



**INVITATION TO e-BID UNDER SINGLE STAGE COMPOSITE BID SYSTEM**

**Tender No. & Date** : SGI8679P19 dated 18.07.2018

**Tender Fee** : INR 1,000.00 (Non-refundable)

**Last Date of Sale of Tender Document** : 20.09.2018 upto 15.30 Hrs.

**Bid Security** : INR 89,000.00

**Bidding Type** : SINGLE STAGE COMPOSITE BID SYSTEM

**Bid Closing on** : 27.09.2018 at 11.00 Hrs.

**Bid Opening on** : 27.09.2018 at 14.00 Hrs.

**Bid Validity** : Bid should be valid for 90 days from bid closing date.

**Bid Bond Validity** : Bid Bond should be valid upto 26.03.2019.  
(Bid bond format has been changed. Please submit bid bond as per revised format)

**Performance Guarantee** : Applicable @ 10% of order value.

**Integrity Pact** : Not Applicable

**Pre-Bid Conference** : Not Applicable

**Last date of receipt of pre-bid queries** : Not Applicable

**OIL INDIA LIMITED invites electronic bids from Indigenous bidders under NATIONAL COMPETITIVE BIDDING on SINGLE STAGE COMPOSITE BID SYSTEM through its e-procurement site for the items detailed below –**

| Item No. | Item Description  | Quantity | UoM |
|----------|---|----------|-----|
| 10       | 1 MVA Dry Type Transformer (Technical Details As per Annexure – AA) | 1        | NO  |
| 20       | Installation & commissioning of Item 10                             | 1        | LSM |
| 30       | 1 MVA Dry Type Transformer (Technical Details As per Annexure – AA) | 1        | NO  |
| 40       | Installation & commissioning of Item 30                             | 1        | LSM |

***Note:*** - The general details of tender can be viewed by opening the eRFx [Tender] under RFx and Auctions in the e-portal through Guest Login. The details of tendered items can be found in the Item Data and details uploaded under Technical RFX. The bidding document is available in the Technical RFX -> External Area -> Tender Documents.

**STANDARD NOTES:**

1.0 The tender will be governed by “General Terms & Conditions for National Tender (National Competitive Bidding)” for e-Procurement as per Booklet No. MM/LOCAL/E-01/2005(For e-tenders).

2.0 This Bidding document consists of:

- (i) Annexure AA : Technical Specification
- (ii) Annexure BB : Bid Rejection Criteria / Bid Evaluation Criteria
- (iii) Annexure CC : Commercial Check List
- (iv) Annexure DD : Price Schedule
- (v) Annexure EE : Annual Turn Over and Net Worth Certificate

“General Terms & Conditions for National Tender (National Competitive Bidding)” for e-Procurement as per Booklet No. MM/LOCAL/E-01/2005(For e-tenders).

3.0 For obtaining User ID and Password for accessing the tender document and for submission of bids, interested bidders are requested to go for Online Registration. Please visit the url: <https://etender.srm.oilindia.in/irj/portal> and click on the link ‘Supplier Enlistment for E-Tender’ for online registration and generation of user id and password. Bidders are advised to apply for user ID and password at least 7(seven) days prior to the last date of tender fee payment for their own interests. User ID’s shall be processed within 4(four) days subject to submission of complete information by the bidder. Once the registration is completed user id and password will be assigned to the bidder. The same user id and password may be used for participating in OIL’s future tender also.

3.1 After completion of the Online Registration process and receipt of user id and password, bidder may submit the tender fee online. **Tender fee must be paid online through OIL’s payment gateway only and no other instrument (Cash/DD/Cheques/Cashier Cheque, etc) will be acceptable.** Please refer the New Vendor Manual uploaded alongwith the tender and also available in the e-portal page for procedure for submission of tender fee and EMD online. *For bidders having existing user id and password issued by OIL, same may be used for submission of bid after payment of tender fee.* On receipt of requisite tender fee, bidder will be allowed to participate in the tender through OIL’s e- Procurement portal. No physical tender documents shall be submitted.

**NOTE: PSUs and SSI units are provided tender documents Free of Cost (as per Govt. guidelines), however they have to apply to OIL’s designated office to issue the tender documents before the last date of sale of tender document mentioned in the tender.**

4.0 Bidder seeking benefits of MSME shall clearly indicate the same in the tender with proper documents as stipulated in the tender. **Purchase Preference (Linked with Local Content) (PP-LC) is not applicable against this tender.**

5.0 Bidders to note that Govt. of India under Micro, Small and Medium Enterprises Development (MSMED) Act 2006, has proclaimed the Public Procurement Policy, 2012 with effect from 1st April, 2012 in respect of procurement of goods and services, produced and provided by micro and small enterprises, by its Ministries, Departments and Public Sector Undertakings for promotion and development of Micro and Small Enterprises. A new Clause on applicability of Public Procurement Policy for procurement of goods from Micro and Small Enterprises (MSE) in the tender is furnished vide Annexure – I, Amendment to General Terms & Conditions for National Tender (National Competitive Bidding)” for e-Procurement as per Booklet No. MM/LOCAL/E-01/2005(For e-tenders). Bidders are requested to take note of the same and to submit their offers accordingly.

6.0 OIL INDIA LIMITED (OIL) has upgraded its E-tender Portal. As part of the new system, the intending bidder must have Encryption Certificate along with Digital Signature Certificate (DSC) of Class III [Organization]. **All the Bids must be Digitally Signed using “Class III” digital certificate (e-commerce application) with ‘Certificate Type: Organisation Certificate’ as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. The bid signed using other than “Class 3 with Organisation’s Name” digital certificate, will be rejected.**

- 7.0 Please note that all tender forms and supporting documents are to be submitted through OIL's e-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with Tender no. and Due date to **The Deputy General Manager - Materials (PL), Oil India Limited (Pipeline Headquarter), P.O. Udayan Vihar, Guwahati -781171 before 14.00 Hrs. IST on the Bid Closing Date** mentioned in the Tender.

- a) Bid Security(EMD) submitted in the form of Bank Guarantee.
- b) Detailed Catalogue (if any).
- c) Any other document required to be submitted in original as per tender requirement.

All documents submitted in physical form should be signed on all pages by the authorised signatory of the bidder and to be submitted in triplicate.

- 8.0 OIL has made arrangement for online confirmation of Bank Guarantee through SFMS Platform with Axis Bank, Guwahati. Therefore, bidders submitting Bid Security in the form of Bank Guarantee must route the BG through SFMS platform as per following details –

- a. (i) **MT 760/MT 760 COV for issuance of bank guarantee**
- (ii) **MT 767/MT 767 COV for amendment of bank guarantee**

*The above message/intimation shall be sent through SFMS by the BG issuing bank branch to Axis Bank, Guwahati Branch, IFS Code – UTIB0000140, Branch Address – Axis Bank Ltd., Guwahati Branch, Chibber House, G.S. Road, Dispur, Assam, Pin – 781005.*

- b. *The Bidder shall submit to OIL the copy of SFMS message as sent by the issuing bank branch along with the original bank guarantee.*

- 8.1 Bank Guarantee issued by a Scheduled Bank in India at the request of some other Non-Scheduled Bank in India shall not be acceptable.

- 9.0 Bidders are requested to go through the '**New Vendor Manual**', '**Guidelines to Bidders for participating in OIL e-tenders**', '**New Instruction to bidders for submission of bid**' and '**Vendor User Manual for e-tendering**' available in the e-portal home page before submitting offer in system.

- 10.0 **Deemed export/Custom Duty benefits are not applicable against this tender and bidders should furnish prices without considering these benefits.**

- 11.0 The tender is invited under **SINGLE STAGE-COMPOSITE BID SYSTEM**. The bidder has to submit both the "TECHNO-COMMERCIAL UNPRICED BID" and "PRICED BID" through electronic form in the OIL's e-Tender portal within the Bid Closing Date and Time stipulated in the e-Tender. The "Techno-commercial Unpriced Bid" shall contain all technical and commercial details except the prices which shall be kept blank. Details of prices as per Price Schedule to be uploaded as attachment in the Attachment Tab "Notes and Attachments".

Any offer not complying with above submission procedure will be rejected as per Bid Rejection Criteria mentioned in the tender.


