

### **Pre-Qualification Requirements (PQR)**

1. The firm of Bidder should have in existence in past 3 years as on date of bid opening. Supporting documents “i.e. Last 3 years “Profit & Loss account/Balance Sheet/ GST returns/Any other acceptable document certified by CA” proving the firm is active in past 3 years to be provided.
2. The Bidder/OEM shall offer items (i.e. **Dew Point Apparatus & Hydrogen Purity Test Apparatus**) whose guaranteed and trouble-free performance has been proven at-least for one year in Thermal Power Station/Industry from the bid opening date. The bidder shall submit supporting documents, e.g. copy of Commissioning Report, Experience Certificate and details of end user concerned official for supply, satisfactory operation of the commissioned item.
3. The Bidder should have supplied **Dew Point Apparatus/Hydrogen Purity Test Apparatus** in last 05 years as on date of bid opening. The self-attested copies of Purchase Orders placed on them by customers, proof of supply & end-user details should be attached.
4. In case of Agent/Reseller/Traders, offering equipment from OEM, Tender specific authorization letter required from the manufacturer, clearly indicating contact details like Name, E-mail & address of manufacturer.

## CHEMICAL LAB EQUIPMENTS FOR 3X800 MW PATRATU PROJECT

### TECHNICAL SPECIFICATIONS

S/N	Item Description	Qty (Set)	Specification
1	<b>Dew Point Apparatus &amp; Hydrogen Purity Test Apparatus</b>	1	<b>Annexure - 1: Dew Point Apparatus Annexure - 2: Hydrogen Purity Test Apparatus</b>

**Note:**

1. One Set (01 No. Dew Point Apparatus & 01 No. Hydrogen Purity Test Apparatus) would be supplied in Patratu.

**Annexure - 1**

**1.0 DEW POINT APPARATUS**

**General :** This is for measuring the dew point of hydrogen gas in the generator casing. The instrument should be intrinsically safe from hazardous areas and should be able to measure dew point in the range of +20°C to -60°C. It should have auto calibration / calibration check facility and should comply with ASTM D 2029. The working principle should be either (a) Automatic Chilled mirror (Peltier cooling) principle or (b) Capacitance method.

**a) Automatic Chilled Mirror**

Consisting of internal cooling, temperature sensing, photo-source and photo-detector systems for the determination of dew point by measuring the moisture on the mirror. It should be complete with necessary electronics to give digital display of the dew point temperature and ambient temperature in deg. C and moisture in % and ppm. It should avoid elaborate piping within the instrument so that the time taken for attaining equilibrium is minimized.

**b) Capacitance method**

Capable of measuring various levels of moisture content in test gases using aluminium oxide or silicon oxide sensor - which change capacitance in proportion to the amount of moisture absorbed. Isolation package housing the sensor should allow for the introduction of the test gases maintaining the test gas integrity.

**1.1 : Specifications of Equipment:**

1. Type : Portable
2. Detectable gases / parameters : Moisture in air or gas, dew point, temperature, RH
3. Range: Dew Point -60°C to +20°C; Humidity : 0-100 % RH / Temp : 0 - 75°C
4. Accuracy :  $\pm 2^\circ\text{C}$
5. Technology : Automatic Chilled mirror or Capacitance method
6. Sampling / Input : Direct Plug-in
7. Response Time: Less than 30 seconds
8. Display : Graphic digital display
9. Power: operate at 230 V, 50 Hz single phase AC supply and with rechargeable batteries + charger
10. Instrument Should have the necessary microprocessor capable of computation and digital display of the dew point and ambient temperature in deg. C and moisture in ppm and percentage. Battery & mains operated, complete with necessary connections and tubing accompanied by operation and service manual.

# CHEMICAL LAB EQUIPMENTS FOR 3X800 MW PATRATU PROJECT

## TECHNICAL SPECIFICATIONS

Annexure - 2

### 2.0 Hydrogen Purity Meter

**General :** Hydrogen purity meter is required to measure the hydrogen purity in generator casing.

#### 2.0 Specifications of Equipment:

1. Function: Sensing & Measurement of Hydrogen in Air, gas holders, valves, pipelines, generator casing etc.
2. Range: 0 - 100 % v/v
3. Minimum Resolution : 0.1%
4. Accuracy :  $\pm 0.2\%$  of full scale
5. Detection Principal: Thermal Conductivity
6. Sampling Method : Direct Plug-in
7. Response Time: Less than 10 seconds
8. Alarms: Audible - Visual alarm for low battery
9. Readout: Self illuminating digital display
10. Power: rechargeable batteries + charger
11. Instrument shall be supplied with all required accessories.

