHz	$\pm 1$ GHz
9	Output Power	-10 dBm	

147

148

### 3. General information

149

150

#### 3.1. Training and Readiness Accelerator (TReX)

151 Vendors interested in responding to this RFS must be members of TReX or teamed with  
 152 a TReX member. Information about membership can be found on the following  
 153 webpage: <https://nstxl.org/membership/>. This project will be managed and supervised  
 154 by the Integrated Battlespace Simulation and Testing (IBST) program management  
 155 team.

156

157

All Government participants and Non-Government advisors in the evaluation process  
 158 will be required to sign non-disclosure agreements (NDAs).

159

160

The Government will evaluate the solutions with the intent of awarding an Other  
 161 Transaction Agreement (OTA) in accordance with 10 U.S. Code § 2371b.

162

163

#### 3.2. Allowable Costs and Teaming

164 An individual vendor may not submit more than one comprehensive response to this  
 165 RFS as a Prime. A vendor may participate as a sub-vendor to multiple responses. The  
 166 cost of preparing and submitting a response is not considered an allowable direct  
 167 charge to any Government contract or agreement. Non-compliance with the submission  
 168 instructions provided herein may preclude the vendor from being considered for award.

169

170

#### 3.3. Non-Government Advisors

171 This is to advise you that non-Government advisors will assist in the evaluation. The  
 172 use of non-Government advisors will be strictly controlled. Non-Government advisors  
 173 will be required to sign a Non-Disclosure Agreement (NDA) prior to working on the  
 174 RFGEN effort. Agreements Officer will review NDAs for conflict prior to allowing access  
 175 to source selection information.

176 All non-Government advisors will only have access to the information corresponding to  
177 their area(s) of expertise. Advisors will not have access to the Price Volume of the  
178 response. The companies identified herein have agreed not to engage in the  
179 manufacture or production of hardware/services/R&D that is related to this effort, and to  
180 refrain from disclosing proprietary information to unauthorized personnel.

181 The following companies will have non-Government personnel advising:

182

- 183 • Deloitte Consulting, LLP.  
184 22454 Three Notch Rd, Suite 202  
185 Lexington Park, MD 20653  
186 CAGE Code: ITTG5

#### 187 **4. GFI/GFE/GFP**

188 The Government will make available the following RFGEN SDI Government Furnished  
189 Information (GFI):

190

- 191 1. Attachment #1 – System Requirements Specification for the Next Generation  
192 Electronic Warfare Environment Generator (NEWEG) Block B, 29 May 2014
- 193 2. Attachment #2 – DGEN-RFGEN Interface Control Document (ICD), 30 July 2019  
194 Version 1.02
- 195 3. Attachment #3 – Interface Design Description (IDD) for Next Generation Electronic  
196 Warfare Environment Generator (NEWEG), 30 July 2018

197

198 The GFI will contain the Distribution D. The TReX member/team will require processing  
199 and approval before being authorized to receive any project exhibits to include  
200 GFE/GFI, such as technical documentation, software, data packages, etc. All exhibits  
201 will be considered “As Is” upon being transferred.

202

203 To obtain the GFE/GFI documentation, the vendor shall submit a request in writing to  
204 INITIATIVES@NSTXL.ORG, with “RFGEN SDI GFI” used in the subject line along with  
205 the required information as outlined in the Security Process for Vetting Vendors,  
206 Attachment 7 and the Vendor GFI Tech Data Distribution Agreement, Attachment 8.  
207 The Distribution Agreement will provide further guidance regarding the handling of GFI  
208 after OTA award.

209

210 In summary, for the RFGEN SDI RFS and accompanying solutions, the Government  
211 anticipated the distribution of FOUO/Controlled Unclassified information at a D  
212 classification level (Distro D). The government anticipates this project to be classified at  
213 the SECRET level. The RFGEN SDI prototype itself will be UNCLASSIFIED. However,  
214 in order to develop the RFGEN prototype, the vendor(s) will need to have access to a  
215 SECRET level database and information; therefore, all vendors and teammates (sub-  
216 vendors) will need to be able to perform under this classification level at the time of the  
217 award. The RFGEN SDI prototype project is open to U.S DOD vendors and sub-vendor  
218 only.

219

220

221

222 **5. Solution Responses**

223 Solution submissions should address planned documentation deliverables (including  
 224 format and content) and any planned demonstrations, design reviews, and management  
 225 reviews. A proposed Integrated Master Schedule (IMS) shall be provided in a Microsoft  
 226 Project format.

227 Responses shall be submitted in an editable/executable (not scanned) Word/Adobe  
 228 PDF format and limited to no more than 20\* standard size (8 ½" X 11") pages for the  
 229 total volume count (see table below), using standard 12-point Arial font. Charts or  
 230 figures are not bound by the 12-point font requirement but shall be clearly legible. The  
 231 page size of 11" X17" is allowed for charts or figures only, and each page will be  
 232 counted towards the 20\* page limit (see Table 1). If the solution exceeds the page  
 233 limitation, the Government may choose not to read any information exceeding the 20\*  
 234 page limit, and the information may not be included in the evaluation of the solution.  
 235

Volume	Section	Format**	Counted towards the page limit		Page Limit
			Yes	No	
General	Cover Page	Word/PDF		X	5
	Nontraditional Status		X		
	FOCI Status		X		
	OCI & Mitigation Plan			X	
	Security Requirements		X		
	Company Information		X		
Technical	Cover Page	Word/PDF		X	15
	Sub-Vendor List	Word/PDF		X	
	Solution Paper	Word/PDF	X		
	Delivery Schedule	Word/PDF	X		
	Integrated Master Schedule (IMS)	MS Project		X	
	Government Desired Rights in Technical Data & Comp SW	Word/PDF		X	
Labor & Pricing	Cover Page	Word/PDF		X	
	Labor Hours & Pricing	Excel		X	
	Follow-On ROM***	Word/PDF		X	

236 Table 1- Page Limits

237 **\*The Cover Pages, OCI & Mitigation Plan, Sub-Vendor List, IMS, Government Data Rights in Technical Data**  
 238 **and Computer Software, Follow-On ROM, and Excel format Labor & Pricing Breakdown are not included in**  
 239 **the 20 page total.**

240 **\*\* ALL PDFs will be editable (not locked).**

241 **\*\*\*Follow-On ROM is not part of the evaluation and is only being used for future planning purposes.**

242

243 Any additional information the vendor deems pertinent may be incorporated into the  
244 solution, but the total submission shall not exceed the 20-page limitation identified in  
245 Table 1 above.  
246

