

भारत सरकार/**GOVERNMENT OF INDIA**
अंतरिक्ष विभाग/**DEPARTMENT OF SPACE**
विक्रम साराभाई अंतरिक्ष केंद्र/**VIKRAM SARABHAI SPACE CENTRE**
तिरुवनंतपुरम/**THIRUVANANTHAPURAM – 695 022**

NO. VSSC/PUR II/ADVT/59/2022

03.02.2023

दिनांक **26.12.2022** के विज्ञापन सं. वीएसएससी/ क्रय II /विज्ञापन/ **VSSC/PUR II/ADVT/59/2022** का शुद्धि-पत्र II
CORRIGENDUM II TO ADVT. NO. VSSC/PUR II/ADVT/59/2022 DT. 26.12.2022

निम्नलिखित निविदा के सिलसिले में स्थान के दौरा, अनुलग्नक में संशोधन तथा प्राप्त एवं खोलने की तिथि नीचे दिए गए ब्यौरे के अनुसार बढ़ाई जाती है;

Site Visit, Modification in Annexure and receipt and opening date of following tender is extended as detailed below;

क्रम सं. Sl. No.	निविदा सं. Tender No.	वर्णन Description
01.	VSSC/PURCHASE UNIT II (AVN)/ VS202200417801 [दोभाग/ TWO PART]	एविऑनिकी पैकेजों का परीक्षण व मूल्यांकन TEST AND EVALUATION OF AVIONICS PACKAGES

बोली प्रस्तुतीकरण से पहले स्थान का दौरा/Site visit before bid submission:-अपनी बोलियां प्रस्तुत करने से पहले स्थान का दौरा करने के इच्छुक बोलीकार, आवश्यक व्यवस्था करने हेतु पीएसओ (ps03_avn_pur@vssc.gov.in) से संपर्क करें। फोन नं. 0471 256 2387/2425 में संपर्क करें।

Those bidders interested to visit the site before submission of their bids, may contact PSO (ps03_avn_pur@vssc.gov.in) for necessary arrangements. Phone: 0471 256 2387/2425

अनुलग्नक में संशोधन/Modification in Annexure:- निविदा के निबंधन एवं शर्तों का संशोधन संलग्न अनुलग्नक 1 से 4 में समाहित है।

Modification in Terms and Conditions of the Tender is incorporated in Annexure 1 to 4 is enclosed.

निविदा स्वीकृति की नियत तिथि Due Date for Receipt of Tender	02/03/2023 14:00 बजे तक/up to 14:00 Hrs.
निविदा खोलने की तिथि / Tender Opening Date	02/03/2023 15:00 बजे/at 15:00 Hrs.

मूल निविदा सूचना की सभी अन्य निबंधन एवं शर्तें अपरिवर्तित रहेंगी।

All other terms and conditions of the original tender notice shall remain unchanged.

हस्ताक्षरित/**Sd/-**

वरिष्ठ प्रधान, क्रय एवं भंडार / **Senior Head, Purchase & Stores**

Annexure-A

The following changes are required in the Terms and conditions document for the indent No. VSSC/PURCHASE UNIT II (AVN)/SR/2022004178 dtd 28-9-2022 for Test and Evaluation of NGC and Vehicle Interface Packages through GoCo mode.

- I. In the Terms and conditions document, under Technical Terms and Conditions, Section 6 may be read as

6. VENDOR PRE-REQUISITES - Technical

- 6.1 Vendors shall have minimum one year experience in setting up and running an ISRO/DRDO accredited/certified facility for testing of Onboard Avionics packages.
- 6.2 Vendor shall submit an undertaking to provide work force with qualification & experience as mentioned in Annexure-1, as per the work load.
- 6.3 Vendor should not be in blacklisted category by any Government of India organization/ Department or any PSU at the time of quoting.

Note: Vendor shall read thoroughly and fill the compliance matrix addressed in annexure-3 of this document at the time of quoting. Otherwise quotation will not be considered.