#### Note:

1. Detailed printed Catalogue / User Manual for the items must be submitted along with the offer.

#### Other Terms & Conditions:

**Document:** One hard copy of O&M manual in English language giving complete technical information for operation and maintenance of the equipment shall be supplied with the equipment.

**Installation and Commissioning:** The supplier shall install & commission the equipment at site. Supplier should demonstrate the performance of the Equipment and all its accessories to ensure compliance with complete specifications & parameters quoted by them to the satisfaction of BHEL/end user. Training to chemists at site during installation should be provided for routine maintenance, operation and safety purpose.

**Warranty:** The equipment shall be warranted for satisfactory performance for a period of 12 months from the date of installation or 18 months from date of dispatch, whichever is later.

**Packing & Dispatch:** The equipment / accessories shall be packed in a suitable water proof/ vibration proof packing box capable of bearing air and road transit hazards. Packing box shall be properly identified and marked with BHEL's (India) Purchase Order Number. Also, "**PCRI HWR**" should be written in bold letters on all four sides of the packing box

## **Buyer Specific ATC document for Dew Point Apparatus & Hydrogen Purity Meter of Patratu**

1.	<p><b>MDCC (Material dispatch clearance certificate) Clause:</b></p> <p>Please note that material shall be dispatched only after issue of Material dispatch clearance certificate (MDCC) by BHEL. For issue of MDCC, you are required to submit the set of documents (i.e. Packing list, Warrantee certificate, Complete test reports, Calibration certificates etc).</p> <p>BHEL will release MDCC within 07 days from the date of receipt of complete documents as detailed above.</p> <p>The delivery period of 120 days is inclusive of 07 days taken by BHEL to issue MDCC.</p>
2.	<p><b>Pre-Qualification Requirement (PQR):</b></p> <p>The Pre-Qualification Requirements (PQR) have been made part of bid. All the bidders should ensure submission of complete details and documents as called for in the same. The offers submitted by the bidders would be scrutinized with respect to Pre-Qualification Requirements first.</p> <p><b>Techno-Commercial offer of only those bidders shall be evaluated who meet the Pre-Qualification Requirements.</b></p>
3.	<p><b>Technical Specification Requirement:</b></p> <p>1. Please quote your valuable offer as per BHEL Specification enclosed with bid documents as follows:</p> <p><b>Annexure-1:</b> Dew Point Apparatus <b>Annexure-2:</b> Hydrogen Purity Meter</p> <p>2. Bidders are requested to upload point-wise compliance of BHEL Specification along with the offer as a token of acceptance.</p>
4.	<p><b>Payment Terms:</b></p> <ul style="list-style-type: none"><li>• 90% payment after receipt of material at site against submission of PBG @ 10% of Order value valid till entire Warranty period. The PBG will be in BHEL format and from one of the BHEL consortium banks. For name of BHEL consortium bank, please visit our website <a href="http://hwr.bhel.com">hwr.bhel.com</a>.</li><li>• Balance 10% payment after installation and commissioning at site.</li><li>• Payment will be released by BHEL within:<ul style="list-style-type: none"><li>- 45 days for Micro and Small enterprises</li><li>- 60 days for Medium enterprises</li><li>- 90 days for Non MSME enterprises</li></ul></li></ul>
5.	<p><b>Validity:</b></p> <p>Offer will be valid for 150 days from bid end date and extensions thereof.</p> <p><b>BHEL will reserve the right to reject any or all quotations, quoting validity less than 150 days.</b></p>