## 247 **5.1. RFS Solution Responses**

248 Interested parties shall provide an RFS solution response. The RFS solution response  
249 shall contain separate General, Technical, and Price Volumes. No pricing detail shall  
250 be provided in any volume other than the Price Volume. As appropriate, vendors shall  
251 mark their submissions with proprietary, confidential, etc. The volumes shall consist of:

### 252 • **General Volume Contents List**

- 253 ○ Cover Page
- 254 ○ Nontraditional Status
- 255 ○ Foreign Owned, Controlled or Influenced (FOCI) status
- 256 ○ Organizational Conflicts of Interest (OCI) and Mitigation Plans
- 257 ○ Security Requirements
- 258 ○ Company Information

259

### 260 • **Technical Volume Contents List**

- 261 ○ Cover Page
- 262 ○ Sub-Vendor List
- 263 ○ Solutions Submission
- 264 ○ Delivery Schedule
- 265 ○ Integrated Master Schedule (IMS)
- 266 ○ Government Desired Rights in Technical Data and Computer Software

### 267 • **Labor & Pricing Volume Contents List**

- 268 ○ Cover Page
- 269 ○ Labor Hours and Pricing
- 270 ○ Follow-On Rough Order of Magnitude (ROM)\*

271 \*Please note the Follow-On ROM will not be evaluated and will be used for future  
272 planning purposes.

273

### 274 **5.1.1. General Volume**

275 If the vendor fails to provide the requested documents, the solution may be denied  
276 further evaluation at the Government's discretion.

277

#### 278 **5.1.1.1. Cover Page**

279 The cover page shall include the title, vendor's name, Commercial and Government  
280 Entity (CAGE) Code (if available), Data Universal Numbering System (DUNS) number,  
281 Business Size, address, the primary point of contact (phone number & email), and  
282 status of U.S. ownership. The North American Industry Classification System (NAICS)  
283 Code for this effort is 541512, Computer System Design Services.

284



285 **5.1.1.2. Nontraditional Status**

286 The vendor shall provide its nontraditional business status or its ability to meet the  
287 eligibility requirements of 10 U.S.C. §2371b. The vendor shall check one of the  
288 following boxes – with appropriate justification if needed.

- 289
- 290  There is at least one nontraditional defense contractor or nonprofit research  
291 institution participation to a significant extent in the project.
- 292
- 293  All significant participants in the transaction other than the Federal Government  
294 are small businesses or nontraditional defense contractors.
- 295
- 296  At least one-third of the total cost of the project is to be provided by sources other  
297 than the Federal Government.
- 298

299 If the vendor is not a nontraditional defense contractor (NDC) and the first two  
300 checkboxes are not checked, additional information is needed to support the eligibility  
301 requirements of 10 U.S.C. §2371b.

302

303 The vendor shall provide the name, CAGE code, and DUNS number information for the  
304 NDC. Additionally, the vendor shall provide what portion of the work the NDC is  
305 performing and an explanation of how the prototype would not succeed based on the  
306 portion of work performed by the NDC.

307

308 Definition Nontraditional – an entity that is not currently performing and has not  
309 performed, for at least one-year period preceding the solicitation of sources by the  
310 Department of Defense (DoD) for the procurement or transaction, any contract or  
311 subcontract for the DoD that is subject to full coverage under the cost accounting  
312 standards prescribed according to 41 U.S.C §1502 and the regulations implementing  
313 such section.

314

315 **5.1.1.3. Foreign Owned, Controlled or Influenced (FOCI) Status**

316 In accordance with RFS Attachment 7, Security Process for Vetting Vendors, the  
317 General Volume must include a certification that the vendor (and subcontractor(s)) are  
318 not Foreign-Owned or under USA FOCI status (and are not in a merger or purchasing  
319 discussions for a Foreign company or USA FOCI Company). Should a prospective  
320 vendor be unable to certify so, they will be ineligible for the award unless the mitigating  
321 circumstances in Attachment 7 Security Process for Vetting Vendors are met. In such a  
322 case, these mitigating circumstances shall be detailed in an appendix to the General  
323 Volume.

324

325 **Security Vetting:** All vendors who want to compete, bid, or team with others for this  
326 effort must be willing to comply with the PEO STRI Security Process for Vetting. All  
327 vendors (Prime and Subs) must be vetted for eligibility, suitability, national status, e.g.,  
328 FOCI before the receipt of any award instrument.

329

330 **5.1.1.4. Organizational Conflicts of Interest (OCI) and Mitigation Plan**

331 Vendors will submit an OCI Mitigation Plan via an appendix to its General Volume. In  
332 the event, there are no real or perceived OCI, simply state so, and annotate what

333 actions would be taken in the event that one is realized. The OCI mitigation plan is not  
334 part of the solution page count.

335

#### 336 **5.1.1.5. Company Information**

337 Within this section, the vendor may include relevant or other miscellaneous information  
338 the company wishes to express to the Government (e.g., previous work, partnerships,  
339 awards, company structure, etc.).

340

### 341 **5.1.2. Technical Volume**

342

#### 343 **5.1.2.1. Cover Page**

344 The cover page shall include the title, vendor's name, CAGE Code (if available), (DUNS  
345 number, Business Size, address, the primary point of contact (phone number & email),  
346 and status of U.S. ownership.

347

#### 348 **5.1.2.2. Sub-Vendor List**

349 The vendor shall provide a list of all sub-vendors involved and their role within the  
350 performance of your submission as an appendix to Technical Volume. The list shall  
351 include FOCI status and OCI.

352

#### 353 **5.1.2.3. Solution Submission**

354 The prototype effort is expected to be conducted by the vendor that demonstrates and  
355 proves technical competence, is adequately skilled, has past performance in the  
356 relevant technologies and systems within the past 5 years, and demonstrates price  
357 reasonableness.

358 Vendors will be requested to provide proposed solutions outlining their:

359 

- Technical Merit – The vendor's technical analysis and design approach to carry  
360 out the project requirements in accordance with the NEWEG Modular, Open,  
361 Scalable Architecture (MOSA) and model-based threat simulation approach.  
362 See the SRS, Attachment 1.

363

364 

- The vendor's past experience in designing, developing, prototyping, and  
365 producing electronic threat simulation and measurement systems that can  
366 ingest and directly simulate validated intelligence data in EWIRDB format.

367

368 

- The vendor's past experience designing, developing, prototyping, and  
369 producing advanced test systems and capabilities in accordance with NEWEG  
370 ICDs, IDDs, and open architecture standards.

371

372 

- The vendor's past experience in working with various interfacing subsystems  
373 such as SSC 1.0/2.0 and various DGEN vendors.

374

375 

- The vendor's experience supporting the test and assessment of aviation  
376 platforms at DoD test facilities.