**Notes and Attachments**

➔ Only price details should be uploaded

**Technical attachments**

➔ All technical bid documents except price details

*Bidders are requested to go through the '**New Vendor Manual**', '**Guidelines to Bidders for participating in OIL e-tenders**', '**New Instruction to bidders for submission of bid**' and '**Vendor User Manual for e-tendering**' available in the e-portal home page before submitting offer in system*



**Oil India Limited e-Procurement**

User ID \*

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- 12.0 Bidders are requested to examine all instructions, forms, terms and specifications in the tender. Failure to furnish all information required as per the tender or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in rejection of its offer without seeking any clarifications.
- 13.0 Bidders must ensure that their bid is uploaded in the system before the tender closing date and time. Also, they must ensure that all documents which are to be submitted in a sealed envelope are also submitted at the address mentioned in note 8.0 above before **14:00 Hrs (IST)** on the bid closing date failing which the offer shall be rejected.
- 14.0 Other terms and conditions of the tender shall be as per “General Terms & Conditions for National Tender (National Competitive Bidding)” for e-Procurement as per Booklet No. MM/LOCAL/E-01/2005(For e-tenders). However, if any of the clause of the Bid Rejection Criteria / Bid Evaluation Criteria (BEC / BRC) contradicts the clauses in the General Terms & Conditions of the tender and/or elsewhere, those mentioned in the BEC/BRC shall prevail.
- 15.0 To ascertain the substantial responsiveness of the bid OIL reserves the right to ask the bidder for clarification in respect of clauses covered under BRC also and such clarifications fulfilling the BRC clauses in toto must be received on or before the deadline given by the company, failing which the offer may be summarily rejected.
- 16.0 **No press advertisement will be published regarding amendment to Bidding Document or extension of Bid Closing Date. The same will be uploaded in OIL’s website and informed to all prospective bidders who have received the bidding documents. Bidders to keep themselves updated.**

Sd-  
(M.B. SINGHA)  
SR. MANAGER MATERIALS (PL)  
FOR GENERAL MANAGER - MATERIALS (PL)  
FOR: CHIEF GENERAL MANAGER (PLS)

**ANNEXURE – AA****TECHNICAL SPECIFICATIONS****For Item No 10: Supply of 1000kVA, 433 V/3.3KV Dry Type Transformer****1.0 SCOPE**

This specification covers supply, testing and commissioning of 1 no. 1000kVA, 433 V/3.3KV Dry Type step up Transformer, designed for indoor installation. The transformer to be supplied against this specification is required for vital installations where continuity of service is very important. The design, materials and manufacture of the equipment shall, therefore be of the highest order to ensure continuous and trouble-free service over the years.

**2.0 STANDARDS**

The latest revisions of the following Codes and Standards listed shall be applicable for the Equipment / materials covered in this specification.

IS 11171 & 2026: Dry type power transformer

IS 10028 (Part II & III): Installation and Maintenance of Transformer.

IS 2099: Bushing

IS 2705: Current Transformer

IEC 60529: Classification of degree of protection provided by enclosures

**3.0 GENERAL CONSTRUCTION**

All the MS parts shall be either Hot dipped galvanized or cold galvanized to make them corrosion free. The core shall be made up of high grade low loss CRGO (cold rolled grain oriented) silicon steel. Both low & high voltage windings shall be made of copper conductor. The class of winding insulation shall correspond to class 'F'. The construction of the windings of the transformer shall be such that no creepage path is found even in dusty & corrosive ambient conditions. The core coil assembly shall be housed in a prefabricated metal enclosure.

The enclosure shall be fabricated with mild steel CRCA sheets with adequate provision for ventilation. The enclosures shall undergo minimum ten tank process. Finally, the external and internal surfaces of the enclosure shall be powder coated with the specified shade of paint.

**4.0 GENERAL REQUIREMENTS**

- 4.1 The transformer shall have thermal and dynamic ability to withstand external short-circuit as per clause 9 of IS 2026 (Part I) 1977 and clause 5 of IS 11171-1985.
- 4.2 Capacity and Rating: Continuous rating specified shall be irrespective position of tap changer. Indoor transformers shall be suitable for IP-23 protection.
- 4.3 Temperature Rise: As per IS 11171-1985.  
The reference ambient temperatures assumed for the purpose of this specification are as follows-
  - (a) Maximum ambient air temperature 45 degree C.
  - (b) Minimum ambient temperature 5 degree C.
  - (c) Class of insulation - "F"
  - (d) Altitude of site of installation - not exceeding 150 meters.
- 4.4 Cooling: Unless otherwise specified the transformer cooling shall be air and naturally cooled (AN).
- 4.5 Tap Changing Device: Preferred tapping range is +5% to -5% in 2.5% steps by means of "off-load" tap changing links or tap switch. The device shall be provided on HV for HV Voltage to keep LV Voltage constant.
- 4.6 Terminal Markings Connections: Relevant provisions of IS: 2026 (Part-IV)-1977 shall be applicable.
- 4.7 Voltage Ratio: The transformer shall be suitable for a voltage ratio of 433V/3.3KV
- 4.8 Vector Group: The winding connections shall conform to vector group Dyn11

- 4.9 Accessories: The transformer shall be with metal enclosure with HV and LV terminations as specified both on HV and LV side. The LV side shall be suitable to receive LV cable inter-connection suitable for full load current of the transformer.
- 4.10 Fittings: The transformer shall be complete with the following fittings: -
- (a) "Off-load" type tap changing link
  - (b) RTD temperature controller.
  - (c) Lifting lugs for all transformers.
  - (d) Bi-directional /Unidirectional Rollers to be specified.
  - (e) Rating diagram and terminal marking plate for all transformers with OIL's PO No.
  - (f) Additional Neutral separately brought out on a bushing for earthing for all transformers.
  - (g) The following shall be supplied along with the transformers, as mandatory operating spares:
    - (i) HV Bushing or Bus Bar : 1 Set (3 nos.)
    - (ii) LV Bushing or Bus Bar : 1 Set (4 nos.)
    - (iii) WTI Relay & RTDs: 1 Set (1 relay and 4 RTD)
    - (iv) Neutral CTs : 1 No.
    - (v) Neutral Bushing : 1 No.
- 4.11 Transformer HV winding shall be suitable for vacuum circuit breaker switching and appropriate surge arrester shall be provided.

## 5.0 SPECIFICATIONS

Transformer 1000kVA, 433V/3.3KV, 3 Phases, 50 Hz, Double winding, copper conductor, Dry type, natural air cooled transformer for indoor installation & as per following specifications:

### 5.1 GENERAL

- (a) Applicable Indian Standard: IS : 171 and IS: 2026 with latest amendments.
- (b) Service duty : Continuous.
- (c) Installation : Indoor.
- (d) Auxiliary power supply : 230V AC
- (e) Control Voltage : 230V AC

### 5.2 SITE CONDITION

- (a) Ambient Temperature
  - i) Maximum Ambient air temperature : 45°C
  - ii) Minimum Ambient air temperature : 5.0°C
- (b) Maximum humidity at site (at 40 ° C) : 98 %
- (c) Surrounding atmospheric condition : Humid
- (d) Site Altitude : 150 mtrs.
- (e) Seismic co-efficient : As per IS: 1893.
- (f) Rainfall : 200 cm (annually.)

### 5.3 RATING AND GENERAL DATA

- (a) Rating : 1000kVA
- (b) No. of phases : 3.
- (c) Frequency : 50 ± 3 %
- (d) Type of Insulation : Class-F. Temp. Rise-Designed to withstand 140 degree ° C
- (e) Partial discharge : As per IS-11171, IS-6209.
- (f) Type of cooling : AN
- (g) Installation : Indoor
- (h) Vector group : Dyn 11
- (i) Percentage impedance : 5%. Tolerance as per IS-2026.
- (j) Nominal system voltage : 433V/3.3KV
- (k) Type of neutral earthing: Solidly grounded Neutral.
- (l) Symmetrical short circuit withstands capacity : As per IS-11171.

- (m) Rated short duration power frequency withstands voltage : As per IS 11171.
- (n) Rated lightning impulses withstand voltage : As per IS 11171 (List-2). As Vacuum circuit breaker will be used as incomer to the transformer, BIL voltage shall be 75KV.
- (o) Transformer sound level should not exceed 60 db.
- (p) Water absorption (24hrs @25C) : less than 0.05%
- (q) Dielectric Strength : Minimum of 3200 volts /mil dry
- (r) Dissipation Factor : Max. 0.02 @25 degree C to reduce aging of insulation.

#### 5.4 TAP CHANGER

- (a) Type: Off-Circuit Tap Links
- (b) Total tapping range: -5.0 %, to +5.0 %
- (c) Tapping steps: In steps of 2.5 %.
- (d) Markings shall be clear enough to indicate the tap position.

#### 5.5 TERMINAL ARRANGEMENT

HV winding line end: Cable box

LV winding line end: Cable box

One neutral bushing outside the cable box shall be provided for grounding.

