

Volume – I

Tender Notification for

**RATE CONTRACT FOR THE SUPPLY AND
INSTALLATION OF NITROGEN INJECTION FIRE
PROTECTION SYSTEM (NIFPS) IN BRPL, NEW
DELHI**

CMC/BR/26-27/FK/PR/RJ/1378

Due Date for Submission of Bids: 22.08.2026

**BSES RAJDHANI POWER LTD (BRPL)
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Corporate Identification Number: U74899DL2001PLC111527
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Section – I

REQUEST FOR QUOTATION

Tender Notification: CMC/BR/26-27/FK/PR/RJ/1378

**RATE CONTRACT FOR THE SUPPLY AND
INSTALLATION OF NITROGEN INJECTION FIRE
PROTECTION SYSTEM (NIFPS) IN BRPL, NEW
DELHI**

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SECTION – I: REQUEST FOR QUOTATION**1.0 Event Information**

- 1.01** BRPL invites bids through online portal for supply & installation of NIFPS from the manufacturers. The bidder must qualify the technical requirements as specified in clause 2.0 stated below. The tender shall be duly super scribed as — **“BID FOR RATE CONTRACT FOR THE SUPPLY AND INSTALLATION OF NITROGEN INJECTION FIRE PROTECTION SYSTEM(NIFPS) IN BRPL, TENDER NOTICE CMC/BR/26-27/FK/PR/RJ/1378 DUE FOR SUBMISSION ON DT. 22.08.2026”**.

Sl. No.	Item Description	Specification	Requirement	Estimated Cost
			Total Qty.	
BRPL, DELHI				
1	Supply and Installation of Nitrogen Injection Fire Protection System (NIFPS) in BRPL	SECTION V	31 Nos.	Rs. 1.64 Cr

Note: Quantity may vary to any extent of +/- 30% of above mentioned total quantity.

- 1.02** The schedule of specifications with detail terms & conditions can be obtained from address given below against demand draft/Pay Order of **Rs.1180/- with GST-**, drawn in favour of **BSES RAJDHANI POWER LTD**, payable at New Delhi. The sale of tender documents will be issued from **02.08.2026** onwards on all working days up to **22.08.2026**. The tender documents can also be downloaded from the website www.bsedelhi.com or <https://srmpdrportal.bsedelhi.com/irj/portal>

In case tender papers are downloaded from the above website, the bidder has to submit the demand draft covering the cost of bid documents and EMD as mentioned in tender document in a separate sealed envelope with suitable superscription - **Tender Fee & EMD** and **Tender Notice Ref: CMC/BR/26-27/FK/PR/RJ/1378, Due date of submission, Tender opening date**. This envelope should be deliver to the following address (scanned copy of Tender Fee & EMD to be uploaded on e –procurement portal):

**HEAD OF THE DEPARTMENT, 1st FLOOR, ‘C’ BLOCK,
CONTRACTS & MATERIALS DEPARTMENT, BSES RAJDHANI POWER LTD,
BSES BHAWAN, NEHRU PLACE,
NEW DELHI - 110019**

- 1.03** Offers will be received up to **1500 Hrs. on dt. 22.08.2026** as indicated earlier and will be opened at the address mentioned above dt. **22.08.2026 at 1530 Hrs.** in the presence of authorized representatives of the bidders. The schedule of specifications with detail terms & conditions are enclosed. It is the sole responsibility of the bidder to ensure that the bid documents reach this office on or before the due date.

1.04 BRPL reserves the right to accept/ reject any or all Tenders without assigning any reason thereof and alter the quantity of materials mentioned in the Tender documents at the time of placing purchase orders. Tender will be summarily rejected if:

- i) Earnest Money Deposit (EMD) @ 2% (Two percent) of the Tender value i.e. **Rs. 3,28,000** /- is not deposited in shape of Bank Guarantee executed on favour of BSES RAJDHANI POWER LTD.
- ii) The offer does not contain “FOR, NEW DELHI price indicating break-up towards all taxes & duties”.
- iii) Complete Technical details are not enclosed.
- iv) Tender is received after due time due to any reason.

1.05 BRPL reserves the right to reject any or all bids or cancel/ withdraw the invitation for bids without assigning any reason whatsoever and in such case no bidder/ intending bidder shall have any claim arising out of such action time of placing purchase orders.

2.0 Qualification Criteria:-

The prospective bidder must qualify all of the following requirements to be eligible to participate in the bidding. Bidders who meet following requirements will be considered as successful bidder and management has a right to disqualify those bidders who do not meet these requirements.

- 1) The bidder should have own manufacturing facility in India for NIFPS. *Manufacturing and factory incorporation certificate/ undertaking are submitted by bidder. The details of manufacturing units, locations and works from where supply against this tender shall be proposed to be furnished.*
- 2) The bidder should have manufacturing capacity of minimum 50 nos. NIFPS per month. *Undertaking/Capacity Certificate*
- 3) The bidder should have supplied minimum 100 nos. of NIFPS in last 5 years from the date of bid opening to any utilities/SEB's/PSU's/reputed company wherein the end user shall be Utility/SEB's/PSU's. *i. Summary list of executed Purchase orders ii. Purchase order copies.*
- 4) Performance certificate for minimum 2 year satisfactory performance for NIFPS of similar rating or higher ratings supplied in last 7 years from the date of bid opening from at least two utilities/ SEB's/ PSU's/ reputed company wherein the end user shall be utilities/ SEB's/ PSU's. In case of bidder has a previous association with BRPL/BYPL for similar product and service, the performance feedback for that bidder by BRPL/BYPL shall only be considered irrespective of performance certificate issued by any third organization.- *Performance certificates*

- 5) The bidder should have servicing, repairing, testing & refurbishment facility in INDIA with necessary spares and testing equipments for providing prompt after sales service for NIFPS. *Relevant Details/ certificates/ Undertaking. Details of the set-up available shall be brought out in the offer. The bidder shall submit undertaking along with the bid confirming the infrastructure details submitted.*
- 6) The bidder must possess valid ISO 9001:2015 certification. *Valid copy of Certification*
- 7) Bidder should have Average Annual Sales Turnover of Rs 15 Crores or more in last three financial years. *Balance Sheet /CA Certificate to be submitted.*
- 8) The Bidder shall submit an undertaking that “No Litigation” is pending with the BRPL or its Group/Associates Companies as on date of bid opening. *Undertaking*
- 9) An undertaking (self-certificate) that the bidder has not been blacklisted/debarred by any central/state government institution/Electricity utilities as on date of bid opening. *Undertaking*
- 10) The bidder must have valid PAN No., GST Registration Number, in addition to other statutory compliances. The bidder must submit the copy of registrations and submit an undertaking that the bidder shall comply all the statutory compliances as per the laws/rules etc. before the start of the work - *Relevant Statutory Documents Copy/Undertaking*

3.0 Bidding and Award Process

Bidders are requested to submit their questions regarding the RFQ or the bidding process after review of this RFQ. BRPL response to the questions raised by various bidders will be distributed to all participating bidders through website.

a. Time schedule of the bidding process

The bidders on this RFQ package should complete the following within the dates specified as under:

S.No.	Steps	Activity description	Due date
1	Technical Queries	All Queries related to RFQ	On or before 20.08.2026 1500 Hrs.