377

- 378 • The vendor's capability to handle simultaneous development and production  
379 efforts for multiple platforms, missions, and locations.  
380
- 381 • The vendor's ability to establish and sustain product lines at multiple locations.  
382
- 383 • Management Capabilities to include Team composition/personnel and sub-  
384 vendor involvement, including a description of subcontractor tasks, as well as  
385 manufacturing capabilities and facilities.  
386
- 387 • An Integrated Master Schedule for the entire effort.

388 The technical response is expected to clearly outline the appropriate assertion right in  
389 technical data, computer software, and software documentation that will be delivered  
390 with the solution.

391  
392 The above capabilities are not listed in any specific order of priority and are provided to  
393 help focus vendor responses. In addition to describing the approach to delivering these  
394 capabilities, the technical solution shall also include full discussions of:

- 395
- 396 • Anticipated development risks.  
397
- 398 • Proposed timeline tied to milestone activities for the 36 to 60-month period of  
399 performance.  
400

#### 401 **5.1.2.4. Delivery Schedule**

402 This section should include an anticipated delivery schedule: The vendor is to include  
403 the anticipated delivery dates with their solution that includes all RFGEN SDI  
404 capabilities and completion dates for crucial design reviews, test events, Integrated  
405 Product Team collaboration activities, and other tasks and deliverables as described  
406 herein.  
407

##### 408 **5.1.2.4.1. Integrated Master Schedule (IMS)**

409 An IMS is to be created using Microsoft Project. The IMS should be resource loaded  
410 with each task, including a predecessor (if applicable). The IMS may be attached as an  
411 appendix file. The IMS is not included in the total page count, and page count is  
412 unlimited.  
413

##### 414 **5.1.2.5. Government Desired Rights in Technical Data and Computer Software**

415 Government desired rights are described in Section 5.1.2.7 of this RFS. For data rights  
416 other than unlimited or government purpose rights, the vendor shall assert each  
417 instance with justification within the Data Rights Assertions tables in Attachment #4.  
418

##### 419 **5.1.2.6. RFGEN SDI Prototype Phases**

420  
421 The NAVAIR RFGEN SDI prototype project will be executed in five phases starting with  
422 initial design, development, fabrication, assembly, test, and transition of baseline  
423 RFGEN prototype capabilities. Phase One, the baseline RFGEN prototype capabilities,  
424 will build on and advance the initial design, development, and proof of principle

425 prototyping of RFGEN capabilities conducted by NAVAIR to date. Next, the RFGEN SDI  
426 Prototype project will design, develop, fabricate, assemble, test, and transition RFGEN  
427 prototype variants based on specific DOD aircraft, location, and mission requirements  
428 and desired enhancements to establish initial operational capabilities (IOC) in support of  
429 different DOD programs and activities to include the Navy, Air Force, and Army as well  
430 as other divisions of the DOD.

431 The prototype phases explain the high-level scope and deliverables required prior to  
432 proceeding to the subsequent Technical Objective (TO). The Government has the right  
433 to deny or approve entry into the next TO. The Government reserves the right to reject  
434 any deliverables. At the Governments discretion, the vendor may be required to revise  
435 and resubmit deliverables. If the Government determines that the vendor has not  
436 successfully met the TOs and/or has not produced the required (approved) technical  
437 documentation, the Government may terminate the prototype effort at any decision point  
438 (DP).

439 The phase is considered complete upon the successful demonstration of the collective  
440 TOs and the approval of all deliverables. However, the Government, at its discretion,  
441 may choose to proceed into subsequent TOs prior to approval of TO objectives and/or  
442 deliverables.

443 **Estimated Timeline:** The Government anticipates that the total period of performance  
444 for this effort, which consists of five phases, will not exceed 36 to 60 months total  
445 dependent upon the potential concurrent or nonconcurrent execution of one or more  
446 phases.

447 The timeline below identifies the suggested/estimated completion of each TO  
448 milestones. The vendor will present its own timeline for approval within the delivered  
449 IMS prior to the Kickoff meeting.

450

#### 451 **Phase One: Baseline Development (estimated 12 months)**

452

453 • **Phase One Description:** The purpose of this phase is two-fold: (1) Design and  
454 develop baseline RFGEN SDI prototype capabilities, and (2) Test and Evaluate  
455 (T&E) the baseline RFGEN SDI prototype capabilities with the NEWEG to verify  
456 and validate the RFGEN capabilities within the first 6 months after phase award.  
457 The resulting RFGEN SDI prototype capabilities will serve as the test surrogate  
458 and baseline to support the initial design and development of additional aircraft,  
459 mission, and location specific variants of the RFGEN SDI prototype, phases two  
460 through five. Test and transition activities will take place at NAVAIR 5.4 IBST or at  
461 a location determined by the Government. Upon successful completion of the test  
462 activities, baseline RFGEN SDI prototype capabilities will be delivered and  
463 transitioned to NAVAIR 5.4 IBST.

464

#### 465 • **Phase One Technical Objectives:**

- 466 ○ Design and development of the baseline RFGEN SDI prototype.
- 467 ○ Production of baseline RFGEN SDI prototype capabilities to support testing
- 468 activities.
- 469 ○ T&E baseline RFGEN SDI prototype capabilities with the NEWEG.

- 470 ○ Testing of the baseline RFGEN SDI prototype capabilities.  
471 ○ Transition of the baseline RFGEN SDI prototype capabilities to NAVAIR 5.4  
472 IBST to support the design and development of RFGEN prototypes tailored to  
473 address specific aircraft, mission, and location requirements.  
474
- 475 ● **Phase One Outcomes:**
    - 476 ○ Design, development, test, and transition baseline RFGEN SDI prototype  
477 capabilities.
    - 478 ○ All documentation, analysis, models, simulations, reports, etc. related to the  
479 design, development, and testing of baseline RFGEN SDI prototype capabilities.  
480
  - 481 ● **Phase One Decision Point:** Due to the lack of dependency of the phases  
482 following Phase One, DP One will be used to determine entry into Phase Two,  
483 Three, Four, and/or Five. Upon validation of the Phase One prototype baseline,  
484 any of the five (5) phases (Phase Two, Three, Four, and Five) may be started  
485 simultaneously, consecutively, or staggered. The start of each of the following  
486 phases will be dependent upon funding availability. Individually, Phase Two,  
487 Three, Four, and Five are not dependent on the start or completion of additional  
488 phases. Each can be started and completed at the end of Phase One or before,  
489 during, or after the start of completion of the remaining phases.  
490