#### 5.6 BUSHING

Made from non-hygroscopic epoxy resin cast material suitable for site conditions mentioned in Clause 5.2 above & conforming to IS-2099

#### 5.7 CABLE BOX

- I. HV cable box should be suitable for termination of 1 no 3C x 240 sq. mm, XLPE, armoured, Aluminium conductor cable with heat shrink type cable termination. The bottom plate shall be detachable type and 1 no. heavy duty single compression cable glands suitable for 3Cx240 sq.mm XLPE armoured cables shall be fitted. Cable Box standard should be IP-54.
- II. LV cable box should have brought out bus bars of suitable rating & size for termination of 8 nos. of 3½ x 240 sq. mm PVCA/XLPE Aluminium cables. The cable box should have detachable cable gland plate fitted with suitable heavy duty single compression cable glands for the cables mentioned above. Support bar in LV cable box should be made up of fiber glass. Cable Box standard should be IP-54.
- III. HT and LT cable boxes shall be bottom entry type and Bottom detachable gland plates made from 3.0 mm thick MS sheet shall be provided for all cable entries, suitable cable gland shall be provided for the above cables.
- IV. Terminals should be marked as per IS: 2026 -1977.

#### 5.8 TRANSFORMER CORE

- i) Material: High grade cold rolled grain oriented silicon steel.
- ii) Structure: Grounded and sharp corners avoided.
- iii) Lamination: Treated and coated with suitable insulations. The core limbs & yokes should be branded by means of resin glass tape to reduce vibration & noise.

#### 5.9 TRANSFORMER WINDING:

The winding material should be high conductivity 99.99% electrolytic grade copper. The insulation should be Cast Resin type, Class-F. Conductor should have thermally upgraded paper (Nomex) insulation reinforced with fibre-glass. The coil assembly is to be impregnated & cast under vacuum with epoxy resin



for achieving non-hygroscopic, acid & alkali resistant insulation. The complete winding should have smooth cylindrical finish after impregnation to ensure high mechanical strength. The thickness of resin should be uniform. The insulation should be self- extinguishing type. Mounting of the winding to the transformer case shall be of vibration resistance pad placed uniformly in all direction.

- i) The windings/connection of transformer shall be braced to withstand shocks, which may occur during transport or due to short circuit, repeated peak loads and other transient conditions during service.
- ii) Windings shall be subjected to a shrinkage treatment before final assembly so that no further shrinkage occurs during service.
- iii) The conductors shall be transposed at sufficient intervals in order to minimise eddy currents and equalize the distribution of currents and temperature along the windings.
- iv) Windings shall not have sharp bends which might damage insulation and /or produce high dielectric stresses.
- v) Coils shall be supported using dried and high pressure compressed wedge type insulation spacers at frequent intervals.
- vi) All threaded/bolted connections shall be locked. Leads from the winding to the terminal board and bushings shall be rigidly supported to prevent injury during short circuits/vibration.
- vii) Permanent current carrying joints in the windings and leads shall be welded or brazed.
- viii) Digital Winding temperature scanner connected with three nos. RTDs, one each for each LV winding, should be provided in a metallic enclosure (Marshalling box) that is mounted on the main enclosure. The scanner shall have potential free NO contacts to provide indication, alarm & trip contacts. Two sets of additional contacts to be provided to connect 2 nos. cooling fans so that they start if the temp rises above a set value say above 75 degrees. Winding temperature indicator should show maximum temperature attained. The RTDs should be properly wired up to the scanner terminals. Temperature setting of each contact shall be independently adjustable at site.

#### 5.10 **ENCLOSURE**

Enclosure for transformer shall be fabricated of minimum 14 SWG gauge properly cleaned degreased and painted as per manufacturer's standard practice. The core & winding assembly should be housed inside a sheet steel enclosure with removable inspection & tap changer covers.

The enclosure should offer IP-23 protection as per IS-2147 and should have suitably designed louvers for circulation of cooling air. All the gaskets should be of neoprene rubber. All non-energized metallic parts of the transformer shall be grounded.

No live part / bushing should be left exposed - the enclosure should cover all such live parts.

#### 5.11 **EARTHING**

Earthing shall be as per IS-3043. All metal parts of the transformer with the exception of individual core laminations core bolts and associated individual clamping plates shall be earthed internally. Suitable arrangement shall be made for earthing of neutral externally.

#### 5.12 **WIRING**

All internal wiring shall be done with 1.1kv grade, single core, FRLS PVC insulated tinned copper multi stranded cable of standard size of 2.5sqmm with proper lugs. Ring lugs shall be used at all connections such as CTs connection etc. All terminal strips shall have minimum 2 nos. spare terminals to accommodate any modification required during commissioning /operation. All terminals shall be accessible for testing and troubleshooting/maintenance. All cable shall have ferules.



**5.13 NAME PLATE**

Transformer shall be furnished with a non-corrosive diagrammatic name plate permanently attached with non-corrosive hardware with following information:

- i) KVA rating
- ii) Primary and secondary voltage
- iii) Primary and secondary current
- iv) Frequency
- v) Nos. of phases
- vi) Percentage of impedance
- vii) Types of cooling
- viii) Connection & symbol
- ix) Tap configuration
- x) Insulation system and rated maximum temperature rise.
- xi) Sound level
- xii) K- factor rating (if available)
- xiii) Year of manufacture
- xiv) Design impedance.
- xv) Manufacturer's name
- xvi) Net weight.
- xvii) IS standard.
- xviii) OIL's P.O. no. and date.

**5.14 LIFTING HOOK**

Suitable Lifting hook shall be provided on the top of the transformer for transportation/ installation of transformer.

**5.15 LIST OF FITTINGS AND ACCESSORIES**

- I. HV bushings inside HV cable box : 3 nos. rated for 3.3kV.
- II. LV bushings in side LV cable box : 4 nos. (3P+1N) rated 433 Volts
- III. Outside LV cable box : 1 no. for grounding.
- IV. Digital Winding temperature scanner connected with 3 nos. of RTDs, one each for each LV winding.
- V. Earthing terminals : 2 nos. for body earthing.
- VI. Jacking lugs.
- VII. Inspection cover : 2 nos. placed in opposite site
- VIII. Base channels with bi-directional rollers : 2 nos.
- IX. Any other accessories which bidders think essential may also be included as optional, which however shall not be considered for evaluation.

**6.0 MAKE**

Crompton Greaves/Pete Hammond/Raychem/Schneider/ABB/Voltamp

**7.0 INSPECTION**

- I. All the routine tests and special tests as per IS: 11171 are to be carried out in presence of OIL's Engineer at manufacturer's works. The supplier will give intimation to OIL 15 days advance prior to commencement of tests so that OIL can depute representative for witnessing tests in time.
- II. The transformers shall be cleared for dispatch only if the test results comply with the specifications and testing results are within the tolerance limits.
- III. Materials/equipment failed to conform to the specifications/during testing, OIL's representative shall have the right to reject the materials and in that case, the supplier will either replace the rejected materials or make alterations necessary to meet specifications requirements free of costs.
- IV. Cost towards to & fro charges and lodging of OIL's engineer shall be borne by OIL.

## 8.0 **GENERAL TERMS AND CONDITIONS**

- I. Party should furnish all relevant technical particulars as per IS:2026 (1977), Part-I along with the offer.
- II. Bidder shall mention in their offer the minimum ventilation requirement of transformer room.
- III. Bidder must indicate the storage procedure for the transformer in case the transformer is left un-energized.
- IV. List of commissioning checks required for the transformer must be enclosed with the offer.
- V. Transformer winding shall be specially braced to withstand to thermal and mechanical stresses of harmonic current and voltage.
- VI. Bidder should mention the no load losses, load losses & efficiency at 50% & 75% load (0.8 pf) on transformer with the offer
- VII. Temperature rise test shall be carried out on transformer for full load current and up to 90 degree centigrade temperature. It takes nearly 8-12 hrs to complete test. Party should confirm in the offer about the tests to be carried out.
- VIII. Partial discharge test is to be carried out on transformer. Party should also confirm about the test in their offer.
- IX. Party should get the detail transformer drawings approved from OIL prior to manufacturing of the transformer.

## 9.0 **TEST**

The following tests shall be carried out on the transformers

### 9.1 **TYPE TEST**

The transformer shall be type tested at CPRI/NABL or any government approved laboratory and type test certificates carried out on similar transformer should be furnished along with the offer. These type test certificates should not be more than 5 (five) years old on the date of bid opening. Offers without these type certificates may not be considered for evaluation.

Type test shall constitute the followings:

- (a) Measurement of winding resistance,
- (b) Measurement of voltage ratio and check of voltage vector relationship,
- (c) Measurement of impedance voltage, short circuit impedance and load loss,
- (d) Measurement of no load loss and current,
- (e) Separate-source voltage withstand test,
- (f) Induced overvoltage withstand test,
- (g) Lightning impulse test,
- (h) Temperature-rise test and
- (i) Short-circuit test.