2	Technical Offer	Documentary evidence in support of qualifying criteria. Technical Literature/ GTP/ Drawings/ Type test report, if any, etc., Testing facilities, any other relevant document, acceptance to commercial terms & conditions viz. delivery Schedule/ Period, Payment terms, PBG etc. Quality assurance plan, Deviation from the specification, list of plant & machinery and testing equipments Un priced items.	22.08.2026, 1530 Hrs
3	Commercial Offer	Prices for NIFPS and Break up regarding basic price and taxes. Delivery commitment	22.08.2026, 1530 Hrs
4	Opening of technical bid	As per RFQ	22.08.2026, 1600 Hrs

b. Bid submission through E-Procurement Portal

BSES will carry out E-Procurement through its e-procurement portal (<https://srmpdportal.bsedelhi.com/irj/portal>). Interested Non-registered bidders are requested to obtain the portal user name and password (if not available) for bid submission. For participating in e-Tenders of BRPL, please write a mail to: Mr. Satyam Singh, E-mail: satyam.singh@reliancegroupindia.com, with your details as per below:

- Existing Vendor Code with BRPL or its Group/Associates Companies (if available):
- Trade Name:
- Address of Principal Place of Business:
- Contact Person's Name:
- Contact Person's Designation:
- Contact Person's Mobile No.:
- Contact Person's email ID:
- Also, attach a valid copy of Power of Attorney in favour of mentioned Contact Person for being authorized to receive user ID and password on behalf of their organization.

The login ID details shall be sent through email to the email ID mentioned by you for the same.

Bids shall be submitted in 2 (Two) parts on the assigned folder of the e-procurement site. Please refer to the user manual available at <https://srmpdportal.bsedelhi.com/irj/portal>

This is a two part bid process. Bidders are to upload the bids (a) Technical Bid (b) Price Bid on website.

- The Part-I (Technical Bid)** - Technical Bid should not contain any cost information whatsoever. In case of Bids where the qualification requirements, technical suitability and other requirements are found to be inadequate, Part-II "Financial Bid" will not be opened.

- **The Part-II (Financial Bid)** - Qualified bidders will be intimated after technical evaluation of all the bids is completed. The date and time of same shall be intimated in due course to the qualified bidders. Notwithstanding anything stated above, the Purchaser reserves the right to assess bidder's capability to perform the contract, should the circumstances warrant such assessment in the overall interest of the purchaser. In this regard the decision of the purchaser is final.

Bids have to be mandatorily submitted only through the e-procurement portal of BSES Delhi. Bids submitted through any other form/ route shall not be admissible. However, documents that necessarily have to be submitted in originals like EMD or Tender Fee (in the form of BG as applicable) and any other documents mentioned in the tender documents have to be submitted at the BRPL office before the due date and time of submission. Please mention the NIT No on sealed envelope of EMD and DD and submit the documents on following address (scanned copy of EMD and Tender Fee to be uploaded on e-procurement portal):

**HEAD OF THE DEPARTMENT, 1st FLOOR, 'C' BLOCK,
CONTRACTS & MATERIALS DEPARTMENT, BSES RAJDHANI POWER LTD,
BSES BHAWAN,
NEHRU PLACE, NEW DELHI-110019.**

4.0 REVERSE AUCTION CLAUSE

Purchaser reserves the right to use the reverse auction tool through SAP – SRM as an integral part of the entire tendering process. All techno commercially qualified bidders shall participate in the reverse auction. Notwithstanding anything stated above, the Purchaser reserves the right to assess the bidder's capability to perform the contract, should the circumstances warrant such assessment in the overall interest of the purchaser. In this regard the decision of the purchaser is final. Bidder is to submit their acceptance as per the format attached ANNEXURE-VI.

5.0 Award Decision

Purchaser intends to award the business on a lowest bid basis, so suppliers are encouraged to bid competitively. The decision to place purchase order / letter of acceptance solely depends on purchaser on the cost competitiveness across multiple lots, quality, delivery and bidder's capacity, in addition to other factors that Purchaser may deem relevant.

The purchaser reserves all the rights to award the contract to one or more bidders so as to meet the delivery requirement or nullify the award decision without any reason.

BSES reserves the right to split the tender quantity amongst techno commercially qualified bidders on account of delivery requirement in tender, quantity under procurement etc.

Splitting of tender quantity amongst more than one bidder shall be governed by below mentioned guidelines:

- If the quantity is to be split among 2 bidders, it will be done in the ratio of 70:30 on L1 price.
- If the quantity is to be split among 3 bidders, it will be done in the ratio of 60:25:15 on L1 price.
- In case quantity needs to be distributed and order splitting is required, distribution of quantity shall be maximum among three (3) bidders.

In the event of your bid being selected by purchaser (and / or its affiliates) and your subsequent DEFAULT on your bid; you will be required to pay purchaser (and / or its affiliates) an amount equal to the difference in your bid and the next lowest bid on the quantity declared in RFQ.

In case any supplier is found unsatisfactory during the delivery process, the award will be cancelled and BRPL reserves the right to award other suppliers who are found fit.

Quantity Variation: The purchaser reserves the rights to vary the quantity by +/- 30% of the tender quantity.

Repeat Order: BRPL reserves the right to place repeat order at the same rates & terms and conditions as per this tender against additional requirement subject to mutual agreement between BRPL & supplier.

6.0 Market Integrity:

We have a fair and competitive marketplace. The rules for bidders are outlined in the Terms & Conditions. Bidders must agree to these rules prior to participating. In addition to other remedies available, we reserves the right to exclude a bidder from participating in future markets due to the bidder's violation of any of the rules or obligations contained in the Terms & Condition. Bidders who violate the marketplace rules or engage in behavior that disrupts the fair execution of the marketplace restricts a bidder to length of time, depending upon the seriousness of the violation. Examples of violations include, but are not limited to:

- Failure to honor prices submitted to the marketplace.
- Breach of the terms of the published in Request For Quotation.

7.0 Supplier Confidentiality

All information contained in this RFQ is confidential and may not be disclosed, published or advertised in any manner without written authorization from BRPL. This includes all bidding information submitted.

All RFQ documents remain the property of BRPL and all suppliers are required to return these documents to BRPL upon request.

Suppliers who do not honor these confidentiality provisions will be excluded from participating in future bidding events.

7.0 Contact Information

All communication as regards this RFQ shall be made (i) in English, (ii) in writing and (iii) sent by mail, facsimile to:

	Technical	Commercial
Contact Name	Mr. Alok Mandal Copy to Mr. Anupam Kumar & Ms. Deepti Sharma	Mr. Satyam Singh Copy to Mr. Pankaj Goyal & Ms. Rachna Jain
Address	CES Deptt., 1 st floor, A-Block, BSES Rajdhani Power Limited, BSES Bhawan, Nehru Place, New Delhi -110019	C&M Deptt., 1 st floor, C-Block, BSES Rajdhani Power Limited, BSES Bhawan, Nehru Place, New Delhi -110019
Email-ID	alok.k.mandal@reliancegroupindia.com anupam.o.kumar@reliancegroupindia.com deepti.r.sharma@reliancegroupindia.com	satyam.singh@reliancegroupindia.com rachna.jain@reliancegroupindia.com pankaj.goyal@reliancegroupindia.com

SECTION – II

INSTRUCTION TO BIDDERS (ITB)

RATE CONTRACT FOR THE SUPPLY AND INSTALLATION OF NITROGEN INJECTION FIRE PROTECTION SYSTEM (NIFPS) IN BRPL, NEW DELHI

CMC/BR/26-27/FK/PR/RJ/1378

1.00 BSES Rajdhani Power Ltd, hereinafter referred to as the Purchaser are desirous of implementing the various Systems Improvement/Repair & Maintenance works at their respective licensed area in Delhi. The Purchaser has now floated this tender for procurement of NIFPS as notified earlier in this bid document.