#### 491 **Phase Two: US Navy Variants (estimated 12 months)** 492

- 493 ● **Phase Two Description:** The purpose of this phase is to design, develop, and  
494 test variants of the baseline RFGEN SDI prototype to support specific US Navy  
495 aircraft, mission, and location requirements. The Navy aircraft variants will focus  
496 on their specific missions and locations, and any nuances between developing  
497 the baseline RFGEN SDI prototype versus developing RFGEN SDI prototypes to  
498 support the other DOD programs and activities. NAVAIR anticipates transitioning  
499 the initial Navy variants to four locations: (1) Air Station ASIL facility, Patuxent  
500 River NAS, MD; (2) Atlantic Test Range Facility, Patuxent River NAS, MD; (3)  
501 Electronic Combat Range, NAS China Lake, CA; and (4) Electronic Combat  
502 Simulation and Evaluation Laboratory, NBVC Pt. Mugu, CA. NAVAIR also  
503 anticipates testing and demonstrating additional RFGEN SDI capabilities at other  
504 Navy locations as those specific aircraft, missions, and the host program or  
505 activity defines location requirements (variants). Upon successful completion of  
506 the test activities, the RFGEN SDI prototype(s) will be delivered and transitioned  
507 to NAVAIR 5.4 IBST.  
508
- 509 ● **Phase Two Technical Objectives:**
  - 510 ○ Design and development of the US Navy variant RFGEN SDI prototypes that  
511 address specific aircraft, missions, and locations.
  - 512 ○ Initial fabrication of the US Navy variant RFGEN SDI prototypes that address  
513 specific aircraft, missions, and locations.
  - 514 ○ Initial developmental testing of the US Navy variant RFGEN SDI prototypes  
515 that address specific aircraft, missions, and locations.

- 516 ○ Delivery of US Navy variant RFGEN SDI prototypes that address specific  
517 aircraft, missions, and locations. The number of prototypes will be determined by  
518 the need of the various variants initiated at the start of the phase.
- 519 ○ Test the viability of US Navy variant RFGEN SDI prototypes that address  
520 specific aircraft, missions, and locations with the NEWEG to verify and validate  
521 the feasibility and utility of the variant prototype capabilities at each delivery  
522 location.
- 523 ○ Reach IOC of the US Navy variant RFGEN SDI prototypes that address  
524 specific aircraft, missions, and locations.

525

- 526 ● **Phase Two Outcomes:**

- 527 ○ Design, development, fabrication, and delivery of US Navy variant RFGEN  
528 SDI prototypes that address specific aircraft, missions, and locations [the test  
529 article(s) required to support testing of the US Navy variant prototypes]. The  
530 number of test articles will be determined by the need for the various variants  
531 initiated at the start of the phase.
- 532 ○ Test the viability of US Navy variant RFGEN SDI prototypes that address  
533 specific aircraft, missions, and locations to determine the feasibility and utility of  
534 the variant prototype capabilities.
- 535 ○ Establish IOC for the technical feasibility of the US Navy variant RFGEN SDI  
536 prototypes that address specific aircraft, missions, and locations.
- 537 ○ All documentation, analysis, models, simulations, reports, etc. related to the  
538 design, development, and fabrication of the US Navy variant RFGEN SDI  
539 prototypes that address specific aircraft, missions, and locations and the  
540 declaration of IOC.

541

- 542 ● **Phase Two Decision Point:** Phase Two may be ready for a DP upon the  
543 successful completion of all Phase Two requirements. DP Two may occur after a  
544 successful demonstration of the Phase Two requirements and may be made  
545 before the Government acceptance of all Phase Two deliverable outcomes.  
546 Completion of Phase Two may also serve as the successful completion of the  
547 RFGEN SDI prototype project to include the transition of all deliverables to the  
548 US Navy.

549

### 550 **Phase Three: US Air Force Variants (estimated 12 months)**

551

- 552 ● **Phase Three Description:** The purpose of this phase is to design, develop, and  
553 test variants of the baseline RFGEN SDI prototype to support specific US Air  
554 Force aircraft, mission, and location requirements and desired enhancements.  
555 The Air Force variants will focus on different types of aircraft, specific missions  
556 and locations, and any nuances between developing and producing the baseline  
557 RFGEN SDI prototype versus developing and producing RFGEN SDI prototypes  
558 to support the other DOD programs and activities. NAVAIR anticipates  
559 transitioning the initial US Air Force variants to two locations: (1) Benefield  
560 Anechoic Facility (BAF), Edwards AFB, CA; and (2) JPRIMES facility, Eglin AFB,  
561 FL. NAVAIR also anticipates integrating, testing and demonstrating additional  
562 RFGEN SDI capabilities at multiple Air Force Base (AFB) locations as those

563 specific aircraft, mission, and location requirements (variants) are defined by the  
564 host program or activity. Upon successful completion of the test activities, the  
565 RFGEN SDI prototype(s) will be delivered and transitioned to NAVAIR IBST.  
566

567 • **Phase Three Technical Objectives:**

- 568 ○ Design and development of the US Air Force variant RFGEN SDI prototypes  
569 that address specific aircraft, missions, and locations.
- 570 ○ Initial fabrication of the US Air Force variant RFGEN SDI prototypes that  
571 address specific aircraft, missions, and locations.
- 572 ○ Initial developmental testing of the US Air Force variant RFGEN SDI  
573 prototypes that address specific aircraft, missions, and locations.
- 574 ○ Delivery of US Air Force variant RFGEN SDI prototypes that address specific  
575 aircraft, missions, and locations. The number of prototypes will be determined by  
576 the need of the various variants initiated at the start of the phase.
- 577 ○ Test the viability of the US Air Force variant RFGEN SDI prototypes that  
578 address specific aircraft, missions, and locations with the NEWEG to verify and  
579 validate the feasibility and utility of the variant prototype capabilities at each  
580 delivery location.
- 581 ○ Reach IOC of the US Air Force variant RFGEN SDI prototypes that address  
582 specific aircraft, missions, and locations.

583  
584 • **Phase Three Outcomes:**

- 585 ○ Design, development, fabrication, and delivery of US Air Force variant RFGEN  
586 SDI prototypes that address specific aircraft, missions, and locations [the test  
587 article(s) required to support the test of the US Air Force variant prototypes]. The  
588 number of test articles will be determined by the need of the various variants  
589 initiated at the start of the phase.
- 590 ○ Test the viability of the US Air Force variant RFGEN SDI prototypes that  
591 address specific aircraft, missions, and locations to determine the feasibility and  
592 utility of the variant prototype capabilities.
- 593 ○ Establish IOC for the technical feasibility of the US Air Force variant RFGEN  
594 SDI prototypes that address specific aircraft, missions, and locations.
- 595 ○ All documentation, analysis, models, simulations, reports, etc. related to the  
596 design, development, and fabrication of the US Air Force variant RFGEN SDI  
597 prototypes that address specific aircraft, missions, and locations and the  
598 declaration of IOC.