### 9.2 **SPECIAL TESTS**

- (i) Partial discharge test as per IS: 6209-1982 and with Appendix A of IS: 2026 (Part 3)-1981.
- (ii) Measurement of acoustic sound

## 10.0 **DOCUMENTS TO BE SUBMITTED BY THE BIDDER**

- i. Manufacture's test certificates for all the components & assemblies as required by IS-11171 with latest amendments should be submitted to us along with the materials.
- ii. Bidder's shall fill up the technical data sheet as per Technical Particulars (Clause 11.0).
- iii. Bidder shall submit the detail dimensional drawing & Foundation drawings along with the bid.

## 11.0 **TECHNICAL PARTICULARS**

The following Technical Particulars to be furnished by the bidder along with their offer:

- i. Type of transformer:
- ii. Rating of transformer:
- iii. Primary Winding Details:
- iv. Secondary Winding Details:
- v. Reference standards:
- vi. No of Phases:
- vii. Rated Frequency:
- viii. Vector Group
- ix. Type of Cooling:
- x. Impedance Voltages:
- xi. Tapping on HV:
- xii. Enclosure type (IP):
- xiii. No Load losses at rated voltage:
- xiv. No load current at rated voltage:
- xv. Total losses (Cu+ Iron) at rated load:
- xvi. Insulation class:
- xvii. Insulation level:
- xviii. Average temp rise of windings over ambient temp (50 Degree):
- xix. Dimension (L X B X H):
- xx. Winding material:
- xxi. Efficiency at unity PF at full load:
- xxii. Efficiency at unity PF at half load:
- xxiii. Percentage Regulation at unity PF:
- xxiv. Percentage Regulations at 0.8 PF (Lag)
- xxv. Sound level:

**For Item No 30: Supply of 1000kVA, 11KV/433V Dry Type Transformer**

**12.0 SCOPE**

This specification covers supply, testing and commissioning of 1 no. 1000kVA, 11KV/433V Dry Type Transformer, designed for indoor installation. The transformer to be supplied against this specification is required for vital installations where continuity of service is very important. The design, materials and manufacture of the equipment shall, therefore be of the highest order to ensure continuous and trouble-free service over the years.

**13.0 STANDARDS**

The latest revisions of the following Codes and Standards listed shall be applicable for the Equipment / materials covered in this specification.

|                          |   |
|--------------------------|---|
| IS 11171 & 2026          | : Dry type power transformer                                    |
| IS 10028 (Part II & III) | : Installation and Maintenance of Transformer.                  |
| IS 2099                  | : Bushing   |
| IS 2705                  | : Current Transformer   |
| IEC 60529                | : Classification of degree of protection provided by enclosures |

**14.0 GENERAL CONSTRUCTION**

All the MS parts shall be either Hot dipped galvanized or cold galvanized to make them corrosion free. The core shall be made up of high grade low loss CRGO (cold rolled grain oriented) silicon steel. Both low & high voltage windings shall be made of copper conductor. The class of winding insulation shall correspond to class 'F'. The construction of the windings of the transformer shall be such that no creepage path is found even in dusty & corrosive ambient conditions. The core coil assembly shall be housed in a prefabricated metal enclosure.

The enclosure shall be fabricated with mild steel CRCA sheets with adequate provision for ventilation. The enclosures shall undergo minimum ten tank process. Finally, the external and internal surfaces of the enclosure shall be powder coated with the specified shade of paint.

## 15.0 GENERAL REQUIREMENTS

- 15.1 The transformer shall have thermal and dynamic ability to withstand external short-circuit as per clause 9 of IS 2026 (Part I) 1977 and clause 5 of IS 11171-1985.
- 15.2 Capacity and Rating: Continuous rating specified shall be irrespective position of tap changer. Indoor transformers shall be suitable for IP-23 protection.
- 15.3 Temperature Rise: As per IS 11171-1985.  
The reference ambient temperatures assumed for the purpose of this specification are as follows -
  - (a) Maximum ambient air temperature 45 degree C.
  - (b) Minimum ambient temperature 5 degree C.
  - (c) Class of insulation - "F"
  - (d) Altitude of site of installation - not exceeding 150 meters.
- 15.4 Cooling: Unless otherwise specified the transformer cooling shall be air and naturally cooled (AN).
- 15.5 Tap Changing Device: Preferred tapping range is +5% to -5% in 2.5% steps by means of "off-load" tap changing links or tap switch. The device shall be provided on HV for HV Voltage to keep LV Voltage constant.
- 15.6 Terminal Markings Connections: Relevant provisions of IS: 2026 (Part-IV)-1977 shall be applicable.
- 15.7 Voltage Ratio: The transformer shall be suitable for a voltage ratio of 11KV/433V
- 15.8 Vector Group: The winding connections shall conform to vector group Dyn11
- 15.9 Accessories: The transformer shall be with metal enclosure with HV and LV terminations as specified both on HV and LV side. The LV side shall be suitable to receive LV cable inter-connection suitable for full load current of the transformer.
- 15.10 Fittings: The transformer shall be complete with the following fittings: -
  - (a) "Off-load" type tap changing link
  - (b) RTD temperature controller.
  - (c) Lifting lugs for all transformers.
  - (d) Bi-directional /Unidirectional Rollers to be specified.
  - (e) Rating diagram and terminal marking plate for all transformers with OIL's PO No.
  - (f) Additional Neutral separately brought out on a bushing for earthing for all transformers.
  - (g) The following shall be supplied along with the transformers, as mandatory operating spares:
    - (j) HV Bushing or Bus Bar : 1 Set (3 nos.)
    - (ii) LV Bushing or Bus Bar : 1 Set (4 nos.)
    - (iii) WTI Relay & RTDs: 1 Set (1 relay and 4 RTD)
    - (iv) Neutral CTs : 1 No.
    - (v) Neutral Bushing : 1 No.
  - (h) Transformer HV winding shall be suitable for vacuum circuit breaker switching and appropriate surge arrester shall be provided.

## 16.0 SPECIFICATIONS

Transformer 1000kVA, 11KV/433V, 3 Phases, 50 Hz, Double winding, copper conductor, Dry type, natural air cooled transformer for indoor installation & as per following specifications:

- 16.1 GENERAL
  - a) Applicable Indian Standard: IS: 171 and IS: 2026 with latest amendments.
  - b) Service duty: Continuous.
  - c) Installation: Indoor.
  - d) Auxiliary power supply: 230V AC
  - e) Control Voltage: 230V AC
- 16.2 SITE CONDITION
  - a) Ambient Temperature

- i) Maximum Ambient air temperature : 45°C
    - ii) Minimum Ambient air temperature: 5.0°C
  - b) Maximum humidity at site (at 40 ° C) : 98 %
  - c) Surrounding atmospheric condition : Humid
  - d) Site Altitude : 150 mtrs.
  - e) Seismic co-efficient: As per IS : 1893.
  - f) Rainfall : 200 cm (annually.)
- 16.3 RATING AND GENERAL DATA:
- a) Rating : 1000kVA
  - b) No. of phases : 3.
  - c) Frequency : 50 ± 3 %
  - d) Type of Insulation: Class-F. Temp. Rise-Designed to withstand 140 degree ° C
  - e) Partial discharge : As per IS-11171, IS-6209.
  - f) Type of cooling : AN
  - g) Installation : Indoor
  - h) Vector group : Dyn 11
  - i) Percentage impedance : 5%. Tolerance as per IS-2026.
  - j) Nominal system voltage : 11KV/433V
  - k) Type of neutral earthing : Solidly grounded Neutral.
  - l) Symmetrical short circuit withstands capacity : As per IS-11171.
  - m) Rated short duration power frequency withstands voltage : As per IS 11171.
  - n) Rated lightning impulses withstand voltage: As per IS 11171 (List-2). As Vacuum circuit breaker will be used as incomer to the transformer, BIL voltage shall be 75KV.
  - o) Transformer sound level should not exceed 60 db.
  - p) Water absorption (24hrs @25C) : less than 0.05%
  - q) Dielectric Strength : Minimum of 3200 volts/mil dry
  - r) Dissipation Factor : Max. 0.02 @25 degree C to reduce aging of insulation.
- 16.4 TAP CHANGER
- a) Type : Off-Circuit Tap Links
  - b) Total tapping range : -5.0 %, to +5.0 %
  - c) Tapping steps : In steps of 2.5 %.
  - d) Markings shall be clear enough to indicate the tap position.
- 16.5 TERMINAL ARRANGEMENT
- a) HV winding line end: Cable box
  - b) LV winding line end: Cable box
  - c) One neutral bushing outside the cable box shall be provided for grounding.
- 16.6 BUSHING
- Made from non-hygroscopic epoxy resin cast material suitable for site conditions mentioned in Clause 5.2 above & conforming to IS-2099
- 16.7 CABLE BOX
- i) HV cable box should be suitable for termination of 1 no 3C x 240 sq. mm, XLPE, armoured, Aluminium conductor cable with heat shrink type cable termination. The bottom plate shall be detachable type and 1 no. heavy duty single compression cable glands suitable for 3Cx240 sq.mm XLPE armoured cables shall be fitted. Cable Box standard should be IP-54.
  - ii) LV cable box should have brought out bus bars of suitable rating & size for termination of 8 nos. of 3½ x 240 sq. mm PVCA/XLPE Aluminium cables. The cable box should have detachable cable gland plate fitted with suitable heavy duty single compression cable glands for the cables mentioned above. Support bar in LV cable box should be made up of fiber glass. Cable Box standard should be IP-54.
  - iii) HT and LT cable boxes shall be bottom entry type and Bottom detachable gland plates made from 3.0 mm thick MS sheet shall be provided for all cable entries, suitable cable gland shall be provided for the above cables.