2.00 SCOPE OF WORK

The scope shall include Design, Manufacture, Testing at works conforming to the Technical Specifications enclosed along with Packing, Forwarding, Freight and Unloading and proper stacking at Purchaser's stores.

3.00 DISCLAIMER

3.01 This Document includes statements, which reflect various assumptions, which may or may not be correct. Each Bidder/ Bidding Consortium should conduct its own estimation and analysis and should check the accuracy, reliability and completeness of the information in this Document and obtain independent advice from appropriate sources in their own interest.

3.02 Neither Purchaser nor its employees will have any liability whatsoever to any Bidder or any other person under the law or contract, the principles of restitution or unjust enrichment or otherwise for any loss, expense or damage whatsoever which may arise from or be incurred or suffered in connection with anything contained in this Document, any matter deemed to form part of this Document, provision of Services and any other information supplied by or on behalf of Purchaser or its employees, or otherwise a rising in any way from the selection process for the Supply.

3.03 Though adequate care has been taken while issuing the Bid document, the Bidder should satisfy itself that Documents are complete in all respects. Intimation of any discrepancy shall be given to this office immediately.

3.04 This Document and the information contained herein are Strictly Confidential and are for the use of only the person(s) to whom it is issued. It may not be copied or distributed by the recipient to third parties (other than in confidence to the recipient's professional advisors).

4.00 COST OF BIDDING

The Bidder shall bear all cost associated with the preparation and submission of its Bid and Purchaser will in no case be responsible or liable for those costs.

B BIDDING DOCUMENT

5.00 BIDDING DOCUMENTS

5.01 The Scope of Work, Bidding Procedures and Contract Terms are described in the Bidding Documents. In addition to the covering letter accompanying Bidding Documents, the Bidding Documents include:

Volume –I

- a) Request for Quotation (RFQ) - Section – I
- b) Instructions to Bidders (ITB) - Section – II
- c) General Conditions of Contract - Section - III
- d) Quantity and delivery requirement - Section –IV
- e) Technical Specifications (TS) - Section –V

Volume – II

- a) Bid Form - Annexure – I
- b) Bid Format - Annexure – II
- c) Price Schedule - Annexure – III
- d) Commercial Terms & Conditions - Annexure - IV
- e) No Deviation Sheet - Annexure - V
- f) Qualification Criterion - Annexure - VI

- 5.02 The Bidder is expected to examine the Bidding Documents, including all Instructions, Forms, Terms and specifications. Failure to furnish all information required by the Bidding documents or submission of a Bid not substantially responsive to the Bidding Documents in every respect will may result in the rejection of the Bid.

6.00 AMENDMENT OF BIDDING DOCUMENTS

- 6.01 At any time prior to the deadline for submission of Bids, the Purchaser may for any reasons, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the Bidding Documents by Amendment.
- 6.02 The Amendment shall be part of the Bidding Documents, pursuant to Clause 5.01, and it will be notified in writing by Fax/e-mail to all the Bidders who have received the Bidding Documents and confirmed their participation to Bid, and will be binding on them.
- 6.03 In order to afford prospective Bidders reasonable time in which to take the Amendment into account in preparing their Bids, the Purchaser may, at its discretion, extend the deadline for the submission of Bids.

C PREPARATION OF BIDS

7.00 LANGUAGE OF BID

The Bid prepared by the Bidder, and all correspondence and documents relating to the Bid exchanged by the Bidder and the Purchaser, shall be written in the English Language. Any printed literature furnished by the Bidder may be written in another Language, provided that this literature is accompanied by an English translation, in which case, for purposes of interpretation of the Bid, the English translation shall govern.

8.00 DOCUMENTS COMPRISING THE BID

The Bid prepared and submitted by the Bidder shall comprise the following components:

- a) Bid Form, Price & other Schedules (STRICTLY AS PER FORMAT) and Technical Data Sheets completed in accordance with Clause 9.0, 10.0, 11.0 and Technical Specification;
- b) All the Bids must be accompanied with the required EMD as mentioned in the Section-I against each tender.
- c) Power of Attorney or Authorization letter indicating that the person(s) signing the Bid have the authority to sign the Bid and thus that the Bid is binding upon the Bidder during the full period of its validity, in accordance with clause 12.0.

9.00 BID FORM

- 9.01 The Bidder shall complete an the Bid Form and the appropriate Price & Other Schedules and Technical Data Sheets.

9.02 EMD

Pursuant to Clause 8.0(b) above, the bidder shall furnish, as part of its bid, a EMD amounting to 2% of the total bid value (FOR Destination) i.e. **Rs. 3,28,000/-**. The EMD is required to protect the Purchaser against the risk of Bidder's conduct which would warrant the security's forfeiture.

The EMD shall be denominated in the currency of the bid, and shall be in the following form:

A bank guarantee issued by any scheduled bank strictly as per the form at enclosed and shall be valid for a period of thirty (30) days beyond the validity of the bid.

Unsuccessful bidders' EMD will be discharged or returned as promptly as possible as but not later than thirty (30) days after the expiration of the period of bid validity.

The successful bidder's EMD will be discharged upon furnishing the performance security. The EMD may be forfeited:

- a) If the Bidder:
 - i) Withdraws its bid during the period of bid validity specified by the Bidder in the Bid Form; or
- b) in the case of a successful Bidder, if the Bidder fails:
 - i) to sign the Contract, or
 - ii) to furnish the required performance security.

10.00 BID PRICES

- 10.01 Bidders shall quote for the entire Scope of Supply with a break-up of prices for individual items. The total Bid Price shall also cover all the Supplier's obligations mentioned in or reasonably to be inferred from the Bidding Documents in respect of Design, Supply, Transportation to site, all in accordance with the requirement of Bidding Documents the

Bidder shall complete the appropriate Price Schedules included herein, stating the Unit Price for each item & total Price.

- 10.02 The prices offered shall be inclusive of all costs as well as Duties, Taxes and Levies paid or payable during execution of the supply work, breakup of price constituents, should be there. Prices quoted by the Bidder shall be—Firm “and not subject to any price adjustment during the performance of the Contract. A Bid submitted with an adjustable price quotation will be treated as non -responsive and rejected.

11.00 BID CURRENCIES

Prices shall be quoted in **Indian Rupees (INR) only**.

12.00 PERIOD OF VALIDITY OF BIDS

- 12.01 Bids shall remain valid for **120 days** post bid date.
- 12.02 Notwithstanding Clause 12.01 above, the Purchaser may solicit the Bidder's consent to an extension of the Period of Bid Validity. The request and the responses thereto shall be made in writing by Fax/ e-mail.

13.00 ALTERNATIVE BIDS

Bidders shall submit Bids, which comply with the Bidding Documents. Alternative Bids will not be considered. The attention of Bidders is drawn to the provisions of Clause 22.03 & 22.04 regarding the rejection of Bids, which are not substantially responsive to the requirements of the Bidding Documents.