6.	<p><b>Delivery Period:</b></p> <p>The delivery shall be 120 days from the date of PO placement. This period is inclusive of 7 days for BHEL to arrange dispatch clearance (provided MDCC related documents are complete in all respect).</p>
7.	<p><b>Price Basis:</b></p> <p>Please confirm that prices have been quoted on F.O.R. Patratu site basis.</p>
8.	<p><b>Installation, Commissioning and Training Clause:</b></p> <p>The supplier shall install &amp; commission the equipment at site. Supplier should demonstrate the performance of the Equipment and all its accessories to ensure compliance with complete specifications &amp; parameters quoted by them to the satisfaction of BHEL/end user. Training to chemists at site during installation should be provided for routine maintenance, operation and safety purpose.</p> <p><b><i>Cost of Installation, Commissioning and Training should be inclusive in the quoted prices.</i></b></p> <p>Installation and Commissioning will be done at following address:</p> <p>GENERAL MANAGER (PROJ.), PATRATU STPP (3X800 MW), PATRATU VIDYUT UTPADAN NIGAM LTD. P.O.-PTPS, DIST- RAMGARH, JHARKHAND - 829119</p> <p><b><i>Failing to comply to the Installation, Commissioning and Training clause, the offer will be rejected straightaway.</i></b></p>
9.	<p><b>Evaluation criteria:</b></p> <p>Evaluation will be done on the basis of Total Landed cost up to Patratu project site <b>(Total value wise evaluation)</b>.</p>
10.	<p><b>Document:</b></p> <p>One hard copy of O&amp;M manual in English language giving complete technical information for operation and maintenance of the equipment shall be supplied with the equipment.</p>
11.	<p><b>Packing &amp; Dispatch:</b></p> <p>The equipment / accessories shall be packed in a suitable water proof/vibration proof packing box capable of bearing air and road transit hazards. Packing box shall be properly identified and marked with BHEL's (India) Purchase Order Number. Also, "<b>PCRI HWR</b>" should be written in bold letters on all four sides of the packing box.</p>
12.	<p><b>Warrantee:</b></p> <p>The equipment shall be warranted for satisfactory performance for a period of 18 months from the date of dispatch or 12 months from the date of installation, whichever is later.</p> <p><b><i>Failing to comply to the Warranty clause, the offer will be rejected straightaway.</i></b></p>

13.	<p><b>Arbitration Clause:</b></p> <p>In case of any dispute arising out of as in connection with this contract, the same shall be referred to arbitration under Arbitration &amp; Conciliation Act 1996 of a sole arbitrator who shall be appointed by mutual consent of the parties. The seat &amp; venue of arbitration shall be Haridwar.</p> <p>The proceedings shall be conducted in English. The Governing law of contract shall be the substantive law of India</p>
14.	<p><b>Risk Purchase:</b></p> <p>In case of abnormal delays (beyond the maximum late delivery period as per LD clause) in supplies / defective supplies or non-fulfillment of any other terms and conditions given in Purchase Order, BHEL may cancel the Purchase Order in full or part thereof, and may also make the purchase of such material from elsewhere / alternative source at the risk and cost of the supplier. BHEL will take all reasonable steps to get the material from alternate source at optimum cost. If bidder does not agree to the above Risk Purchase Clause, BHEL reserves the right to reject the offer. In case for compelling reasons BHEL accepts the offer without acceptance of this clause by the bidder and in the eventuality of Risk Purchase, appropriate action will be taken as per BHEL extant rules. This will be without prejudice to any other right of BHEL under the contract or under General Law.</p> <p><b>Action against Bidders / vendor / supplier / contractor in case of default:</b></p> <p>In order to protect the commercial interests of BHEL, BHEL shall take action against supplies / contractors by way of suspension of business dealings, who either fail to perform or are in default without any reasonable cause, cause loss of business/ money/ reputation, indulge in malpractices, cheating, bribery, fraud or any other misconduct or formation of cartels so as to influence the bidding process or influence the price etc.</p> <p>Suspension of Business Dealings could be in the form of “Hold” or “Banning” a supplier/ contractor or a bidder and shall be as per “Guidelines for Suspension of Business Dealings with Suppliers/ Contractors” available at BHEL’s website “<a href="https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors">https://www.bhel.com/guidelines-suspension-business-dealings-supplierscontractors</a>”.</p>
15.	<p><b>E-invoicing:</b></p> <p>E-invoicing under GST has been implemented w.e.f. 01.10.2022 for all the taxable persons having turnover more than Rs. 10 cr. it has been specified by the govt that it is mandatory to mention a valid unique invoice reference no. (IRN) and QR code as generated from govt. portal on a tax invoice. Based on such information, GST ITC as claimed by BHEL in GST returns shall be matched with the corresponding details uploaded by supplier in E-invoicing system.</p> <p>In case the vendor / contractor delays or fails to provide all the documents as per the purchase order / work order at the time of submitting tax invoice to BHEL, any subsequent financial loss to BHEL on account of vendor/contractor shall be to vendor's / contractor's account. BHEL has further right to take necessary steps to protect its interest at the time of release of payment. this further requires inclusion of IRN and QR code on tax invoice as announced by govt. of india w.e.f. 01.10.2022.</p>
16.	<p><b>General Clause:</b></p> <p>All other commercial terms and conditions will be governed by General Terms and Conditions (GTC) GeM_GTC_4.0 v1.12_16Aug23.</p>