- iv) Terminals should be marked as per IS: 2026 -1977.

16.8 TRANSFORMER CORE

- i) Material: High grade cold rolled grain oriented silicon steel.
- ii) Structure: Grounded and sharp corners avoided.
- iii) Lamination: Treated and coated with suitable insulations. The core limbs & yokes should be branded by means of resin glass tape to reduce vibration & noise.

16.9 TRANSFORMER WINDING:

The winding material should be high conductivity 99.99% electrolytic grade copper. The insulation should be Cast Resin type; Class-F. Conductor should have thermally upgraded paper (Nomex) insulation reinforced with fibre-glass. The coil assembly is to be impregnated & cast under vacuum with epoxy resin for achieving non-hygroscopic, acid & alkali resistant insulation. The complete winding should have smooth cylindrical finish after impregnation to ensure high mechanical strength. The thickness of resin should be uniform. The insulation should be self- extinguishing type. Mounting of the winding to the transformer case shall be of vibration resistance pad placed uniformly in all direction.

- (i) The windings/connection of transformer shall be braced to withstand shocks, which may occur during transport or due to short circuit, repeated peak loads and other transient conditions during service.
- (ii) Windings shall be subjected to a shrinkage treatment before final assembly so that no further shrinkage occurs during service.
- (iii) The conductors shall be transposed at sufficient intervals in order to minimise eddy currents and equalize the distribution of currents and temperature along the windings.
- (iv) Windings shall not have sharp bends which might damage insulation and /or produce high dielectric stresses.
- (v) Coils shall be supported using dried and high pressure compressed wedge type insulation spacers at frequent intervals.
- (vi) All threaded/bolted connections shall be locked. Leads from the winding to the terminal board and bushings shall be rigidly supported to prevent injury during short circuits/vibration.
- (vii) Permanent current carrying joints in the windings and leads shall be welded or brazed.
- (viii) Digital Winding temperature scanner connected with three nos. RTDs, one each for each LV winding, should be provided in a metallic enclosure (Marshalling box) that is mounted on the main enclosure. The scanner shall have potential free NO contacts to provide indication, alarm & trip contacts. Two sets of additional contacts to be provided to connect 2 nos. cooling fans so that they start if the temp rises above a set value say above 75 degrees. Winding temperature indicator should show maximum temperature attained. The RTDs should be properly wired up to the scanner terminals. Temperature setting of each contact shall be independently adjustable at site.

16.10 ENCLOSURE

Enclosure for transformer shall be fabricated of minimum 14 SWG gauge properly cleaned degreased and painted as per manufacturer's standard practice. The core & winding assembly should be housed inside a sheet steel enclosure with removable inspection & tap changer covers.

The enclosure should offer IP-23 protection as per IS-2147 and should have suitably designed louvers for circulation of cooling air. All the gaskets should be of neoprene rubber. All non-energized metallic parts of the transformer shall be grounded.

No live part / bushing should be left exposed - the enclosure should cover all such live parts.

16.11 EARTHING

Earthing shall be as per IS-3043. All metal parts of the transformer with the exception of individual core laminations core bolts and associated individual clamping plates shall be earthed internally. Suitable arrangement shall be made for earthing of neutral externally.

16.12 WIRING

All internal wiring shall be done with 1.1kv grade, single core, FRLS PVC insulated tinned copper multi stranded cable of standard size of 2.5sqmm with proper lugs. Ring lugs shall be used at all connections such as CTs connection etc. All terminal strips shall have minimum 2 nos. spare terminals to accommodate any modification required during commissioning /operation. All terminals shall be accessible for testing and troubleshooting/maintenance. All cable shall have ferules.

**16.13 NAME PLATE**

Transformer shall be furnished with a non-corrosive diagrammatic name plate permanently attached with non-corrosive hardware with following information:

- (i) KVA rating
- (ii) Primary and secondary voltage
- (iii) Primary and secondary current
- (iv) Frequency
- (v) Nos. of phases
- (vi) Percentage of impedance
- (vii) Types of cooling
- (viii) Connection & symbol
- (ix) Tap configuration
- (x) Insulation system and rated maximum temperature rise.
- (xi) Sound level
- (xii) K- factor rating (if available)
- (xiii) Year of manufacture
- (xiv) Design impedance.
- (xv) Manufacturer's name
- (xvi) Net weight.
- (xvii) IS standard.
- (xviii) OIL's P.O. no. and date.

**16.14 LIFTING HOOK**

Suitable Lifting hook shall be provided on the top of the transformer for transportation/installation of transformer.

**16.15 LIST OF FITTINGS AND ACCESSORIES**

- (i) HV bushings inside HV cable box: 3 nos. rated for 11kV.
- (ii) LV bushings in side LV cable box: 4 nos. (3P+1N) rated 433 Volts
- (iii) Outside LV cable box : 1 no. for grounding.
- (iv) Digital Winding temperature scanner connected with 3 nos. of RTDs, one each for each LV winding.
- (v) Earthing terminals: 2 nos. for body earthing.
- (vi) Jacking lugs.
- (vii) Inspection cover: 2 nos. placed in opposite site
- (viii) Base channels with bi-directional rollers: 2 nos.
- (ix) Any other accessories which bidders think essential may also be included as optional, which however shall not be considered for evaluation.

**17.0 MAKE**

Crompton Greaves/Pete Hammond/Raychem/Schneider/ABB/Voltamp

**18.0 INSPECTION**

- (i) All the routine tests and special tests as per IS: 11171 are to be carried out in presence of OIL's Engineer at manufacturer's works. The supplier will give intimation to OIL 15 days advance prior to commencement of tests so that OIL can depute representative for witnessing tests in time.
- (ii) The transformers shall be cleared for dispatch only if the test results comply with the specifications and testing results are within the tolerance limits.
- (iii) Materials/equipment failed to conform to the specifications/during testing, OIL's representative shall have the right to reject the materials and in that case, the supplier will either replace the rejected materials or make alterations necessary to meet specifications requirements free of costs.
- (iv) Cost towards to & fro charges and lodging of OIL's engineer shall be borne by OIL.



**19.0 GENERAL TERMS AND CONDITIONS**

- i. Party should furnish all relevant technical particulars as per IS:2026 (1977), Part-I along with the offer.
- ii. Bidder shall mention in their offer the minimum ventilation requirement of transformer room.
- iii. Bidder must indicate the storage procedure for the transformer in case the transformer is left un-energized.
- iv. List of commissioning checks required for the transformer must be enclosed with the offer.
- v. Transformer winding shall be specially braced to withstand to thermal and mechanical stresses of harmonic current and voltage.
- vi. Bidder should mention the no load losses, load losses & efficiency at 50% & 75% load (0.8 pf) on transformer with the offer
- vii. Temperature rise test shall be carried out on transformer for full load current and up to 90 degree centigrade temperature. It takes nearly 8-12 hrs to complete test. Party should confirm in the offer about the tests to be carried out.
- viii. Partial discharge test is to be carried out on transformer. Party should also confirm about the test in their offer
- ix. Party should get the detail transformer drawings approved from OIL prior to manufacturing of the transformer.

**20.0 TEST**

The following tests shall be carried out on the transformers

**20.1 TYPE TEST**

The transformer shall be type tested at CPRI/NABL or any government approved laboratory and type test certificates carried out on similar transformer should be furnished along with the offer. These type test certificates should not be more than 5 (five) years old on the date of bid opening. Offers without these type certificates may not be considered for evaluation.