- II. Annexure-1 to be read as

Annexure-1

1. Qualification required for the T&E workforce at the time of execution of the contract

Graduate Engineers: B.Tech Degree (with minimum first class) in Electronics & Communication/Electrical & Electronics/Applied Electronics & Instrumentation.

Technical Assistant: Diploma (with minimum first class) in Electronics&Communication/ Electrical& Electronics/ Applied Electronics & Instrumentation.

Technician: National Trade Certificate (with minimum first class) in Electronics Mechanic/Fitter.

Note: **Atleast 50% of the workforce in each category (i.e. Graduate Engineers, Technical Assistants & Technicians) should have minimum one year experience in testing avionic packages. Proof to be submitted for verification at the time of execution of order. Throughout the period of execution of the order, availability of 50% workforce with minimum 1 year experience should be maintained.**

2. Expected Quantum of Work

- Expected quantum of work/year: 38491 work units (approximate)
- Work force required at a time for completing the quantum of work as in Annexure-2 is approximately 19 Graduate Engineers, 34 Technical Assistants, 4 Electronic Technicians & 4 Mechanical Technicians. The numbers can be more or less depending on the work load .

1 work unit corresponds to

2hrs. of work of an engineer or
3hrs. of work of a technical assistant or
4hrs. of work of a technician

III. Annexure-2 to be read as

Annexure-2

SI No .	Package name	Type of package	Work units per package*				No. of work units per Package	No. of packages per year	TOTAL work units
			Engineer	Te ch. As st	Techn ician - Electr ical	Techni cian - Mecha nical			
1	Control Electronics (RCT/TVC/PS3/PS4/ L40)	Control Electronics - Category 1	66	45	3	3	117	48	5616
2	S200 Stage Controller & Actuator #	Control Electronics & Actuator - Category 2	248	33 2	22	22	624	2	1248
3	PS2/GS2/L110 EMA CE	Control Electronics - Category 3	120	75	3	3	201	11	2211
4	PICE	Control Electronics - Category 4	180	12 0	3	3	306	10	3060
5	CUS CE, C25 CE	Control Electronics - Category 5	180	12 0	3	3	306	4	1224
6	PS3/PS4 ACTUATOR	Actuators - Category 1	0	27	2	3	32	30	960

7	PS2/GS2/L110 EMA ACTUATOR	Actuators - Category 2	37	24	2	3	66	22	1452
8	C25 MRC ACTUATOR	Actuators - Category 3	57	38	3	3	101	2	202
9	CUS EGC ACTUATOR, ,C25 EGC ACTUATOR	Actuators - Category 4	57	38	3	3	101	12	1212
10	CUS AVR+MRC ACTUATOR	Actuators - Category 5	57	38	3	3	101	4	404
11	PS3/PS4 MOTOR	Motors - Category 1	0	3	1	2	6	30	180
12	PS2 MOTOR,GS2 MOTOR, L110/S200 BLDC MOTOR	Motors - Category 2	0	9	2	2	13	22	286
13	STEPPER MOTOR FOR AVR/MRC for CUS, STEPPER MOTOR FOR MRC for C25	Motors - Category 3	0	27	2	3	32	6	192
14	MOTORS for CUS EGC actuator, MOTORS for C25 EGC actuator,	Motors - Category 4	0	27	2	3	32	12	384
15	S200 LFM COIL SPOOL	Motors - Category 5	0	9	2	2	13	8	104
16	S200 LFM	Motors - Category 6	0	27	2	3	32	8	256
17	MIS	MIS	0	18	3	3	24	10	240
18	CEM/SLRU- DUAL	Command Execution Modules, Category-1	45	30	3	3	81	31	2511
19	CEM-TMR	Command Execution Modules, Category-2	58	38	3	3	102	6	612
20	CEM-TCM-TMR	Command Execution Modules, Category-3	74	50	3	3	130	4	520
21	MIB/RBB	Interface Packages,	0	10	2	1	13	129	1677