17. **Conflict of Interest among Bidders/ Agents:**

"A bidder shall not have conflict of interest with other bidders. Such conflict of interest can lead to anti-competitive practices to the detriment of Procuring Entity's interests. **The bidder, found to have a conflict of interest shall be disqualified.** A bidder may be considered to have a conflict of interest with one or more parties in this bidding process, if:

a) they have controlling partner (s) in common; **or**

b) they receive or have received any direct or indirect subsidy/ financial stake from any of them; **or**

c) they have the same legal representative/agent for purposes of this bid; **or**

d) they have relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the bid of another Bidder; **or**

e) Bidder participates in more than one bid in this bidding process. Participation by a Bidder in more than one Bid will result in the disqualification of all bids in which the parties are involved. However, this does not limit the inclusion of the components/ sub-assembly/Assemblies from one bidding manufacturer in more than one bid; **or**

f) In cases of agents quoting in offshore procurements, on behalf of their principal manufacturers, one agent cannot represent two manufacturers or quote on their behalf in a particular tender enquiry. One manufacturer can also authorize only one agent/dealer. There can be only one bid from the following:

1. The principal manufacturer directly or through one Indian agent on his behalf; and

2. Indian/foreign agent on behalf of only one principal, **or**

g) A Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the contract that is the subject of the Bid, **or**

h) In case of a holding company having more **than** one independently manufacturing units, or more than one unit having common business ownership/management, only one unit should quote. Similar restrictions would apply to closely related sister companies. Bidders must proactively declare such sister/ common business/ management units in same/ similar line of business. "

18. **Acceptance of offers from country Sharing Land Border with India:**

I. Any bidder from a country which shares a land border with India will be eligible to bid in any procurement whether of goods, services (including consultancy services and non-consultancy services) or works (including turkey projects) only if the bidder is registered with the Competent Authority. Further, any bidder (including bidder from India) having specified Transfer of Technology (ToT) arrangement with an entity from a country which shares a land border with India, shall also require to be registered with the same competent authority.

II. "Bidder" means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.

III. "Bidder (or entity) from a country which shares a land border with India" for the purpose of this Order means: -

a. An entity incorporated, established or registered in such a country; or

b. A subsidiary of an entity incorporated, established or registered in such a country; or

- c. An entity substantially controlled through entities incorporated, established or registered in such a country; or
- d. An entity whose beneficial owner is situated in such a country; or
- e. An Indian (or other) agent of such an entity; or
- f. A natural person who is a citizen of such a country; or
- g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above

IV. The beneficial owner for the purpose of (iii) above will be as under:

1. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation:

- a. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company;
- b. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements;

2. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership;

3. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals;

4. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official;

5. In case of a trust, the identification of beneficial owners) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

V. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.

VI. The successful bidder shall not be allowed to sub-contract works to any contractor from a country which shares a land border with India unless such contractor is registered with the Competent Authority.

VII. The registration shall be valid at the time of submission of bid and at the time of acceptance of bid.

VIII. If the bidder was validly registered at the time of acceptance / placement of order, registration shall not be a relevant consideration during contract execution.

**Note:** Following declarations would be required from bidders (if applicable):

(A) "I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority. I hereby certify that this bidder fulfills all requirements in this regard and is eligible to be considered. [Where applicable, evidence of valid registration by the Competent Authority shall be attached.]"

(B) "I have read the clause regarding restrictions on procurement from a bidder having Transfer of

Technology (ToT) arrangement. I certify that this bidder does not have any ToT arrangement requiring registration with the competent authority.

**OR**

\* have read the clause regarding restrictions on procurement from a bidder having Transfer of Technology (ToT) arrangement. I certify that this bidder has valid registration to participate in this procurement."