Type test shall constitute the followings:

- a) Measurement of winding resistance,
- b) Measurement of voltage ratio and check of voltage vector relationship,
- c) Measurement of impedance voltage, short circuit impedance and load loss,
- d) Measurement of no load loss and current,
- e) Separate-source voltage withstand test,
- f) Induced overvoltage withstand test,
- g) Lightning impulse test,
- h) Temperature-rise test and
- i) Short-circuit test.

**20.2 SPECIAL TESTS**

- (i) Partial discharge test as per IS: 6209-1982 and with Appendix A of IS: 2026 (Part 3)-1981.
- (ii) Measurement of acoustic sound

**21.0 DOCUMENTS TO BE SUBMITTED BY THE BIDDER**

- i. Manufacture's test certificates for all the components & assemblies as required by IS-11171 with latest amendments should be submitted to us along with the materials.
- ii. Bidder's shall fill up the technical data sheet as per Technical Particulars (Clause 22.0).
- iii. Bidder shall submit the detail dimensional drawing & Foundation drawings along with the bid.

**22.0 TECHNICAL PARTICULARS**

The following Technical Particulars to be furnished by the bidder along with their offer:

- i. Type of transformer:
- ii. Rating of transformer:
- iii. Primary Winding Details:
- iv. Secondary Winding Details:

- v. Reference standards:
- vi. No of Phases:
- vii. Rated Frequency:
- viii. Vector Group
- ix. Type of Cooling:
- x. Impedance Voltages:
- xi. Tapping on HV:
- xii. Enclosure type (IP):
- xiii. No Load losses at rated voltage:
- xiv. No load current at rated voltage:
- xv. Total losses (Cu+ Iron) at rated load:
- xvi. Insulation class:
- xvii. Insulation level:
- xviii. Average temp rise of windings over ambient temp (50 Degree):
- xix. Dimension (L X B X H):
- xx. Winding material:
- xxi. Efficiency at unity PF at full load:
- xxii. Efficiency at unity PF at half load:
- xxiii. Percentage Regulation at unity PF:
- xxiv. Percentage Regulations at 0.8 PF (Lag):
- xxv. Sound level:

### **23.0 For Item No 20 & Item No. 40: Installation & Commissioning of Item 10 & Item 30**

#### **A. GENERAL NOTES ON COMMISSIONING:**

1. The bidder shall confirm that Installation, Testing and Commissioning jobs shall be carried out under the direct supervision of an Engineer/an electrical supervisor holding a valid Electrical Supervisor's Certificate of Competency. The copy of certificate of competency should be submitted prior to the commencement of the commissioning jobs.
2. All tools & instruments for commissioning shall be arranged/provided by the bidder.
3. Installation, Testing and Commissioning of transformers shall be carried out by specialist /engineer from manufacturer. All pre commissioning testing of transformer like magnetic balance test, vector group test, IR test etc. are required to be carried out by party at site before energization of the transformer.
4. The commissioning of the transformer shall be considered as complete with the submission of the commissioning test records, operating & maintenance manuals, spares list of the transformer etc. to OIL.  
**Bidder shall arrange for to & fro travel to the installation sites, local conveyance and boarding & lodging during the installation. All charges shall be borne by the bidder.**

#### **B. TECHNICAL NOTES ON COMMISSIONING:**

##### **1. COMMISSIONING**

Any material / spare not specified in the NIT but required for commissioning, item shall be supplied by party on "free of cost" basis.

##### **2. PRE-COMMISSIONING CHECKS:**

After completion of installation of the transformer at the specified site, prior to energizing of the transformer, the following checks and tests shall be carried out on transformer:

- i. Assembly, check as per manufacturer's drawings and instructions.
- ii. Physical inspection for damages, external defects and remedial actions, if any.
- iii. Check for proper fixing on foundation, levelling and tightness of foundation bolts.
- iv. Check for proper tightness of transformer & its control devices, accessories, cables and earth connections.
- v. Check meters, if any.

**C. EARTHING:**

Scope shall be for supply, Burying of Chemical Earth Electrode and making masonry enclosure along with connecting electrodes with transformer body with GI strip of size 50X6 mm(minimum) & transformer neutral with stranded single core copper cable of size 16sqmm(minimum). Also treatment of electrodes to make the value of earth resistance less than or equal to 5 Ohm individual or less than or equal to 1 ohm when connected.

Two Separate earthing for Transformer neutral & two for transformer body earthing.

Earth Electrode should be heavy duty, sealed CPRI approved chemical electrode with suitable backfilling chemical, of size 80mm dia 4 mm thick 3000mm length.

Size of masonry enclosure should be 600mm X 600mm X 600mm with FRP cover plate of suitable size.

**Bidder to include cost for earthing system in their bid.**

**24.0 GENERAL NOTE**

1. Packing should be adequate to avoid transit damage and ingress of water.
2. **TRANSPORTATION, LOADING & UNLOADING REQUIRED FOR SUPPLY, INSTALLATION & COMMISSIONING OF TRANSFORMER ARE IN BIDDER'S SCOPE OF WORK.**

**BID REJECTION CRITERIA/BID EVALUATION CRITERIA****I. BID REJECTION CRITERIA (BRC):**

The bids shall conform generally to the specifications, terms & conditions given in this bids document. Notwithstanding the general conformity of the bids to the stipulated specifications, the following requirements will have to be particularly met by the bidders without which the same shall be considered as non-responsive and rejected.

**(A) TECHNICAL**

- 1.0 Bidder shall be a manufacturer/channel partner/authorized dealer of Dry Type Transformer. Bidders quoting on behalf of OEM shall submit copy of valid dealership certificate/authorization letter/certificate of channel partnership from the OEM along with the bid.
- 2.0 The Bidder (**OEM or channel partner/authorized dealer**) should have experience of successfully executed at least 1(one) no. **similar works** in any Central Govt. /Govt. PSU/Public Limited Companies in the last 5 years as on original bid closing date of this tender.

**Similar works means:** Supply, Installation, Testing and Commissioning of either

- a) 3.3KV/6.6KV/11KV (or higher) HT Panel with VCB/RMU  
OR
- b) 6.6KV/3.3KV/433V (or higher) 500KVA (or higher) rated dry type transformer  
OR
- c) Compact substation [with VCB, Transformer] of capacity 500KVA (or higher)
- 3.0 In case the bidder is a channel partner/authorized dealer of OEM, the bidder should have the experience (as mentioned in para 2.0 above) of supplying from the same OEM for the items he is quoting against the tender.
- 4.0 The bidder shall have to provide type test certificate for Transformer as per IS-11171/2026 from reputed test house accredited by National Accreditation Board for testing and calibration Laboratories (NABL), India. Bidder should submit copies of type test certificate along with the offer (type tests as mentioned in IS-11171/2026). Authorized dealers shall submit their OEM's credentials in this regard.
- 5.0 Bidders shall submit documentary evidences such as Purchase order copies and completion certificate or Tax invoice or performance certificate or consignee receipted delivery challan and any other documents which substantiate successful execution of each of the purchase order along with their bid.
- 6.0 A job/supply executed by a bidder for its own organization/subsidiary cannot be considered as experience for the purpose of meeting Bid Rejection Criteria/ Bid Evaluation Criteria.
- 7.0 **DELIVERY PERIOD:** Delivery shall be completed within 03 (three) months from the date of issue of Purchase Order. Installation & Commissioning shall be completed within 01(one) months from the date of site clearance by OIL. 10(ten) days advance intimation of site clearance shall be provided by OIL.

**(B) FINANCIAL:**

- 8.0 Annual Financial Turnover of the bidder during any of preceding three financial/accounting years from the original bid closing date should be at least INR 22,25,000.00.
- 8.1 **Net worth** of bidder must be positive for preceding financial/ accounting year.

- 9.0 Considering the time required for preparation of Financial Statements, if the last date of preceding financial/accounting year falls within the preceding six months reckoned from the original bid closing date and the Financial Statements of the preceding financial/accounting year are not available with the bidder, then the financial turnover of the previous three financial/accounting years excluding the preceding financial/accounting year will be considered. In such cases, the Net worth of the previous financial/accounting year excluding the preceding financial/accounting year will be considered. However, the bidder has to submit an affidavit/undertaking certifying that the balance sheet/Financial Statements for the financial year ..... (as the case may be) has actually not been audited so far.

**Notes:**

- a) For proof of Annual Turnover & Net worth any one of the following document must be submitted along with the bid: -
  - i) A certificate issued by a practicing Chartered/Cost Accountant (with Membership Number and Firm Registration Number), certifying the Annual turnover & Net worth as per format prescribed in **ANNEXURE EE**.  
OR
  - ii) Audited Balance Sheet along with Profit & Loss account.
- b) In case the bidder is a Central Govt. Organization/PSU/State Govt. Organization/Semi-State Govt. Organization or any other Central/State Govt. Undertaking, where the auditor is appointed only after the approval of Comptroller and Auditor General of India and the Central Government, their certificates may be accepted even though FRN is not available. However, bidder to provide documentary evidence for the same.