- 599  
600 • **Phase Three Decision Point:** Phase Three may be ready for a DP upon the  
601 successful completion of all Phase Three requirements. DP Three may occur  
602 after a successful demonstration of the Phase Three requirements and may be  
603 made before the Government acceptance of all Phase Three deliverable  
604 outcomes. Completion of Phase Three may also serve as the successful  
605 completion of the RFGEN SDI prototype project to include the transition of all  
606 deliverables to the US Air Force.

607  
608  
609

610 **Phase Four: US Army Variants (estimated 12 months)**

611

612 • **Phase Four Description:** The purpose of this phase is to design, develop, and  
613 test variants of the baseline RFGEN SDI prototype to support specific US Army  
614 aircraft, mission, and location requirements and desired enhancements. The  
615 Army variants will focus on different types of aircraft, specific missions and  
616 locations, and any nuances between developing and producing the baseline  
617 RFGEN SDI prototype versus developing and producing RFGEN SDI prototypes  
618 to support the other DOD programs and activities. NAVAIR anticipates testing  
619 and demonstrating additional RFGEN SDI capabilities at multiple Army locations  
620 as those specific aircraft, missions, and the host program or activity defines  
621 location requirements (variants).

622

623 • **Phase Four Technical Objectives:**

624 ○ Design and development of the US Army variant RFGEN SDI prototypes that  
625 address specific aircraft, missions, and locations.

626 ○ Initial production of the US Army variant RFGEN SDI prototypes that address  
627 specific aircraft, missions, and locations.

628 ○ Initial developmental testing of the US Army variant RFGEN SDI prototypes  
629 that address specific aircraft, missions, and locations.

630 ○ Delivery of US Army variant RFGEN SDI prototypes that address specific  
631 aircraft, missions, and locations. The number of prototypes will be determined by  
632 the need of the various variants initiated at the start of the phase.

633 ○ Test the US Army variant RFGEN SDI prototypes that address specific  
634 aircraft, missions, and locations with NEWEG to verify and validate the feasibility  
635 and utility of the variant prototype capabilities at each delivery location.

636 ○ Reach IOC of the US Army variant RFGEN SDI prototypes that address  
637 specific aircraft, missions, and locations.

638

639 • **Phase Four Outcomes:**

640 ○ Design, development, fabrication, and delivery of US Army variant RFGEN  
641 SDI prototypes that address specific aircraft, missions, and locations [the test  
642 article(s) required to support the test of the US Army variant prototypes]. The  
643 number of test articles will be determined by the need of the various variants  
644 initiated at the start of the phase.

645 ○ Test US Army variant RFGEN SDI prototypes that address specific aircraft,  
646 missions, and locations to determine the feasibility and utility of the variant  
647 prototype capabilities.

648 ○ Establish IOC for the US Army variant RFGEN SDI prototypes that address  
649 specific aircraft, missions, and locations.

650 ○ All documentation, analysis, models, simulations, reports, etc. related to the  
651 design, development, and fabrication of the US Army variant RFGEN SDI  
652 prototypes that address specific aircraft, missions, and locations and the  
653 declaration of IOC.

654

655 • **Phase Four Decision Point:** Phase Four may be ready for a DP upon the  
656 successful completion of all Phase Four requirements. DP Four may occur after



657 a successful demonstration of the Phase Four requirements and may be made  
658 before the Government acceptance of all Phase Four deliverable outcomes.  
659 Completion of Phase Four may also serve as the endpoint of the RFGEN SDI  
660 prototype project with the transition of the test articles to the US Army. This is  
661 dependent upon the remaining Phases and their funding during this OT  
662 Prototype cycle.

663  
664 **Phase Five: Other DOD Variants (estimated 12 months).**

- 665  
666 • **Phase Five Description:** The purpose of this phase is to design, develop, and  
667 test variants of the baseline RFGEN SDI prototype to support specific Other DOD  
668 aircraft, mission, and location requirements and desired enhancements. The  
669 Other DOD variants will focus on different types of aircraft, specific missions and  
670 locations, and any nuances between developing and producing the baseline  
671 RFGEN SDI prototype versus developing and producing RFGEN SDI prototypes  
672 to support the other programs and activities (such as the Navy, Air Force, and  
673 the Army). NAVAIR anticipates, testing, and demonstrating additional RFGEN  
674 SDI capabilities at multiple Other DOD locations as those specific aircraft,  
675 mission, and the host program or activity defines location requirements  
676 (variants). Upon successful completion of the test activities, the RFGEN SDI  
677 prototype(s) will be delivered and transitioned to NAVAIR 5.4 IBST.  
678
- 679 • **Phase Five Technical Objectives:**
  - 680 ○ Design and development of the other DOD variant RFGEN SDI prototypes that  
681 address specific aircraft, missions, and locations.
  - 682 ○ Initial fabrication of the other DOD variant RFGEN SDI prototypes that address  
683 specific aircraft, missions, and locations.
  - 684 ○ Initial developmental testing of the other DOD variant RFGEN SDI prototypes  
685 that address specific aircraft, missions, and locations.
  - 686 ○ Delivery of other DOD variant RFGEN SDI prototypes that address specific  
687 aircraft, missions, and locations. The number of prototypes will be determined by  
688 the need of the various variants initiated at the start of the phase.
  - 689 ○ Test the other DOD variant RFGEN SDI prototypes that address specific  
690 aircraft, missions, and locations with the NEWEG to verify and validate the  
691 feasibility and utility of the variant prototype capabilities at each delivery location.
  - 692 ○ Reach IOC of the other DOD variant RFGEN SDI prototypes that address  
693 specific aircraft, missions, and locations.  
694
- 695 • **Phase Five Outcomes:**
  - 696 ○ Design, development, fabrication, and delivery of other DOD variant RFGEN  
697 SDI prototypes that address specific aircraft, missions, and locations [the test  
698 article(s) required to support the test of the other DOD variant prototypes]. The  
699 number of test articles will be determined by the need of the various variants  
700 initiated at the start of the phase.
  - 701 ○ Test other DOD variant RFGEN SDI prototypes that address specific aircraft,  
702 missions, and locations to determine the feasibility and utility of the variant  
703 prototype capabilities.