14.00 FORMAT AND SIGNING OF BID

- 14.01 The original Bid Form and accompanying documents (as specified in Clause 9.0), clearly marked "Original Bid", plus one copy must be received by the Purchaser at the date, time and place specified pursuant to Clauses 15.0 and 16.0. In the event of any discrepancy between the original and the copies, the original shall govern.
- 14.02 The original and copy of the Bid shall be typed or written in indelible ink and shall be signed by the Bidder or a person or persons duly authorized to sign on behalf of the Bidder. Such authorization shall be indicated by written Power-of-Attorney accompanying the Bid.
- 14.03 The Bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the Bidder, in which case such corrections shall be initialed by the person or persons signing the Bid.

D SUBMISSION OF BIDS

15.0 SEALING AND MARKING OF BIDS

15.01 Bid submission: All the Bid Documents shall be uploaded on website before the closing time for submission of the bid.

15.02 The EMD and tender fee shall be enclosed in a sealed envelope and the said envelope shall be superscribed with — **Tender Fee & EMD** and “**Tender Notice no., Due date of submission, Tender opening date**”

15.03 Bids submitted by Telex/ Telegram/ Fax/ in person will not be accepted. No request from any Bidder to the Purchaser to collect the proposals from Airlines/Cargo Agents etc. shall be entertained by the Purchaser.

16.0 DEADLINE FOR SUBMISSION OF BIDS

16.01 The Bid must be submitted by the bidder not later than **1500 HRS on 22.08.2026** on SRM portal.

16.02 The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Documents in accordance with Clause 9.0, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline will thereafter be subject to the deadline as extended.

17.0 ONE BID PER BIDDER

Each Bidder shall submit only one Bid. A Bidder who submits or participates in more than one Bid will cause all those Bids to be rejected.

18.00 LATE BIDS

Any Bid received by the Purchaser after the deadline for submission of Bids prescribed by the Purchaser, pursuant to Clause 16.0, will be declared "Late" and rejected and returned unopened to the Bidder.

19.00 MODIFICATIONS AND WITHDRAWAL OF BIDS

19.01 The Bidder is not allowed to modify or withdraw its Bid after the Bid's submission.

E. EVALUATION OF BID

20.00 PROCESS TO BE CONFIDENTIAL

Information relating to the examination, clarification, evaluation and comparison of Bids and recommendations for the award of a contract shall not be disclosed to Bidders or any other persons not officially concerned with such process. Any effort by a Bidder to influence the Purchaser's processing of Bids or award decisions may result in the rejection of the Bidder's Bid.

21.00 CLARIFICATION OF BIDS

To assist in the examination, evaluation and comparison of Bids, the Purchaser may, at its discretion, ask the bidder for a clarification of its Bid. All responses to requests for clarification shall be in writing and no change in the price or substance of the Bid shall be sought, offered or permitted.

22.00 PRELIMINARY EXAMINATION OF BIDS / RESPONSIVENESS

- 22.01 Purchaser will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bids are generally in order.
- 22.02 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price per item that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price per item will be corrected. If there is a discrepancy between the Total Amount and the sum of the total price per item, the sum of the total price per item shall prevail and the Total Amount will be corrected.
- 22.03 Prior to the detailed evaluation, Purchaser will determine the substantial responsiveness of each Bid to the Bidding Documents including production capability and acceptable quality of the Goods offered. A substantially responsive Bid is one, which conforms to all the terms and conditions of the Bidding Documents without material deviation.
- 22.04 Bid determined as not substantially responsive will be rejected by the Purchaser and/or the Purchaser and may not subsequently be made responsive by the Bidder by correction of the non -conformity.

23.0 EVALUATION AND COMPARISON OF BIDS

- 23.01 The evaluation of Bids shall be done based on the delivered cost competitiveness basis.
- 23.02 The evaluation of the Bids shall be a stage-wise procedure. The following stages are identified for evaluation purposes: In the first stage, the Bids would be subjected to a responsiveness check. The Technical Proposals and the Conditional ties of the Bidders would be evaluated. Subsequently, the Financial Proposals along with supplementary Financial Proposals, if any, of Bidders with Techno-commercially Acceptable Bids shall be considered for final evaluation.
- 23.03 The Purchaser's evaluation of a Bid will take into account, in addition to the Bid price, the following factors, in the manner and to the extent indicated in this Clause:
- (a) Supply Schedule
 - (b) Deviations from Bidding Documents

Bidders shall base their Bid price on the terms and conditions specified in the Bidding Documents. The cost of all quantifiable deviations and omissions from the specification, terms and conditions specified in Bidding Documents shall be evaluated. The Purchaser will make its own assessment of the cost of any deviation for the purpose of ensuring fair comparison of Bids.

- 23.04 Any adjustment in price, which results from the above procedure, shall be added for the purposes of comparative evaluation only to arrive at an "Evaluated Bid Price". Bid Prices quoted by Bidders shall remain unaltered.

F. AWARD OF CONTRACT

24.0 CONTACTING THE PURCHASER

- 24.01 From the time of Bid submission to the time of contract award, if any Bidder wishes to contact the Purchaser on any matter related to the Bid, it should do so in writing.
- 24.02 Any effort by a Bidder to influence the Purchaser and/or in the Purchaser's decisions in respect of Bid evaluation, Bid comparison or Contract Award, will result in the rejection of the Bidder's Bid.

25.0 THE PURCHASER 'S RIGHT TO ACCEPT ANY BID AND TO REJECT ANY OR ALL BIDS

The Purchaser reserves the right to accept or reject any Bid and to annul the Bidding process and reject all Bids at anytime prior toward of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligation to inform the affected Bidder or Bidders of the grounds for the Purchaser's action.

26.0 AWARD OF CONTRACT

The Purchaser will award the Contract to the successful Bidder whose Bid has been Determined to be the lowest-evaluated responsive Bid, provided further that the Bidder has been determined to be qualified to satisfactorily perform the Contract. Purchaser reserves the right to award order other bidders in the tender, provided it is required for progress of project & provided he agrees to come to the lowest rate.

27.0 THE PURCHASER'S RIGHT TO VARY QUANTITIES

The Purchaser reserves the right to vary the quantity i.e. increase or decrease the numbers/quantities without any change in terms and conditions during the execution of the Order.

28.0 LETTER OF INTENT/ NOTIFICATION OF AWARD

The letter of intent/ Notification of Award shall be issued to the successful Bidder whose bids have been considered responsive, techno-commercially acceptable and evaluated to be the lowest (L1). The successful Bidder shall be required to furnish a letter of acceptance within 7 days of issue of the letter of intent /Notification of Award by Purchaser.

29.0 PERFORMANCE BANK GUARANTEE

Bidder shall initially submit the PBG within 28 days of placement of RC for 1% of RC Value

(including GST) valid till RC validity period plus three month claim period. If there is extension in RC validity date, the BG shall be extended accordingly.

Upon submission of the performance security, the EMD shall be released.

Thereafter bidder shall submit PBG on Purchase Order (PO) basis for 10% of the PO value (including GST). The Performance Bond shall be valid for a period of twenty four months (24) from the date of the commissioning or thirty months (30) from the date of receipt of material (last consignment of PO) at site/stores whichever is earlier plus 3 months towards claim period.