**(C) COMMERCIAL**

- 1.0 Bids are invited under **SINGLE STAGE COMPOSITE BID SYSTEM**. Bidders shall quote accordingly.
- 2.0 **Bid security of INR 89,000.00 shall be furnished as a part of the bid.** Any bid not accompanied by a proper bid security in ORIGINAL will be rejected without any further consideration. For exemption for submission of Bid Security, please refer Clause No. 8.8 of General Terms & Conditions for National Tenders (National Competitive Bidding), Booklet No. MM/LOCAL/E-01/2005 (For E-tenders). **The Bid Security shall be valid till 26.03.2019.**
- 3.0 Bidders must confirm that materials to be supplied shall be new of recent make and of the best quality and shall be guaranteed for a period of 18 months from the date of despatch/ shipment or 12 months from the date of successful commissioning, whichever is earlier. Defective goods/materials rejected by OIL shall be replaced immediately by the supplier at the supplier's expenses at no extra cost to OIL.
- 4.0 The prices offered will have to be firm through delivery and not subject to variation on any account. A bid submitted with an adjustable price will be treated as non-responsive and rejected.
- 5.0 **Validity of the bid shall be minimum 90 days from the Original Bid Closing date. Bids with lesser validity will be rejected.**
- 6.0 All the Bids must be Digitally Signed using Class III digital certificate (e-commerce application) with '**Certificate Type: Organisation Certificate**' as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India. **The bid signed using other than "Class 3" digital certificate, will be rejected.**
- 7.0 Successful bidder will be required to furnish a Performance Bank Guarantee @10% of the order value. The Performance Security specified above must be valid for 3(three) months beyond the Warranty period indicated in the Purchase Order/contract agreement [Please refer General Terms & Conditions for National Tenders (National Competitive Bidding), Booklet No. MM/LOCAL/E-01/2005 (For E-tenders)].

Bidder must confirm the same in their Technical Bid. Offers not complying with this clause will be rejected.

8.0 Bids received after the bid closing date and time will be rejected. Similarly, modifications to bids received after the bid closing date & time will not be considered.

9.0 Bids containing incorrect statement will be rejected.

10.0 No offers should be sent by Telex, Cable, E-mail or Fax. Such offers will not be accepted.

11.0 The following points are deemed as “non-negotiable” and offer shall be rejected straightaway without seeking clarification:

- i. Validity of bid shorter than validity indicated in the tender.
- ii. Original Bid Security not received within the stipulated date and time mentioned in the tender.
- iii. Bid security with (a) Validity shorter than the validity indicated in tender and/or (b) Bid security amount lesser than the amount indicated in the tender.

12.0 Bidder must accept and comply with the following clauses as given in the Bid Document, failing which bid shall be liable for rejection:

- i. Liquidated Damages
- ii. Guarantee of material
- iii. Arbitration / Resolution of Dispute
- iv. Force Majeure
- v. Applicable Laws

13.0 **DELIVERY LOCATION:** Delivery to be done as under –

**Item 10: To be delivered at:**

**OIL INDIA LIMITED,  
PIPELINE HEAD QUARTERS,  
PO: UDAYAN VIHAR,  
GUWAHATI, DIST - KAMRUP METROPOLITAN,  
ASSAM, PIN – 781171**

**INSTALLATION & COMMISSIONING OF ITEM 10 SHALL BE DONE AT PHQ, GUWAHATI**

**Item 30: To be delivered at:**

**PUMP STATION NO. 2 (MORAN)  
OIL INDIA LIMITED  
P.O. MORAN, SIVASAGAR,  
ASSAM, PIN- 785669**

**INSTALLATION & COMMISSIONING OF ITEM 30 SHALL BE DONE AT PS 2, MORAN**

14.0 **PRICE SCHEDULE:**

Bidder shall submit the Price Break up as per Annexure DD (i) – for item no. 10 & 20 and Annexure DD(ii) – for item no. 30 & 40. Bidders should fill up the annexures, sign and upload under “Notes & Attachments” > “Attachments” only. Evaluation of offers shall be done on F.O.R. Destination basis.

14.1 The bids conforming to the specifications, terms and conditions stipulated in the enquiry and considered to be responsive after subjecting to the Bid Rejection Criteria will be considered for further evaluation as per the Bid Evaluation Criteria given below:

1. Basic Material Value
2. Packing & Forwarding Charges, if any
3. **Total Ex-works Value (1+2)**
4. GST on Total Ex-Works Value
5. Compensatory Cess, if any
6. **Total FOR Despatching Station Value (3+4+5)**
7. Freight Charges upto destination
8. GST on Freight Charges
9. Insurance Charges @0.5% of (7) inclusive of GST
10. Installation & Commissioning Charges
11. GST on Installation & Commissioning Charges
12. **Total FOR Destination, Site Value (6+7+8+9+10+11)**

14.2 **Comparison of offers shall be done on Total Value vide Srl. No. 12 (Total FOR Destination Value).**

14.3 **Item no. 10 & 20 and 30 & 40 shall be evaluated separately.**

14.4 Domestic bidders must quote inland freight charges upto Destination. In case bidder fails to quote inland freight charges, highest freight quoted by domestic bidder (considering pro-rata distance) against this tender or OIL's estimated freight, whichever is higher, shall be loaded to their offer for comparison purpose.

14.5 If there is any discrepancy between the unit price and the total price, the unit price will prevail and the total price shall be corrected. Similarly, if there is any discrepancy between words and figure, the amounts in words shall prevail and will be adopted for evaluation.

14.6 Other terms and conditions of the enquiry shall be as per General Terms and Conditions for LCB Tender. However, if any of the Clauses of the Bid Rejection Criteria / Bid Evaluation Criteria (BEC/BRC) mentioned here contradict the Clauses in the General Terms & Conditions of LCB Tender of the tender and/or elsewhere, those mentioned in this BEC/BRC shall prevail.

\*\*\*\*\*



**ANNEXURE: CC****COMMERCIAL CHECK LIST**

The check list must be completed and submitted with your offer. Please ensure that all these points are covered in your offer. These will ensure that your offer is properly evaluated. Please mark 'Yes', 'No' or 'Not Applicable' or specify against the following questions, in the right hand column.

| <b>OFFER REF:</b>          |   |                              |                |
|----------------------------|---|------------------------------|----------------|
| <b>NAME OF THE BIDDER:</b> |   |                              |                |
| <b>Srl. No.</b>            | <b>Particulars</b>  | <b>Yes/No/Not Applicable</b> | <b>Remarks</b> |
| 1                          | Whether bid submitted under Single Stage Composite Bid System?  |                              |                |
| 2                          | Whether ORIGINAL Bid Bond (not copy of Bid Bond) submitted exactly as per format? If YES, provide details - |                              |                |
|                            | (a) Amount  |                              |                |
|                            | (b) Name of issuing Bank  |                              |                |
|                            | (c) Validity of Bid Bond  |                              |                |
|                            | (d) Whether Bid Bond is valid till  |                              |                |
| 3                          | Whether offered firm prices?  |                              |                |
| 4                          | Whether quoted offer validity of 90 days from the date of bid closing of the tender?                        |                              |                |
| 5                          | Whether quoted a firm delivery period? Please indicate.   |                              |                |
| 6                          | Whether quoted as per tender (without any deviations)?  |                              |                |
| 7                          | Whether quoted any deviation?   |                              |                |
| 8                          | Whether deviation separately highlighted?   |                              |                |
| 9                          | Whether agreed to the Warranty clause?  |                              |                |
| 10                         | Whether Price Bid submitted as per Price Schedule   |                              |                |
| 11                         | Whether quoted all the items/qty. of tender?  |                              |                |
| 12                         | Whether indicated the country of origin for the items quoted?   |                              |                |
| 13                         | Whether technical literature / catalogue enclosed?  |                              |                |
| 14                         | Whether confirmed acceptance of tender Payment Terms?   |                              |                |
| 15                         | Whether indicated the place from where the goods will be dispatched. To specify :                           |                              |                |
| 16                         | Whether road transportation charges up to Destination quoted?   |                              |                |
| 17                         | Whether offered Ex-works price including packing/forwarding charges?  |                              |                |
| 18                         | Whether weight & volume of items offered indicated?   |                              |                |
| 19                         | If Pre-despatch/shipment inspection charges applicable, whether quoted separately?                          |                              |                |
| 20                         | Whether confirmed to submit PBG as asked for in tender?   |                              |                |
| 21                         | Whether agreed to submit PBG within 30 days of placement of order?  |                              |                |
| 22                         | Whether indicated import content in the offer?  |                              |                |
| 23                         | Whether all applicable Taxes & Duties have been quoted?   |                              |                |
| 24                         | Whether all BRC/BEC clauses accepted?   |                              |                |
| 25                         | Whether MSME? If yes, whether documents enclosed as per tender.   |                              |                |