- 704           ○ Establish IOC for the integrated other DOD variant RFGEN SDI prototypes  
705 that address specific aircraft, missions, and locations.  
706           ○ All documentation, analysis, models, simulations, reports, etc. related to the  
707 design, development, and fabrication of the other DOD variant RFGEN SDI  
708 prototypes that address specific aircraft, missions, and locations and the  
709 declaration of IOC.  
710
- 711       ● **Phase Five Decision Point:** Phase Five may be ready for a DP upon the  
712 successful completion of all Phase Five requirements. DP Five may occur after a  
713 successful demonstration of the Phase Five requirements and may be made  
714 before the Government acceptance of all Phase Five deliverable outcomes.  
715 Completion of Phase Five may also serve as the endpoint of the RFGEN SDI  
716 prototype project with the transition of the test articles to the other DOD  
717 organizations and activities. This is dependent upon the remaining Phases and  
718 their funding during the OT Prototype cycle.

719

### 720 **5.1.2.7 Government Desired Rights in Technical Data and Computer Software**

721 For this RFS and final award document, the Government will use the data rights and  
722 computer software related terms defined in Attachment 6, Data Rights and Computer  
723 Software License Terms and Definitions

724 Vendors shall complete the Data Rights Assertions tables in Attachment 4, including  
725 any assertions of its sub-vendors or suppliers that must be submitted as an attachment  
726 to its solution response. The tables must be completed in the format outlined in the  
727 attachment, dated and signed by an official authorized to obligate the vendor  
728 contractually. If additional space is necessary, additional pages may be included. There  
729 is no page limit for the Data Rights Assertions Tables, and they do not count against the  
730 proposed technical solution page limitation. If the proposed solution under this  
731 transaction contains data rights other than unlimited or government purpose rights, the  
732 vendor shall assert each instance with justification within the Data Rights Assertions  
733 tables in Attachment 4.

734

735 The Government requires a minimum of Government Purpose Rights (GPR) to all  
736 development and deliverables of technical data and computer software developed  
737 exclusively with Government funds under the transaction agreement, for a five-year  
738 period.

739

740 The Vendor shall describe the intellectual property rights being provided to the  
741 Government in terms of technical data and computer software. If the proposed solution  
742 includes commercial software, copies of any applicable End User License Agreements  
743 (EULAs) must be submitted with the response. It is the Government's intent to plan for  
744 the maintenance and modification of the system(s) using Government personnel and  
745 third-party vendors. The EULA submissions have no page limit and do not count against  
746 the proposed technical solution page limitation. If additional pages are needed, data  
747 rights assertions may be submitted as an appendix, which has no page limit and does  
748 not count against the proposed technical solution page limitation.

749

750 The Vendor shall make every effort to analyze feasible non-proprietary solutions and  
751 incorporate them when applicable to the effort. This includes, but is not limited to,  
752 software rights, data, source code, drawings, manuals, warranties, and integration  
753 efforts. The Vendor shall clearly state all assumptions made during development of  
754 responses.

755  
756 **5.1.2.8 Operations Security**

757 For Operations Security (OPSEC) requirements, see the Attachment 9; OPSEC  
758 requirements document.

759

760 **5.1.2.8.1.1 Cybersecurity**

761 The prototype shall meet all applicable Risk Management Framework (RMF)  
762 cybersecurity requirements required for the Government to obtain an Authority to  
763 Operate (ATO).

764

765 **5.1.3 Labor & Pricing Volume**

766

767 **5.1.3.1 Cover Page**

768 The cover page shall include the title, vendor's name, CAGE Code (if available), DUNS  
769 number, Business Size, address, the primary point of contact (phone number & email),  
770 and status of U.S. ownership.

771

772 **5.1.3.2 Labor Hours & Pricing**

773 Vendors shall submit a firm, fixed-price amount for its solution, further divided into  
774 severable milestones. The Government is not dictating a specific price mechanism.  
775 However, proposed payments should be linked to delivery based definable milestones  
776 for the prototype. It should be clear, with sufficient detail, what is being delivered at  
777 each milestone. The vendor's pricing milestones may vary from the defined decision  
778 points, depending on the proposed solution. Labor Hours and labor categories by TO  
779 should be included in the pricing breakdown. Pricing submission shall be submitted in  
780 Excel format with all Excel formulae and pricing information (to include buildup of direct  
781 labor rate) used during the calculation. Milestones should be established and priced in  
782 a manner that prohibits milestone efforts from being worked concurrently. Each  
783 milestone price should reflect the anticipated value the Government will receive toward  
784 the accomplishment of the OTA goals and objectives at the time the milestone is  
785 completed. The Labor Hours & Pricing has no page number limitation.

786

787

788 **5.1.3.3. Follow-On Rough Order of Magnitude (ROM)**

789 Vendors shall provide a ROM pricing for potential RFGEN follow-on production activities  
790 as described in Section 8 with an assumption that the Navy anticipates ordering a  
791 quantity of up to 8 systems. The Follow-On ROM pricing shall state all assumptions and  
792 methodology used to obtain the Follow-on ROM. Please note: The Follow-On ROM will  
793 assist in future planning efforts for the potential follow-on efforts. The Follow-On ROM is  
794 not part of the evaluation and will be used for future planning purposes.

795

796 **5.2. RFS Response Instruction:**

797 There will be an open period for the submittal of questions relating to the RFS. All  
798 questions related to this RFS should be submitted utilizing the Vendor Question Form  
799 provided as Attachment 10. Questions must be submitted via email to  
800 [inities@nstxl.org](mailto:inities@nstxl.org), with "RFGEN SDI" used in the subject line. All questions must be  
801 submitted with the company name and POC information.

802

803 Questions must be submitted no later than **12:00 PM EDT on 2 July 2020**. Questions  
804 received after the deadline may not be answered. Questions shall not include  
805 proprietary data as the Government reserves the right to post submitted questions and  
806 answers, as necessary (and appropriate) to facilitate vendor solution responses.

807

808 The Government will make every attempt to answer all submitted questions as soon as  
809 possible, but no later than **1:00 PM EDT on 9 July 2020**. Questions shall not include  
810 proprietary data. The Government reserves the right to post submitted questions and  
811 answers, as necessary (and appropriate) to facilitate vendor Solution Paper responses.  
812 Submitted questions will be posted without identifying company names.

813

814 The Government may also establish a WebEx session, as appropriate, to communicate  
815 with industry. If the Government decides to utilize WebEx, a date, time, and title of the  
816 event will be posted no later than two (2) weeks before solutions are due.

817

818 Written solutions shall be submitted no later than **1:00 PM EDT on 22 July 2020**, via  
819 the "Submit a Solution" button on the NSTXL website. Any submissions received after  
820 the deadline may be rejected as late and not considered.