30.00 CORRUPT OR FRAUDULENT PRACTICES

30.01 The Purchaser requires that the Bidders observe the highest standard of ethics during the procurement and execution of the Project. In pursuance of this policy, the Purchaser:

- (a) Defines, for the purposes of this provision, the terms set forth below as follows:
 - i) "Corrupt practice" means behavior on the part of officials in the public or private sectors by which they improperly and unlawfully enrich themselves and/or those close to them, or induce others to do so, by misusing the position in which they are placed, and it includes the offering, giving, receiving, or soliciting of anything of value to influence the action of any such official in the procurement process or in contract execution; and
 - ii) "Fraudulent practice" means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Purchaser, and includes collusive practice among Bidders (prior to or after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive the Purchaser of the benefits of free and open competition.
 - (b) Will reject a proposal forward if it determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question ;
 - (c) Will declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a contract if it at any time determines that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a contract.
- 30.02 Furthermore, Bidders shall be aware of the provision stated in the General Conditions of Contract.

SECTION – III

GENERAL CONDITIONS OF CONTRACT (GCC)

**RATE CONTRACT FOR THE SUPPLY AND
INSTALLATION OF NITROGEN INJECTION FIRE
PROTECTION SYSTEM (NIFPS) IN BRPL, NEW
DELHI**

CMC/BR/26-27/FK/PR/RJ/1378

GENERAL TERMS AND CONDITIONS

1.0 General Instructions

- 1.01 All the Bids shall be prepared and submitted in accordance with these instructions.
- 1.02 Bidder shall bear all costs associated with the preparation and delivery of its Bid, and the Purchaser will in no case shall be responsible or liable for these costs.
- 1.03 The Bid should be submitted by the Bidder in whose name the bid document has been issued and under no circumstances it shall be transferred/ sold to the other party.
- 1.04 The Purchaser reserves the right to request for any additional information and also reserves the right to reject the proposal of any Bidder, if in the opinion of the Purchaser, the data in support of RFQ requirement is incomplete.
- 1.05 The Bidder is expected to examine all instructions, forms, terms & conditions and specifications in the Bid Documents. Failure to furnish all information required in the Bid Documents or submission of a Bid not substantially responsive to the Bid Documents in every respect may result in rejection of the Bid. However, the Purchaser's decision in regard to the responsiveness and rejection of bids shall be final and binding without any obligation, financial or otherwise, on the Purchaser.

2.0 Definition of Terms

- 2.01 "Purchaser" shall mean BRPL, on whose behalf this bid enquiry is issued by its authorized representative / officers.
- 2.02 "Bidder" shall mean the firm who quotes against this bid enquiry issued by the Purchaser. "Supplier" or "Supplier" shall mean the successful Bidder and/or Bidders whose bid has been accepted by the Purchaser and on whom the "Letter of Acceptance" is placed by the Purchaser and shall include his heirs, legal representatives, successors and permitted assigns wherever the context so admits.
- 2.03 "Supply" shall mean the Scope of Contract as described.
- 2.04 "Specification" shall mean collectively all the terms and stipulations contained in those portions of this bid document known as RFQ, Commercial Terms & Condition, Instructions to Bidders, Technical Specifications and the Amendments, Revisions, Deletions or Additions, as may be made by the Purchaser from time to time.
- 2.05 "Letter of Acceptance" shall mean the official notice issued by the Purchaser notifying the Supplier that his proposal has been accepted and it shall include amendments thereto, if any, issued by the Purchaser. The "Letter of Acceptance" issued by the Purchaser shall be binding on the "Supplier" The date of Letter of Acceptance shall be taken as the effective date of the commencement of contract.

- 2.06 “Month” shall mean the calendar month and “Day” shall mean the calendar day.
- 2.07 “Codes and Standards” shall mean all the applicable codes and standards as indicated in the Specification.
- 2.08 “Offer Sheet” shall mean Bidder's firm offer submitted to BRPL in accordance with the specification.
- 2.09 “Contract” shall mean the “Letter of Acceptance” issued by the Purchaser.
- 2.10 “Contract Price” shall mean the price referred to in the “Letter of Acceptance”.
- 2.11 “Contract Period” shall mean the period during which the “Contract” shall be executed as agreed between the Supplier and the Purchaser in the Contract inclusive of extended contract period for reason beyond the control of the Supplier and/or Purchaser due to force majeure.
- 2.12 “Acceptance” shall mean and deemed to include one or more of the following as will be stipulated in the specification:
- a) The written acceptance of material by the inspector at suppliers works to ship the materials.
 - b) Acceptance of material at Purchaser site stores after its receipt and due inspection/ testing and release of material acceptance voucher.
 - c) Where the scope of the contract includes supply, acceptance shall mean issue of necessary equipment / material takeover receipt after installation & commissioning and final acceptance.

3.0 Contract Documents & Priority

- 3.01 Contract Documents: The terms and conditions of the contract shall consist solely of these RFQ conditions and the offer sheet.
- 3.02 Priority: Should there be any discrepancy between any term hereof and any term of the Offer Sheet, the terms of these RFQ shall prevail.

4.0 Scope of Supply - General

- 4.01 The “Scope of Supply” shall be on the basis of Bidder’s responsibility, completely covering the obligations, responsibility and supplies provided in this Bid enquiry whether implicit or explicit.
- 4.02 Bidder shall have to quote for the Bill of quantities as listed in Section – IV of this RFQ.
- 4.03 Quantity variation and additional requirement if any shall be communicated to successful bidder during project execution.
- 4.04 All relevant drawings, data and instruction manuals.

5.0 Quality Assurance and Inspection

- 5.01 Immediately on award of contract, the bidder shall prepare detailed quality assurance plan / test procedure identifying the various stages of manufacture, quality checks performed at each stage, raw material inspection and the Customer hold points. The document shall also furnish details of method of checking, inspection and acceptance standards / values and get the approval of Purchaser before proceeding with manufacturing. However, Purchaser shall have right to review the inspection reports, quality checks and results of suppliers in house inspection department which are not Customer hold points and the supplier shall comply with the remarks made by purchaser or his representative on such reviews with regards to further testing, rectification or rejection, etc.
- 5.02 Witness and Hold points are critical steps in manufacturing, inspection and testing where the supplier is obliged to notify the Purchaser in advance so that it may be witnessed by the Purchaser. Final inspection is a mandatory hold point. The supplier needs to proceed with the work past a hold point only after clearance by purchaser or a witness waiver letter from BRPL.
- 5.03 The performance of waiver of QA activity by Purchaser at any stage of manufacturing does not relieve the supplier of any obligation to perform in accordance with and meet all the requirements of the procurement documents and also all the codes & reference documents mentioned in the procurement document nor shall it preclude subsequent rejection by the purchaser.
- 5.04 On completion of manufacturing the items can be dispatched only after issue of shipping release by the Purchaser.
- 5.05 All testing and inspection shall be done without any extra cost.
- 5.06 Purchaser reserve the right to send any material out of the supply to any recognized laboratory for testing and the cost of testing shall be borne by the Purchaser. In case the material is found not in order with the technical requirement / specification, the charges along with any other penalty which may be levied is to be borne by the bidder. To avoid any complaint the supplier is advised to send his representative to the stores to see that the material sent for testing is being sealed in the presence of bidders representative.
- 5.07 Bidder has to sign quality agreement before supply of the material.