## ANNEXURE – DD (i)

**PRICE SCHEDULE (For item no. 10 & 20)**

*(Bidders should fill up, sign and upload this price schedule [Annexure DD] under “Notes & Attachments” > “Attachments” only. The filled up price breakup should not be uploaded in Technical RFx Response folder)*

|                  |  |
|------------------|--|
| TENDER NO.       |  |
| BID CLOSING DATE |  |

| ITEM NO.  | MATERIALS DESCRIPTION                   | HSN Code | QTY | UNIT | UNIT PRICE (IN INR) | TOTAL MATERIALS VALUE (IN INR) | PACKING AND FORWARDING CHARGES (IN INR) | EX- WORKS VALUE (IN INR) | GST (IN INR) | TOTAL FOR DESPATCH STATION VALUE (IN INR) |
|---|---|----------|-----|------|---------------------|--------------------------------|---|--------------------------|--------------|---|
| 10  | 1 MVA Dry Type Transformer (433V/3.3KV) |          | 1   | NO.  |                     |                                |   |                          |              |   |
| Total FOR Despatching Station Value   |   |          |     |      |                     |                                |   |                          |              |   |
| Inland Freight charges upto Destinations (Guwahati)   |   |          |     |      |                     |                                |   |                          |              |   |
| Applicable GST on freight charges<br>(Please indicate the rate and SAC code separately)     |   |          |     |      |                     |                                |   |                          |              |   |
| TOTAL F.O.R. DESTINATION, VALUE   |   |          |     |      |                     |                                |   |                          |              |   |
| Installation & Commissioning Charges for Item no. 10 (Item no. 20)                          |   |          |     |      |                     |                                |   |                          |              |   |
| GST on Installation & Commissioning Charges<br>(Please indicate GST rate and SAC Code also) |   |          |     |      |                     |                                |   |                          |              |   |
| Total Installation & Commissioning Charges including GST                                    |   |          |     |      |                     |                                |   |                          |              |   |
| Total weight of consignment   |   |          |     |      |                     |                                |   |                          |              |   |
| Total volume of consignment   |   |          |     |      |                     |                                |   |                          |              |   |

**Notes:**

- (i) In the event of computational error between unit price and total price, unit price shall prevail and adopted for evaluation. Similarly, in the event of discrepancy between words and quoted figure, words will prevail.
- (ii) GST should be quoted separately. If GST is not shown separately the offer will be considered to be inclusive of all taxes and will be binding on the bidder.
- (iii) Insurance charges @0.5% shall be loaded on F.O.R Despatch Station Value for evaluation purpose.
- (iv) Loading & evaluation shall done be as per clause no. 14.1 of Annexure – BB.

## ANNEXURE – DD(ii)

**PRICE SCHEDULE (For item no. 30 & 40)**

*(Bidders should fill up, sign and upload this price schedule [Annexure DD] under “Notes & Attachments” > “Attachments” only. The filled up price breakup should not be uploaded in Technical RFx Response folder)*

|                  |  |
|------------------|--|
| TENDER NO.       |  |
| BID CLOSING DATE |  |

| ITEM NO.  | MATERIALS DESCRIPTION                  | HSN Code | QTY | UNIT | UNIT PRICE (IN INR) | TOTAL MATERIALS VALUE (IN INR) | PACKING AND FORWARDING CHARGES (IN INR) | EX- WORKS VALUE (IN INR) | GST (IN INR) | TOTAL FOR DESPATCH STATION VALUE (IN INR) |
|---|--|----------|-----|------|---------------------|--------------------------------|---|--------------------------|--------------|---|
| 30  | 1 MVA Dry Type Transformer (11KV/433V) |          | 1   | NO.  |                     |                                |   |                          |              |   |
| Total FOR Despatching Station Value   |  |          |     |      |                     |                                |   |                          |              |   |
| Inland Freight charges upto Destinations (Moran)  |  |          |     |      |                     |                                |   |                          |              |   |
| Applicable GST on freight charges<br>(Please indicate the rate and SAC code separately)     |  |          |     |      |                     |                                |   |                          |              |   |
| TOTAL F.O.R. DESTINATION, VALUE   |  |          |     |      |                     |                                |   |                          |              |   |
| Installation & Commissioning Charges for item no. 30 (Item no. 40)                          |  |          |     |      |                     |                                |   |                          |              |   |
| GST on Installation & Commissioning Charges<br>(Please indicate GST rate and SAC Code also) |  |          |     |      |                     |                                |   |                          |              |   |
| Total Installation & Commissioning Charges including GST                                    |  |          |     |      |                     |                                |   |                          |              |   |
| Total weight of consignment   |  |          |     |      |                     |                                |   |                          |              |   |
| Total volume of consignment   |  |          |     |      |                     |                                |   |                          |              |   |

**Notes:**

- (v) In the event of computational error between unit price and total price, unit price shall prevail and adopted for evaluation. Similarly, in the event of discrepancy between words and quoted figure, words will prevail.
- (vi) GST should be quoted separately. If GST is not shown separately the offer will be considered to be inclusive of all taxes and will be binding on the bidder.
- (vii) Insurance charges @0.5% shall be loaded on F.O.R Despatch Station Value for evaluation purpose.
- (viii) Loading & evaluation shall done be as per clause no. 14.1 of Annexure – BB.

**ANNEXURE - EE****CERTIFICATE OF ANNUAL TURNOVER & NETWORTH**

| <b>TO BE ISSUED BY PRACTISING CHARTERED ACCOUNTANTS' FIRM ON THEIR LETTER HEAD</b>   |  |  |
|--|--|--|
| <b><u>TO WHOM IT MAY CONCERN</u></b>   |  |  |
| <p>This is to certify that the following financial positions extracted from audited financial statements of M/s..... (Name of the bidder) for the last 3 (three) completed accounting years upto.....(as the case may be) are correct.</p> |  |  |
| YEAR   | TURNOVER<br>In INR (Rs.) Crores/<br>USD Million* | NET WORTH<br>In INR (Rs.) Crores /<br>USD Million* |
|  |  |  |
|  |  |  |
|  |  |  |
| <p>*Rate of conversion (if used any): USD 1.00 = INR .....</p> <p>Place:</p> <p>Date:</p><br><p>Seal:</p><br><p>Membership No.:</p> <p>Registration Code:</p><br><p>Signature:</p>   |  |  |

**\*Applicable for Global Tenders.**

**ANNEXURE – VII (Revised)**

**BID SECURITY FORMAT**

TO,

**OIL INDIA LIMITED  
PIPELINE HEADQUARTERS  
P. O. – UDAYAN VIHAR,  
GUWAHATI - 781171  
ASSAM, INDIA**

Whereas ..... (herein after called 'the Bidder') has submitted their Bid No..... dated..... against OIL INDIA LIMITED, PIPELINE HEADQUARTERS, GUWAHATI, ASSAM, INDIA (hereinafter called the Purchaser) 's tender No..... for the supply of ..... (hereinafter called 'the Bid') KNOW ALL MEN by these presents that we..... of ..... having our registered office at ..... (hereinafter called 'the Bank') are bound unto the Purchaser, in the sum of ..... for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors and assigns by these presents.

Sealed with the said Bank this .....day of .....

**THE CONDITIONS of this obligation are:**

1. If the Bidder withdraws their Bid during the period of Bid validity specified by the Bidder,  
or
2. If the Bidder, having been notified of the acceptance of their bid by the Purchaser during the period of bid validity:
  - a) fails or refuses to accept the order; or
  - b) fails or refuses to furnish the performance securityor
3. If the Bidder furnishes fraudulent document/information in their bid.

We undertake to pay to the Purchaser up to the above amount upon receipt of their first written demand (by way of letter /fax/cable) without the Purchaser having to substantiate their demand, provided that in their demand the Purchaser will note that the amount claimed by it is due to it owing to the occurrence of one or all of the conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including \_\_\_\_\_ (Bidder to indicate specific date as mentioned in the tender), and any demand in respect thereof should reach the Bank not later than the above date.

The details of the issuing bank and controlling bank are as under:

A. Issuing Bank

1. Full address of the bank:
2. Email address of the bankers:
3. Mobile nos. of the contact persons:

B. Controlling Office

1. Address of the controlling office of the BG issuing banks:
2. Name of the contact persons at the controlling office with their mobile nos. and email address:

***Signature & Seal of the Bank***