821

822 Vendor submission shall be valid for at least 180 days after submission.

823

824

825 **6. EVALUATION AND SELECTION PROCESS**

826 **6.1. Evaluation**

827 The evaluation will consist of an evaluation of the written solution response. If further  
828 information is required after the completion of the evaluations of the written solution  
829 responses, the Government may request presentations and/or demonstrations or enter  
830 into communications with vendors.

831 The Government will evaluate the degree to which the submission provides a thorough,  
832 flexible, and sound approach to fulfill the requirements.

833 In performing the initial review of the Technical Volume, the Government evaluators will  
834 only review the enclosures and other proposal information if the response describes a  
835 technical approach that the Government evaluators find viable and effective based on  
836 the Focus Areas described below.

837 If the other supporting documents are reviewed, the Government evaluators will  
838 consider the extent to which the supporting documents are consistent with the  
839 remaining technical response. If the supporting documents are not consistent, the  
840 overall evaluation of the vendor’s solution may be negatively affected.

841 Written solution responses will be evaluated with consideration given to the vendor’s  
842 ability to provide a clear description of the proposed solution, the overall technical merit  
843 of the response, and the total project risk with consideration aimed at the Focus Areas,  
844 Technical and Labor & Pricing Volumes. The proposed schedule; and Intellectual  
845 Property and Data Rights will also be considered as aspects of the entire response  
846 when weighing risk and reward.

847 After the evaluation of written solution responses, it is anticipated that the Government  
848 will begin the Statement of Work (SOW) collaboration with the selected vendor.

849 The Technical and Labor & Pricing Volumes of the Written Solution Response will be  
850 evaluated based upon the following focus areas.

851 **Focus Areas:** In evaluating the viability and overall effectiveness, the Government  
852 evaluators will consider the following focus areas, in no specific order of importance.  
853

Focus Area	Focus Area Description
1	Technical Merit
2	Demonstrated Experience
3	Solution Feasibility of Implementation
4	Anticipated Delivery Schedule
5	Government Desired Rights in Technical Data and Computer Software
6	Solution Price

854

855 **6.1.1.1. Focus Area 1 – Technical Merit**

856 The technical merit of the vendor’s technical solution and design approach for all  
857 phases and objectives as described in Sections 5.1.2.6

858

859 **6.1.1.2. Focus Area 2 – Demonstrated Experience**

860 Clearly communicate past experience designing, developing, prototyping, and  
861 producing electronic threat simulation and measurement systems that can ingest and  
862 directly simulate validated intelligence data in EWIRDB format. This includes recent  
863 experience within 5 years, working with various interfacing subsystems such as SSC  
864 1.0/2.0 and DGEN vendors. Communicate experience in advanced test systems and  
865 capabilities in accordance with NEWEG ICDs, IDDs, and open architecture standards.  
866 Communicate experience supporting the test and assessment of aviation platforms.  
867 Communicate the ability to handle simultaneous development and production efforts for  
868 multiple platforms, missions, and locations. Communicate the ability to establish and  
869 sustain product lines at multiple locations.

870

871 **6.1.1.3. Focus Area 3 – Solution and Feasibility of Implementation**

872 Clear, concise, and well-developed solution with streamlined approach of being  
873 implemented into the RFGEN SDI, ease of adapting final design prototype solution for  
874 reuse in various DoD variants.

875

876 **6.1.1.4. Focus Area 4 – Anticipated Delivery Schedule**

877 The Government will evaluate the vendor’s proposed approach and understanding of  
878 the entire effort as demonstrated in the proposed delivery dates for all tasks as  
879 described in the RFS.

880

881 **6.1.1.5. Focus Area 5 – Government Desired Rights in Technical Data and**  
882 **Computer Software**

883 The Government will evaluate the vendor’s Attachment 4, Data Rights Assertions  
884 Tables, specifically their response to requested Government Desired Rights in  
885 Technical Data and Computer Software and evaluate for risk(s) impacts.

886

887 **6.1.1.6. Focus Area 6 – Solution Price**

888 Transparent pricing & cost data, which accurately reflects the level of effort derived from  
889 proposed Technical Volume, and IMS. Rational price breakdown for each significant  
890 milestone activity. A detailed breakdown of man-hours by month for each labor  
891 category.

892

893 **6.2. Selection Process**

894

895 The Government anticipates awarding one OT prototype project, through TReX, to the  
896 vendor that proposes a solution that best satisfies the Government’s objectives.

897

898 The Government will review each vendor’s submittal against the focus areas outlined in  
899 Section 6.1 and make an award to the vendor whose solution is determined to be the  
900 most advantageous to the Government in terms of overall technical merit, solution  
901 feasibility, and total project risk with considerations for price, schedule, and data rights  
902 assertions.

903

904 The assessment of risk is subjective. If the risk is evident or the schedule seems overly  
905 aggressive, the Government will consider that in the total risk assessment. Vendors are  
906 responsible for identifying risks within their submissions, as well as providing specific  
907 mitigation solutions. If sufficient validation of the proposed information is not provided,  
908 the Government may reject the submission.

909

910 Unsupported assertions will be discounted by the evaluators.

911

912 In making the final decision, it may become necessary to compare the proposals of  
913 each vendor against the other. Still, the Government anticipates that its decision is more  
914 likely to be made based on each vendor’s submittal as evaluated against the criteria  
915 described above and a determination of which proposal is determined to be the most  
916 advantageous to the Government.

917

918 **7. ADDITIONAL INFORMATION**

919 **7.1. Statement of Work**

920 The proposed solution will be used to collaboratively negotiate a Statement of Work  
921 (SOW) after selection for the award. The SOW will be incorporated into the OTA  
922 agreement as part of the award.

923

924 **7.2. Export Controls**

925 Research findings and technology developments arising from the efforts may constitute  
926 a significant enhancement to the national defense and the economic vitality of the  
927 United States. As such, in the conduct of all work related to this effort, the recipient will  
928 comply strictly with the International Traffic in Arms Regulation (22 C.F.R. §§ 120-130),  
929 the National Industrial Security Program Operating Manual (DoD 5220.22-M) and the  
930 Department of Commerce Export Regulation (15 C.F.R. §§ 730-774).