6.0 Packing, Packing List & Marking

- 6.01 Packing: Supplier shall pack or shall cause to be packed all Commodities in boxes and containers and otherwise in such a manner as shall be reasonably suitable for shipment by road or rail to BRPL without undue risk of damage in transit.
- 6.02 Packing List: The contents of each package shall be itemized on a detailed list showing the exact weight and the extreme outside dimensions (length, width and height) of each container or box. One copy of the packing list shall be enclosed in each package delivered. There shall also be enclosed in one package a master packing list identifying each individual package,

which is part of the shipment. On any packaging where it is not feasible to place the packing list inside the container, all pertinent information shall be stenciled on the outside and will thus constitute a packing list.

7.01 Prices basis for supply of materials

Bidders require quoting their prices on Landed Cost Basis and separate price for each item. For Supply to BRPL Delhi the price shall be inclusive of packing, forwarding, GST and freights. The above supply prices shall also include unloading at site stores. Transit and storage insurance will be arranged by BRPL; however bidder to furnish required details in advance for arranging the same by BRPL.

8.0 Variation in taxes, duties & levies:

- 8.01 The total order value shall be adjusted on account of any variations in Statutory Levies imposed by Competent Authorities by way of fresh notification(s) within the stipulated delivery period only. However, in case of reduction in taxes, duties and levies, the benefits of the same shall be passed on to BUYER.
- 8.02 No other Taxes, Duties & Levies other than those specified above will be payable by BUYER except in case of new Levies, Taxes & Duties imposed by the Competent Authorities by way of fresh notification(s) subsequent to the issue of PURCHASE ORDER but within the stipulated delivery period.
- 8.03 Notwithstanding what is stated above, changes in Taxes, Duties & Levies shall apply only to that portion of PURCHASE ORDER not executed on the date of notification by Competent Authority. Further, changes in Taxes, Duties & Levies after due date of Delivery shall not affect PURCHASE ORDER Terms and Value.
- 8.04 PURCHASE ORDER value shall not be subject to any variation on account of variation in Exchange rate(s).

9.0 Taxes & Duties on raw materials & bought out components:

- 9.01 Taxes & Duties on raw materials & bought out components are included in Order Value and are not subject to any escalation or variation for any reason whatsoever.
- 9.02 Taxes & Duties on raw materials & bought out components procured indigenously are included in Order Value and are not subject to any escalation or variation for any reason whatsoever.

10.0 Terms of payment and billing

10.01 For Supply of Equipments:

- a) 85% prorated of supply value shall be payable against supply of equipment and materials within 45 days against receipt of material at site and submission of following documents duly certified by BRPL Project-in-charge:

- i. Consignee copy of LR
- ii. Detailed invoice showing commodity description, qty, unit & total price
- iii. Original certificate issued by BRPL confirming receipt of material at site & acceptance
- iv. Dispatch clearance & inspection report issued by the inspection authority
- v. Packing List, Test Reports
- vi. Guarantee Certificate.

b) 15% prorata after Installation, Testing & Commissioning of NIFPS at site duly certified by BRPL Project-in-charge and Handing Over of the entire Installation.

10.02 Installation, Testing and Commissioning:

a) 100% within 45 days after Installation, Testing & Commissioning of NIFPS at site duly certified by BRPL Project-in-charge.

11.0 Price Validity

11.01 All bids submitted shall remain valid, firm and subject to unconditional acceptance by BRPL Delhi for 120 days post bid-date. For awarded suppliers, the prices shall remain valid and firm till contract completion.

12.0 Performance Guarantee

12.01 Bidder shall initially submit the PBG within 28 days of placement of RC for 1% of RC Value (including GST) valid till RC validity period plus three month claim period. If there is extension in RC validity date, the BG shall be extended accordingly.

Upon submission of the performance security, the EMD shall be released.

Thereafter bidder shall submit PBG on Purchase Order (PO) basis for 10% of the PO value (including GST). The Performance Bond shall be valid for a period of twenty four months (24) from the date of the commissioning or thirty months (30) from the date of receipt of material (last consignment of PO) at site/stores whichever is earlier plus 3 months towards claim period. It shall be in accordance with the following terms:

- a) Bank guarantee from any nationalized bank in favour of BSES RAJDHANI POWER LTD (BRPL). The performance Bank guarantee shall be in the format as specified by BRPL.

13.0 Forfeiture

13.01 Each Performance Bond established under Clause 12.0 shall contain a statement that it shall be automatically and unconditionally forfeited without recourse and payable against the presentation by BRPL of this Performance Bond to the ICICI Bank at Mumbai, or to the relevant company/ correspondent bank referred to above, as the case may be, together with a simple statement that supplier has failed to comply with any term or condition set forth in the Contract.

13.02 Each Performance Bond established under will be automatically and unconditionally forfeited without recourse if BRPL in its sole discretion determines that supplier has failed to comply with any term or condition set forth in the contract.

14.0 Release

All Performance Bonds will be released without interest within seven (7) days from the last date up to which the Performance Bond has to be kept valid (as defined in Clause 12.0) except for the case set forth in Clause 21.0.

15.0 Defects Liability Period

- 15.01 The bidder to guarantee the materials / items supplied against any defect of failure, which arise due to faulty materials, workmanship or design for the entire defects liability period. The Defect liability period shall be 60 months from the date of commissioning or 66 months from the date of delivery whichever is earlier. If during the defects liability period any materials / items are found to be defective, these shall be replaced or rectified by the bidder at his own cost within 30 days from the date of receipt of intimation

16.0 Return, Replacement or Substitution.

BRPL shall give Supplier notice of any defective Commodity promptly after becoming aware thereof. BRPL may in its discretion elect to return defective Commodities to Supplier for replacement, free of charge to BRPL, or may reject such Commodities and purchase the same or similar Commodities from any third party. In the latter case BRPL shall furnish proof to Supplier of the cost of such substitute purchase. In either case, all costs of any replacement, substitution, shipping, labour and other related expenses incurred in connection with the return and replacement or for the substitute purchase of a Commodity hereunder should be for the account of Supplier. BRPL may set off such costs against any amounts payable by BRPL to Supplier. Supplier shall reimburse BRPL for the amount, if any, by which the price of a substitute Commodity exceeds the price for such Commodity as quoted in the Bid.

17.0 Effective Date of Commencement of Contract:

- 17.01 The date of the issue of the Letter of Acceptance shall be treated as the effective date of the commencement of Contract.

18.0 Time – The Essence of Contract

- 18.01 The time and the date of completion of the “Supply” as stipulated in the Letter Of Acceptance / Purchase order issued to the Supplier shall be deemed to be the essence of the “Contract”. The Supply has to be completed not later than the aforesaid Schedule and date of completion of supply.

19.0 The Laws and Jurisdiction of Contract:

- 19.01 The laws applicable to this Contract shall be the Laws in force in India.
- 19.02 All disputes arising in connection with the present Contract shall be settled amicably by mutual consultation failing which shall be finally settled as per the rules of Arbitration and Conciliation Act, 1996 at the discretion of Purchaser. The venue of arbitration shall be at Mumbai in India.

20.0 Events of Default

20.01 Events of Default. Each of the following events or occurrences shall constitute an event of default ("Event of Default") under the Contract:

- a) Supplier fails or refuses to pay any amounts due under the Contract;
- b) Supplier fails or refuses to deliver Commodities conforming to this RFQ/ specifications, or fails to deliver Commodities within the period specified in P.O. or any extension thereof
- c) Supplier becomes insolvent or unable to pay its debts when due, or commits any act of bankruptcy, such as filing any petition in any bankruptcy, winding-up or reorganization proceeding, or acknowledges in writing its insolvency or inability to pay its debts; or the Supplier's creditors file any petition relating to bankruptcy of Supplier;
- d) Supplier otherwise fails or refuses to perform or observe any term or condition of the Contract and such failure is not remediable or, if remediable, continues for a period of 30 days after receipt by the Supplier of notice of such failure from BRPL.

