



प्रसार भारती/ PRASAR BHARATI  
भारत का लोक सेवा प्रसारक/ INDIA'S NATIONAL PUBLIC SERVICE BROADCASTER  
आकाशवाणी महानिदेशालय/DIRECTORATE GENERAL: ALL INDIA RADIO  
योजना और विकास एकक आकाशवाणी भवन, संसद मार्ग, नई दिल्ली-110001  
P & D UNIT, AKASHVANI BHAWAN, SANSAD MARG, NEW DELHI-110001  
[क्रय अनुभाग/PURCHASE SECTION]

No. 01(61)11/NIT-38/2020-D(P)E/2406

Dated: 09.09.2020

### Corrigendum/ Addendum-I to NIT-38/2020

**Tender no. 12(59)01/20kW/2020/D(P)672-D(P-S)Cell/E :-**

**{Supply of 20 kW Digital Compatible VHF FM solid state MOSFET technology based Broadcast Transmitter (Liquid Cooled) in (1+1) Configuration and Associated Equipments / items.}**

**Reference:** M/s BECIL letter No. BECIL/GM(P)/AIR-TRX TENDER/50/2020 dated 14.08.2020.

**A.** Following clauses of AIR specification No: 2 0 kW FM TX/2/April/2020-D (TD/FM) are amended as under.

**1. The clause 1.10 under Section-I may be read as -**

#### **1.10 INSPECTION:**

1.10.1 Detailed Pre-dispatch Inspection (PDI) of transmitters on dummy load will be carried out at OEM's Works by **two Engineers** of All India Radio as per details given in **Annexure-I**. However, AIR at its discretion may decide to opt for conducting PDI remotely through online/video conference considering the ongoing Covid-19 Pandemic scenario.

1.10.2 Call for Pre-dispatch Inspection(PDI) of transmitter is to be given by the tenderer to All India Radio at least **4 weeks** in advance. Inspection period will be four days including one day to test the compatibility of the transmitters for HD or DRM+ mode. Testing/measurements reports as per approved ATP must be submitted to All India Radio along with the call for inspection of transmitters for analyzing etc.

1.10.3 For AIR inspecting engineers, expenses toward to and fro air journey, boarding, lodging etc. will be borne by All India Radio.

1.10.4 The complete Acceptance Test Procedure/Protocol (ATP) will be prepared by the OEM of the transmitter and submitted to DDG (E-FM), P&D Unit, DG: AIR for approval within **15 days** of issue of Acceptance of Tender. ATP will also indicate full details of setup for measuring/testing equipments to be

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deployed during the performance measurements/inspection. The **approved ATP** shall form the basis for performance measurements/inspection to be carried out. AIR has the right to include other technical parameters in ATP submitted by OEM within the ambit of specification of the product offered.

1.10.5 Inspection of all other associated equipment/items i.e. Dummy Load, Motorized RF coaxial changeover switch, RF coaxial copper rigid line etc. as per details given in **Annexure-I**.

**in place of**

1.10.1 Detailed inspection of transmitters on dummy load will be carried out at Tenderer's Works/Site by **two Engineers** of All India Radio as per details given in **Annexure-I**.

1.10.2 Call for Pre-dispatch Inspection(PDI) of transmitter at tenderer's Works/Site is to be given by the tenderer to All India Radio at least **2 weeks** in advance. Inspection period will be four days including one day to test the compatibility of the transmitters for HD or DRM+ mode. Testing/measurements reports as per approved ATP must be submitted to All India Radio along with the call for inspection of transmitters for analyzing etc.

1.10.3 For AIR inspecting engineers, expenses toward to and fro air journey, boarding, lodging etc. will be borne by All India Radio.

1.10.4 The complete Acceptance Test Procedure/Protocol (ATP) will be prepared by the OEM of the transmitter and submitted to DDG (E-FM), P&D Unit, DG: AIR for approval within **15 days** of issue of Acceptance of Tender. ATP will also indicate full details of setup for measuring/testing equipments to be deployed during the performance measurements/inspection. The **approved ATP** shall form the basis for performance measurements/inspection to be carried out. AIR has the right to include other technical parameters in ATP submitted by OEM within the ambit of specification of the product offered.

1.10.5 Inspection of all other associated equipment/items i.e. Dummy Load, Motorized RF coaxial changeover switch, RF coaxial copper rigid line etc. as per details given in **Annexure-I**.

**2. The clause 2.0 (f) under Section-II may be read as -**

- f. The 20 kW Digital Compatible FM Transmitter should be compatible for HD Radio and DRM+ mode for future upgradation. Details regarding the compatibility of the transmitter should be given by the tenderer in the tender offer. HD/DRM+ Equipments shall not be the part of supply in respect of this tender .