931

932 **7.3. Interaction and/or Disclosure**

933 The Vendor should comply with foreign disclosure processes IAW US Army Regulation  
934 (AR) 380-10, Foreign Disclosure and Contacts with Foreign Representatives;  
935 Department of Defense Directive (DoDD) 5230.11, Disclosure of Classified Military  
936 Information to Foreign Governments and International Organizations; and DoDD  
937 5230.20, Visits and Assignments of Foreign Nationals. All submissions shall be  
938 unclassified. Submissions containing data that is not to be disclosed to the public for  
939 any purpose or used by the Government except for evaluation purposes shall include  
940 the following sentences on the cover page:

941 *“This submission includes data that shall not be disclosed outside the Government,*  
942 *except to non-Government personnel for evaluation purposes, and shall not be*  
943 *duplicated, used, or disclosed -- in whole or in part -- for any purpose other than to*  
944 *evaluate this submission. If, however, an agreement is awarded to this Company as a*  
945 *result of -- or in connection with -- the submission of this data, the Government shall*  
946 *have the right to duplicate, use, or disclose the data to the extent agreed upon by both*  
947 *parties in the resulting agreement. This restriction does not limit the Government's right*  
948 *to use the information contained in this data if it is obtained from another source without*  
949 *restriction. The data subject to this restriction are contained in sheets [insert numbers or*  
950 *other identification of sheets]”*

951 Each restricted data sheet should be marked as follows:

952 “Use or disclosure of data contained on this sheet is subject to the restriction on the title  
953 page of this submission.”

954 **8. FOLLOW-ON PRODUCTION ACTIVITIES**

955

956 The Government anticipates one or more RFGEN SDI prototype solutions may require  
957 further development to support IOC. IOC is defined as the ability to develop and test  
958 prototypes that lead to the successful transition of distributed logistics enhancing  
959 capabilities and technologies to the Warfighter. To establish IOC, follow-on activities,  
960 such as further development or production, may be required for one or more of the  
961 RFGEN SDI variant prototypes.

962  
963 The Navy anticipates further development of one or more prototypes that may be  
964 required to establish IOC. This determination will be made by NAVAIR 5.4 IBST.  
965 NAVAIR 5.4 IBST will take into consideration initial user evaluation(s) when determining  
966 if further development of one or more prototypes is required. If further development is  
967 required, NAVAIR 5.4 IBST will continue the development of the RFGEN SDI  
968 prototype(s) until all requirements specified by the user, resource sponsors, and  
969 stakeholders are met, and IOC is established.

970  
971 The Navy anticipates conducting a low rate initial production (LRIP) of each of the  
972 RFGEN DGI variant prototypes that reach IOC. LRIP will be used to produce a small  
973 quantity set of test articles to provide for representation at Initial Operational Test and  
974 Evaluation (IOT&E). LRIP will also be used to establish an initial production base and  
975 set the stage for a gradual increase in production rate to allow for Full-Rate Production  
976 (FRP) upon completion of Operational Test and Evaluation (OT&E). The LRIP quantity  
977 will not exceed 10 percent of the total expected production, as determined by NAVY,  
978 resource sponsors, and stakeholders.

979  
980 In accordance with 10 U.S.C. 2371b(f), the Navy anticipates (upon successful  
981 completion of IOT&E and OT&E activities) production of each RFGEN SDI variant  
982 prototype may be required. This will include maintenance and sustainment support. The  
983 follow-on production may be acquired through either a non-competitive OT or a FAR  
984 based contract.

## 985 **9. ATTACHMENTS**

986 The characteristics of this prototype system and the Government concept for its  
987 development are included in the below attachments.  
988

989  
990 Attachment #1 – System Requirements Specification (SRS) for the Next Generation  
991 Electronic Warfare Environment Generator (NEWEG) Block B, 29  
992 May 2014

993 Attachment #2 – DGEN-RFGEN Interface Control Document (ICD), 30 July 2019 Version  
994 1.02

995 Attachment #3 – Interface Design Description (IDD) for Next Generation Electronic  
996 Warfare Environment Generator (NEWEG), 30 July 2018

997 Attachment #4 – Data Rights Assertion Tables

998 Attachment #5 – Data Rights License Terms Definitions

999 Attachment #6 – Data Rights and Computer Software License Terms and Definitions and  
1000 EULA

1001 Attachment #7 – Security Process for Vetting Vendors

1002 Attachment #8 – RFGEN\_GFI\_Distribution Agreement

1003 Attachment #9 – DGEN/RFGEN\_OPSEC

1004 Attachment #10 – Vendor Question Form

1005  
1006 Attachments 1-3 are considered GFI and will be provided in accordance with Section 4 of  
1007 this document.



**10. ACRONYMS**

Abbreviations	
AA&E	Arms, Ammunition, and Explosives
ACA	Associate Vendor/Contractor Agreement
AR	Army Regulation
ATO	Authority to Operate
BOE	Basis of Estimates
CAC	Common Access Card
CAGE	Commercial and Government Entity
CAN	Controller Area Network
CAWG	Core Asset Working Group
CC	Common Core
CM	Configuration Management
COTS	Commercial off the Shelf
CPM	Consolidated Product Line Management
DTT	Diagnostic & Troubleshooting Trainer
DOD	Department of Defense
DoDD	DoD Directive
DoDI	DoD Instruction
DoDM	DoD Manual
DP	Decision Point
FMT	Family of Maintenance Trainers
FMT-CC	Family of Maintenance Trainers Common Core
FOCI	Foreign Owned, Controlled or Influenced
GFE	Government Furbished Equipment
GFE	Government Furbished Information
GFP	Government Furbished Property
HHAR	Health Hazard Analysis Report
HOT	Hands-On-Trainer
IDE	Independent Development Environment
IMS	Integrated Master Schedule
IOS	Instructor Operator Station
ITAR	International Traffic in Arms Regulation

JLTV	Joint Light Tactical Vehicle
LT2	Live Training Transformation
MCTL	Militarily Critical Technologies List
NAS	Network Area Storage
NDC	Nontraditional Defense Contractor
NET	New Equipment Training
NSTXL	National Security Technology Accelerator
OPSEC	Operational Security
OTA	Other Transaction Agreement
PEO STRI	Program Executive Office for Simulation, Training, and Instrumentation
PL	Product Line
PM ST	Project Manager Soldier Training
PM VTS	Product Manager Virtual Training Systems
PTT	Part Task Trainer/Powertrain Trainers
RFS	Request for Solutions
RMF	Risk Management Framework
ROM	Rough Order of Magnitude
RTS-M	Regional Training Sites-Maintenance
RTVM	Requirements Traceability Verification Matrix
SAD	System Architecture Description
SAR	System Safety Assessment Report
SETA	System Engineering and Technical Advisors
SETA	Systems Engineering and Technical Advisors
SOW	Statement of Work
SS	System Specification
SSE	Software Support Environment
TDP	Technical Data Package
TFR	Training Facilities Report
TMS	Training Management System
TReX	Training and Readiness Accelerator
TS	Technical Supplement
UI	User Interface