21.0 Consequences of Default.

- a) If an Event of Default shall occur and be continuing, BRPL may forthwith terminate the Contract by written notice.
- b) In the event of an Event of Default, BRPL may, without prejudice to any other right granted to it by law, or the Contract, take any or all of the following actions;
 - i) present for payment to the relevant bank the Performance Bond;
 - ii) purchase the same or similar Commodities from any third party; and/or
 - iii) recover any losses and/or additional expenses BRPL may incur as a result of Supplier's default.

22.0 Penalty for Delay

- 22.01 If supply of items / equipments is delayed beyond the supply schedule as stipulated in purchase order then the Supplier shall be liable to pay to the Purchaser as penalty for delay, a sum of 1% (one percent) of the contract price for every week delay or part thereof for undelivered quantities.
- 22.02 The total amount of penalty for delay under the contract will be subject to a maximum of ten percent (10%) of the contract price for undelivered quantities.
- 22.03 The Purchaser may, without prejudice to any method of recovery, deduct the amount for such damages from any amount due or which may become due to the Supplier or from the Performance Bond or file a claim against the supplier.

23.0 Force Majeure

- 23.01 General

An "Event of Force Majeure" shall mean any event or circumstance not within the reasonable control directly or indirectly, of the Party affected, but only if and to the extent that:

- i) Such event or circumstance materially and adversely affects the ability of the affected Party to perform its obligations under this Contract, and the affected Party has taken all reasonable precautions, due care and reasonable alternative measures in order to prevent or avoid the effect of such event on the affected party's ability to perform its obligations under this Contract and to mitigate the consequences thereof.
- ii) For the avoidance of doubt, if such event or circumstance would not have materially and adversely affected the performance of the affected party had such affected party followed good industry practice, such event or circumstance shall not constitute force majeure.
- iii) Such event is not the direct or indirect result of the failure of such Party to perform any of its obligations under this Contract.
- iv) Such Party has given the other Party prompt notice describing such events, the effect thereof and the actions being taken in order to comply with above clause.

23.02 Specific Events of Force Majeure subject to the provisions of above clause, Events of Force Majeure shall include only the following to the extent that they or their consequences satisfy the above requirements:

23.03 Mitigation of Events of Force Majeure Each Party shall:

- i) Make all reasonable efforts to prevent and reduce to a minimum and mitigate the effect of any delay occasioned by an Event of Force Majeure including recourse to alternate methods of satisfying its obligations under the Contract;
- ii) Use its best efforts to ensure resumption of normal performance after the termination of any Event of Force Majeure and shall perform its obligations to the maximum extent practicable as agreed between the Parties; and
- iii) Keep the other Party informed at regular intervals of the circumstances concerning the event of Force Majeure, with best estimates as to its likely continuation and what measures or contingency planning it is taking to mitigate and or terminate the Event of Force Majeure.

23.04 Burden of Proof In the event that the Parties are unable in good faith to agree that a Force Majeure event has occurred to an affected party, the parties shall resolve their dispute in accordance with the provisions of this Agreement. The burden of proof as to whether or not a force majeure event has occurred shall be upon the party claiming that the force majeure event has occurred and that it is the affected party.

23.05 Termination for Certain Events of Force Majeure. If any obligation of any Party under the Contract is or is reasonably expected to be delayed or prevented by a Force Majeure event for a continuous period of more than 3 months, the Parties shall promptly discuss in good faith how to proceed with a view to reaching a solution on mutually agreed basis. If a solution on mutually agreed basis cannot be arrived at within a period of 30 days after the expiry of the period of three months, the Contract shall be terminated after the said period of 30 days and

neither Party shall be liable to the other for any consequences arising on account of such termination.

- 23.06 Limitation of Force Majeure event. The Supplier shall not be relieved of any obligation under the Contract solely because cost of performance is increased, whether as a consequence of adverse economic consequences or otherwise.
- 23.07 Extension of Contract Period due to Force Majeure event The Contract period may be extended by mutual agreement of Parties by way of an adjustment on account of any period during which an obligation of either Party is suspended due to a Force Majeure event.
- 23.08 Effect of Events of Force Majeure. Except as otherwise provided herein or may further be agreed between the Parties, either Party shall be excused from performance and neither Party shall be construed to be in default in respect of any obligations hereunder, for so long as failure to perform such obligations shall be due to and event of Force Majeure."

24.0 Transfer And Sub-Letting

- 24.01 The Supplier shall not sublet, transfer, assign or otherwise part with the Contract or any part thereof, either directly or indirectly, without prior written permission of the Purchaser.

25.0 Recoveries

- 25.01 Whenever under this contract any money is recoverable from and payable by the bidder, the purchaser shall be entitled to recover such sum by appropriating in part or in whole by detecting any sum due to which any time thereafter may become due from the supplier in this or any other contract. Should the sum be not sufficient to cover the full amount recoverable the bidder shall pay to the purchaser on demand the remaining balance.

26.0 Waiver

- 26.01 Failure to enforce any condition herein contained shall not operate as a waiver of the condition itself or any subsequent breach thereof.

27.0 Indemnification

- 27.01 Notwithstanding contrary to anything contained in this RFQ, Supplier shall at his costs and risks make good any loss or damage to the property of the Purchaser and/or the other Supplier engaged by the Purchaser and/or the employees of the Purchaser and/or employees of the other Supplier engaged by the Purchaser whatsoever arising out of the negligence of the Supplier while performing the obligations under this contract.

SECTION – IV: QUANTITY AND DELIVERY REQUIREMENT

Sl. No.	Item Description	Specification	Requirement	Delivery Schedule	Location
BRPL,DELHI					
1	Rate Contract for the Supply, installation, testing & commissioning of NIFPS	SECTION V	31 nos.	Within 4.5 months from the date of receipt of Purchase Order.	Stores/ site at BRPL in New Delhi

BID FORM

Supply & Installation of NIFPS

To

Head of the Department Contracts & Materials BSES Rajdhani Power Ltd BSES Bhawan, Nehru Place New Delhi– 110019

Sir,

We understand that BRPL is desirous of procuring “Nitrogen Injection Fire Protection System” in its licensed distribution network area in Delhi. Having examined the Bidding Documents for the above named works, we the undersigned, offer to deliver the goods in full conformity with the Drawings, Conditions of Contract and specifications for the sum of AS PER PRICE BID ENCLOSED or such other sums as may be determined in accordance with the terms and conditions of the contract .The above amounts are in accordance with the Price Schedules attached herewith and are made part of this bid.

If our Bid is accepted, we undertake to deliver the entire goods as per delivery schedule given by you from the date of award of purchase order/letter of intent.

If our Bid is accepted, we will furnish a performance bank guarantee for an amount of 10% (Ten) percent of the total contract value for due performance of the Contract in accordance with the General Conditions of Contract.

We agree to abide by this Bid for a period of 120 days from the date fixed for bid opening under clause 9.0 of GCC, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.

We declare that we have studied the provision of Indian Income Tax Law and other Indian Laws for supply of equipments/materials and the prices have been quoted accordingly.

Unless and until Letter of Intent is issued, this Bid, together with your written acceptance thereof, shall constitute a binding contract between us.