		Category-1							
22	CCIFU	Interface Packages, Category-2	0	20	3	1	24	11	264
23	S200 ACT PSM	Interface Packages, Category-3	0	40	2	1	43	2	86
24	BEXM, LVM3 EB NGC/ACT PSM, PS2 AVN PSM	Interface Packages, Category-4	0	50	3	1	54	49	2646
25	LS AVN PSM	Interface Packages, Category-5	0	60	2	1	63	4	252
26	EMA PSM	Interface Packages, Category-6	48	32	3	1	84	11	924
27	LVM3 EB INST PSM	Interface Packages, Category-7	50	40	2	1	93	2	186
28	NGCP/NAINS	Onboard Computer	50	33	2	1	86	36	3096
29	Simplex LVDT/Pot.	Sensor Category-1	0	20	2	2	24	86	2064
30	Duplex LVDT	Sensor Category-2	0	30	2	2	34	20	680
31	Triplex LVDT	Sensor Category-3	0	40	2	2	44	12	528
32	DSE Stack	Signal Conditioner Category-1	0	54	2	1	57	4	228
33	CUS PSC	Signal Conditioner, Category-2	50	33	2	1	86	2	172
34	CDLSE	Signal Conditioner Category-3	80	54	2	1	137	4	548
35	SPS EB/BS/GLS/CS CUS	Stage Processing Systems, Category-1	72	45	3	3	123	14	1722
36	SPS LS/US(TMR)	Stage Processing Systems, Category-2	80	50	3	3	136	4	544
	TOTAL							672	38491

1 set of S200 Stage controller and Actuator consists of one Controller, 2 Drive Electronics, 2 Actuators and 2 MIS. Testing of any one package at a time with corresponding units also to be considered.

***1 work unit corresponds to:-**

**2hrs. of work of an engineer or
3hrs. of work of a technical assistant or
4hrs. of work of a technician**

The above work can be carried out by approx. 19 Graduate Engineers, 34 Technical Assistants, 4 Electronic Technicians & 4 Mechanical Technicians.

Multiple checkouts are to be operated simultaneously as per schedule requirements.

- IV. In annexure-3 compliance matrix – Sl. No. 5 and 6 may be read as given below. 5.a & 5.b is deleted.

Annexure- 3

Compliance Matrix

Sl No.	Parameters	Compliance	Response	Remarks
5	Experience of minimum one year in setting up and running an ISRO/DRDO accredited/certified facility for testing of Onboard Avionics packages.	Available or not; If yes, provide details & proof	Yes*/No	
6	Vendor to submit undertaking to provide work force with qualification and experience as mentioned in Annexure-1, as per the work load	Undertaking will be provided or not.	Yes*/No	

***Details to be provided.**

- V. In annexure-4 General information on Tests to be carried out on each category of Packages – Sl. No. 2 may be read as given below.

Annexure-4

General information on Tests to be carried out on each category of Packages											
Sl. No.	Type of package	Packages	Initial SRC	COL D SOAK	HOT SOAK	OPERATING HOT SOAK	Vibration	Vacuum	EMI	Final SRC	Approximate no. of interconnections for setup
2	Control Electronics & Actuator - Category 2	S200 Stage Controller & Actuators	Visual Inspection, Continuity, Isolation & Insulation, capacitance measurement, Inrush Current measurement, Converter Health status verification, 1553 Interface Hardware Tests, Differential Receiver Test for external reset interface, External Reset Test-Reset pulse width, timing for MM/FM entry, surge suppression of relay, Monitor Mode Test, LVDT Excitation measurement, Hall Excitation Measurement, Output Impedance Measurement, Linearity Test, Frequency Response Test, Step Response Test, Slow sine command test, Coil isolation tests, Spike and ripple measurement on T/M, Normal flight mode test, Hardcore tests, Power failure tests, LVDT FDI Checks, Power Supply Variation Tests *2 No. of loops are present.	√#1	√#1	√#1	√#2	√#3	√#4	All tests as in Initial SRC along with Stall force and Current measurement, 200m Simulated cable test, Final QC inspection	220