**in place of**

- f. The 20 kW Digital Compatible FM Transmitter should be compatible for HD Radio and DRM+ mode for future upgradation. Details regarding the compatibility of the transmitter should be given by the tenderer in the tender offer. HD/DRM+ Equipments shall not be the part of supply in respect of this tender . However, all necessary equipments required for checking the compatibility of the offered FM transmitter in HD or DRM+ mode during PDI at tenderer's works/Site will be arranged by the tenderer.



### 3. The clause Inspection details, Annexure-I may be read as -

The inspection for acceptance of the transmitter equipment on dummy load will be carried out at OEM's Works by **Engineers** of All India Radio (AIR) in accordance with Acceptance Test Procedure/Protocol (ATP). All facilities like complete set of measuring instruments, power supply, manual assistance etc. will be provided by the OEM/Tenderer. Complete details and specifications of the transmitter will be checked and all parameter values will be measured.

**All the testing/measurements including Operational & functional checking of the transmitter during PDI will be carried out at 105% of the rated output power of the offered transmitter.**

The tenderer is also required to demonstrate the digital compatibility of the offered FM transmitter in HD or DRM+ mode. However, the tenderer is required to give an undertaking during PDI that the offered transmitter is compatible for both HD and DRM+ mode. All measurements applicable for HD/DRM+ mode shall also checked as per AIR specifications. All necessary equipments required for checking the compatibility of the offered FM transmitter in HD or DRM+ mode during inspection will be arranged by the tenderer.

All the spares ordered as per AT will be tested in actual circuit during inspection by Engineers of AIR.

Testing/measurements including operational & functional checking of all the transmitters shall be carried out at three different frequencies including operating frequency of the transmitter in the VHF Band i.e. 88 MHz to 108 MHz as per approved ATP.

Exhaustive checking and measurements will be carried out so as to completely check the compliance of the transmitter and its sub systems with the requirements as projected in the specifications.

Tenderer shall also arrange for the photographs of inside of transmitter's cubicle which will be attached with the ATP/Inspection report.

Testing/measurements including Operational & functional checking of the transmitter will be carried out on three phase, 4-wire, 400 Volt (rms)  $\pm 10\%$ , 50 Hz  $\pm 4\%$  power supply available at the transmitter's input circuit breaker without any outside transformer unit etc. No other voltage will be acceptable to AIR at the transmitter's input circuit breaker, failing which the transmitter equipment is liable to be rejected. The technical facilities/equipment for varying within  $\pm 10\%$  of 400Volts (rms), three phase, 4-wire, should be available for testing/measurements including Operational & functional checking of the transmitter during the inspection. The performance of transmitter as per parameters in Section-III shall be guaranteed without degradation with the given power supply tolerances.

It is mandatory that testing/measurements including operational & functional checking of all the transmitters as per approved ATP at three different frequencies including operating frequency of the transmitter in the VHF Band i.e. 88 MHz to 108 MHz without change of components/ settings/tuning are carried out well in advance. These measurements as per approved ATP must be submitted to All India Radio along with the call for inspection of transmitters for analyzing etc. These measurement details, graphical printout, notes and figures must also be available at the time of inspection.

All other associated equipments/items i.e. RF coaxial copper rigid lines and accessories, Dummy Load, Motorized RF coaxial switch etc. will be accepted on the basis of OEM test certificates (as per AIR

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specifications) duly stamped and signed by respective OEM on the letterhead of the OEM, failing which, test certificates will be considered incomplete and equipment offered by the firm is liable to be rejected.

All OEM test certificates are also to be submitted by the tenderer to All India Radio along with the call for inspection for analyzing etc. These OEM test certificates must also be available at the time of inspection.

Following information should also form part of above data which will also be checked for each transmitter during inspection by AIR representatives: -

1. Origin of Country, Make, Type, Model & name of all units of transmitter, other items & accessories and spares.
2. Dimensions of transmitter rack, sub-units, other items & accessories.
3. Working/operation of all sub-units and accessories.
4. System configuration check and completeness of transmitter.
5. Automatic changeover of Exciter and IPA (if applicable) etc.
6. Checking meter readings and calibration.
7. Checking of control and protection system of transmitter.
8. Checking of all power levels, meters, LEDs etc.
9. Checking of RF voltages on test points.
10. Inter-changeability of Pas, sub-modules.
11. Exciter operation, checking and measurements.
12. Working of Exciter in all mode including modulating inputs as per specifications.
13. Measurement of levels in the whole AF and RF chain.
14. Checking of all spares, PCB's, modules for the respective transmitter, other items & accessories.

### *in place of*

The inspection for acceptance of the transmitter equipment on dummy load will be carried out at Tenderer's Works/Site by **Engineers** of All India Radio (AIR) in accordance with Acceptance Test Procedure/Protocol (ATP). All facilities like complete set of measuring instruments, power supply, manual assistance etc. will be provided by the Tenderer. Complete details and specifications of the transmitter will be checked and all parameter values will be measured.

