



NTPC Limited
Corporate Operation Services EOC, Noida

Ref: 01: OS: C&I: Enlistment: QR

Date: 18.08.2020

Sub: QR for Vendor Enlistment for supply of Guided Wave Radar Type Level Transmitter.

A	MEG Details	
	1.0 MEG No.	94MEG-04
	2.0 MEG Description	Guided Wave Radar Type Level Transmitter
	3.0 Responsibility Centre	CC
B	Technical Criteria of QR: 1. The applicant should be manufacturer of Guided Wave Radar Type Level Transmitter. 2. The applicant should have supplied Guided Wave Radar Type Level Transmitters to power plants having 200MW and higher size units during last 5 Years from the date of application.	
C	Documents required in support of meeting Qualifying Requirements (QR): 1. QR-1: Documents in support of manufacturing facility: Valid ISO certificate/NSIC/ Catalogue /any other suitable document as a proof of being manufacturer of the required material. Brief details of manufacturing facilities for Guided Wave Radar Type Level Transmitters are also to be given. 2. QR-2: PO / Contract / Work order copies and their Invoices/completion Certificates etc. in support of supply.	
D	Other Documents to be submitted: In addition to the documents required in support of meeting technical requirements as stated above, following documents are required to be submitted by the Applicants applying for enlistment:- 1. Three POs of the highest executed values of similar work (see definition at point E-Note below) during previous five years from the date of application. Copy of Invoice / Completion certificate from the concerned buyer/s in support of successful execution of supply against the POs to be submitted. These will be required for calculation of Execution capability 2. Audited balance sheet including Profit & Loss statement for the previous three completed financial years reckoned from the date of application. In case the audited documents are not ready / available, then certified copy by a registered practicing Chartered accountant may be submitted. 3. Latest annual report OR NSIC / SSI / MSME registration certificate / BIS license / ISO certificate/ Certificate of registration from the concerned excise department / any other statutory document as a proof of being manufacturer of the required material. 4. Any other documents in addition to the above which the applicant wants to submit. 5. NTPC can ask other documents as necessary during the course of evaluation.	
E	Note-1 Similar works means: Supply of Guided Wave Radar Type Level Transmitter or Instrumentation and Control items to any Power Plants / Petroleum Refinery / Steel / Fertiliser Plants / Aluminium Industry within last 5 (five) years from the date of application for enlistment. Note-2 The executed value means Basic value of quantity of similar works executed/supplied against the reference PO (also applicable to partly executed POs as on date of application). Where PO value is composite (i.e. including Taxes etc.), the applicant to give item-wise break-up of Composite PO value mentioning Basic Value, Taxes etc.	

2. GUIDED WAVE RADAR TYPE LEVEL TRANSMITTER

Type	Microprocessor based 2 wire type (loop powered), HART protocol compatible Guided wave radar transmitter.
Principle	TDR (Time domain reflectometry)
Probe Type & Material	(i) Coaxial probe of SS316/316L. If required, probe shall be suitable for overfill prevention. (ii) Rod probe, cable probe of SS316/SS316L can be used for applications.
Output signal	4-20 mA DC along with superimposed digital signal (based on HART protocol), suitable for over fill prevention.
Accuracy	+/- 0.5% of calibrated span or minimum 5mm.
Power supply	24 VDC +/- 10%.
Housing	Weather proof as per IP-65, metallic housing with durable corrosion resistance coating.
Adjustment/ calibration	Using hand held HART calibrator/ centralized PC based system (as applicable).
Zero & span adjustment	Continuous, temper proof, remote as well as manual adjustability from instrument. It should be possible to calibrate the instrument without any level in the tank/sump etc.
Display	Integral digital display.
Load Impedance	500 ohms (minimum).
Electromagnetic compatibility	Shall meet EN 61326-1 (1997) and AmdtA1, class A equipment/EN 50081-2 & EN 5008 1-2 & EN 50082-2
Mounting	(i) External cage shall be provided where ever side mounting is required. External cage and other mounting accessories to be provided by the contractor. (ii) Where ever top mounting is required, all mounting accessories, stilling well (as required) etc., shall be provided by the contractor.

	(iii) All weather canopy shall be provided for protection from direct sunlight and direct rain for open locations.
Calibration	Standard calibration certificate confirming to specification to be provided.

Note: Four wire type transmitters can also be provided for applications where 2- wire transmitter has some technical limitations, subject to employer's approval. However, in such cases isolated 4-20 mA DC (analog) output shall be provided. Power supply required for such transmitters shall be 240V AC / 24V DC.