**All the testing/measurements including Operational & functional checking of the transmitter during PDI at Tenderer's Works/Site, will be carried out at 105% of the rated output power of the offered transmitter.**

The tenderer is also required to demonstrate the digital compatibility of the offered FM transmitter in HD or DRM+ mode. However, the tenderer is required to give an undertaking during PDI that the offered transmitter is compatible for both HD and DRM+ mode. All measurements applicable for HD/DRM+ mode shall also checked as per AIR specifications. All necessary equipments required for this purpose will be arranged by the tenderer.

All the spares ordered as per AT will be tested in actual circuit at Tenderer's Works/Site by Engineers of AIR.

Testing/measurements including operational & functional checking of all the transmitters shall be carried out at three different frequencies including operating frequency of the transmitter in the VHF Band i.e. 88 MHz to 108 MHz as per approved ATP.

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Exhaustive checking and measurements will be carried out so as to completely check the compliance of the transmitter and its sub systems with the requirements as projected in the specifications.

Tenderer shall also arrange for the photographs of inside of transmitter's cubicle which will be attached with the ATP/Inspection report.

Testing/measurements including Operational & functional checking of the transmitter will be carried out at Tenderer's Works/Site on three phase, 4-wire, 400 Volt (rms)  $\pm 10\%$ , 50 Hz  $\pm 4\%$  power supply available at the transmitter's input circuit breaker without any outside transformer unit etc. No other voltage will be acceptable to AIR at the transmitter's input circuit breaker, failing which the transmitter equipment is liable to be rejected. The technical facilities/equipment for varying within  $\pm 10\%$  of 400Volts (rms), three phase, 4-wire, should be available at Tenderer's Works/Site for Testing/measurements including Operational & functional checking of the transmitter during the inspection. The performance of transmitter as per parameters in Section-III shall be guaranteed without degradation with the given power supply tolerances.

It is mandatory that testing/measurements including operational & functional checking of all the transmitters as per approved ATP at three different frequencies including operating frequency of the transmitter in the VHF Band i.e. 88 MHz to 108 MHz without change of components/ settings/tuning are carried out well in advance. These measurements as per approved ATP must be submitted to All India Radio along with the call for inspection of transmitters for analyzing etc. These measurement details, graphical printout, notes and figures must also be available at the factory at the time of inspection.

All other associated equipments/items i.e. RF coaxial copper rigid lines and accessories, Dummy Load, Motorized RF coaxial switch etc. will be accepted on the basis of OEM test certificates (as per AIR specifications) duly stamped and signed by respective OEM on the letterhead of the OEM, failing which, test certificates will be considered incomplete and equipment offered by the firm is liable to be rejected.

All OEM test certificates are also to be submitted by the tenderer to All India Radio along with the call for inspection for analyzing etc. These OEM test certificates must also be available at the time of inspection at tenderer's Works/Site.

Following information should also form part of above data which will also be checked for each transmitter during inspection by AIR representatives at **Tenderer's Works/Site:-**

1. Origin of Country, Make, Type, Model & name of all units of transmitter, other items & accessories and spares.
2. Dimensions of transmitter rack, sub-units, other items & accessories.
3. Working/operation of all sub-units and accessories.
4. System configuration check and completeness of transmitter.
5. Automatic changeover of Exciter and IPA (if applicable) etc.
6. Checking meter readings and calibration.
7. Checking of control and protection system of transmitter.
8. Checking of all power levels, meters, LEDs etc.
9. Checking of RF voltages on test points.
10. Inter-changeability of Pas, sub-modules.
11. Exciter operation, checking and measurements.
12. Working of Exciter in all mode including modulating inputs as per specifications.
13. Measurement of levels in the whole AF and RF chain.
14. Checking of all spares, PCB's, modules for the respective transmitter, other items & accessories.

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4. The clause/S. No. 10 under Section-V(A) may be read as -

10.	Inspection charges of transmitter as per AIR specifications.			1	Lot
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in place of

10.	Inspection charges at tenderer's Works/Site of transmitter as per AIR specifications.			1	Lot
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No change in other clauses as detailed deliberation on Essential Eligibility criteria has already been carried out by the Committee during feedback received from the prospective bidders.

- B. Accordingly Amended excel sheets of UnPrice Bid and Price bid are being uploaded. The Excel sheets of Price Bid and Unprice Bid uploaded previously will be treated as cancelled.

**NOTE:**

- The bid forms, General Instructions to Bidders and other details including amendments/ changes can be viewed/ downloaded from the website <http://prasarbharati.eproc.in>.
- Tender notice is also available on the Prasar Bharati website [www.prasarbharati.gov.in](http://www.prasarbharati.gov.in) (using the link: Tender) and CPP PORTAL on website <http://eprocure.gov.in>.

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(हर्देश कुमार/ Hirdesh Kumar)

निदेशक (अभि.)/ Director (Engg.)

कृते महानिदेशक आकाशवाणी/for Director General: All India Radio

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