We understand that you are not bound to accept the lowest, or any bid you may receive.

There is provision for Resolution of Disputes under this Contract, in accordance with the Laws and Jurisdiction of Contract, Clause 19 of GCC .

Dated this.....day of.....20.....

Signature..... In the capacity of.....
.....duly authorized to sign for and on behalf of (IN BLOCK CAPITALS).....

FORMAT FOR EMD BANK GUARANTEE

(To be issued in a Non Judicial Stamp Paper of Rs.50/-purchased in the name of the bank)

Whereas [name of the Bidder] (hereinafter called the “Bidder”) has submitted its bid dated [date of submission of bid] for the supply of [name and/or description of the goods] (hereafter called “the Bid”). KNOW ALL PEOPLE by these presents that WE [name of bank]at[Branch Name and address],having our registered office at[address of the registered office of the bank](herein after called —“the Bank”),are bound unto BSES Rajdhani Power Ltd., with its Corporate Office at BSES Bhawan Nehru Place, New Delhi -110019, (herein after called —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 Common Seal of the said Bank this____ day of__ 20__.

THE CONDITIONS of this obligation are:

If the Bidder withdraws its Bid during the period of bid validity specified by the Bidder on the Bid Form; or

If the Bidder, having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity:

fails or refuses to execute the Contract Form ,if required; or
fails or refuses to furnish the performance security, In accordance with the Instructions to Bidders/GENERAL CONDITIONS.;

We undertake to pay to the Purchaser up to the above amount upon receipt of its first written demand, without the Purchaser having to substantiate its demand, provided that is its demand the purchaser will note that amount claimed by it is due to it, owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including thirty (30) days after the period of bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

(Signature of the bank)

Signature of the witness

PRICE FORMAT

NIT no.: CMC/BR/26-27/FK/PR/RJ/1378

PRICE SCHEDULE

ITEM DESCRIPTION	QTY AS PER RFQ	UOM	EX-WORKS RATE/ UNIT	CGST (%)	CGST AMOUNT	SGST (%)	SGST AMOUNT	IGST (%)	IGST AMOUNT	FREIGHT	LANDED RATE/ UNIT	TOTAL LANDED COST (INR)
Supply of NIFPS	31	Nos.										
Installation, testing & commissioning of NIFPS	31	Nos.										

Note:

1. Prices shall be Firm
2. The prices received without break up of ex works, Freight, GST are liable for rejection.
3. Please indicate the exact percentage of taxes in figures and words.
4. If there is a discrepancy between the unit price and the total price, THE UNIT PRICE shall prevail.
5. If there is a discrepancy between the uploaded price as per price format (Annexure III) & price quoted in SRM portal, quoted price as per price format (Annexure III) shall prevail.

Bidders seal & signature

Enquiry No. : CMC/BR/26-27/FK/PR/RJ/1378

COMMERCIAL TERMS AND CONDITIONS

S.N.	TERMS	DESCRIPTION	CONFIRMATION OF BIDDER
1	Validity of prices	120 days from date of offer	
2	Price basis	Price Firm, FOR Delhi store basis, Prices shall be inclusive of all taxes & duties, freight up to Delhi stores. Unloading at stores shall be in vendor's scope. Transit insurance in BRPL scope.	
3	Payment Terms	<u>Supply Part:</u> a) 85% prorated of supply value shall be payable against supply of equipment and materials within 45 days against receipt of material at site and submission of documents duly certified by BRPL Project-in-charge b) 15% prorated after Installation, Testing & Commissioning of NIFPS at site within 45 days duly certified by BRPL Project-in-charge and Handing Over of the entire Installation. <u>Installation, Testing and Commissioning:</u> 100% within 45 days after Installation, Testing & Commissioning of NIFPS at site duly certified by BRPL Project-in-charge.	
4	Delivery schedule	Within 4.5 months from the date of receipt of Purchase Order.	
5	Defect Liability Period	The bidder to Guarantee the materials/ items supplied against any defect of failure, which arise due to faulty materials, workmanship or design for the entire defects liability period. The Defect liability period shall be 60 months from the date of commissioning or 66 months from the date of delivery whichever is earlier. If during the defects liability period any materials / items are found to be defective, these shall be replaced or rectified by the bidder at his own cost within 30 days from the date of receipt of intimation.	
6	Penalty for delay	1% per week of delay of undelivered units or part thereof subject to maximum of 10% of total PO value of undelivered units	
7	Performance Bank Guarantee	Bidder shall initially submit the PBG within 28 days of placement of RC for 1% of RC Value (including GST) valid till RC validity period plus three month claim period. If there is extension in RC validity date, the BG shall be extended accordingly .Upon submission of the performance security, the EMD shall be released. Thereafter bidder shall submit PBG on Purchase Order (PO) basis for 10% of the PO value (including GST).The Performance Bank Guarantee shall be valid for a period of twenty four months (24) from the date of the commissioning or thirty months (30) from the date of receipt of material (last consignment of PO) at site/stores whichever is earlier plus 3 months towards claim period.	

ANNEXURE - V

ENQUIRY NO: CMC/BR/26-27/FK/PR/RJ/1378

NO DEVIATION SHEET

SL NO	SL NO OF TECHNICAL SPECIFICATION	DEVIATION, IF ANY

SIGNATURE & SEAL OF BIDDER

NAME OF BIDDER

CHECK LIST

Sl. No	Item Description	YES/NO
1	INDEX	YES/NO
2	COVERING LETTER	YES/NO
3	BID FORM (UNPRICED) DULY SIGNED	YES/NO
4	BILL OF MATERIAL (UNPRICED)	YES/NO
5	TECHNICAL BID	YES/NO
6	ACCEPTANCE TO COMMERCIAL TERMS & CONDITIONS	YES/NO
7	FINANCIAL BIDS	YES/NO
8	EMD IN PRESCRIBED FORMAT	YES/NO
9	DEMAND DRAFT OF RS 1180/- DRAWN IN FAVOUR OF	BSES RAJDHANI POWER LTD
10	POWER OF ATTORNEY/ AUTHORISATION LETTER FOR SIGNING THE BID	YES/NO

FORM FOR PARTICIPATION IN REVERSE AUCTION EVENT

(To be signed & stamped by the bidder along-with bid)

BSES Rajdhani Power Ltd (BRPL) intends to use reverse auction through SAP-SRM tool as an integral part of entire tendering process. All bidders who are techno-commercially qualified on the basis of tender requirements shall participate in the reverse auction.

The following terms and conditions are deemed as accepted by the bidder on participation in the bid:-

1. In case of bidding through Internet medium, bidders are advised to ensure availability of all associated infrastructure as required to participate in the reverse auction event. Inability to bid due to telephone glitch, internet response issues, software & hardware hangs/failures, power failures or any other reason shall not be the responsibility of BRPL.
2. In case bidder fails to participate in the reverse auction event due to any reason whatsoever, it shall be presumed that the bidder has no further discounts to offer and the initial bid submitted by them as a part of tender shall be considered as bidder's Final .No Regret offer. Any off-line price bids received from a bidder in lieu of non-participation in the reverse auction event shall be rejected by BRPL.
3. The bidder is advised to understand the auto bid process t safeguard themselves against any possibility of non-participation in the reverse auction event.
4. The bidder shall be prepared with competitive price quotes during the day of reverse auction event.
5. The prices quoted by bidder in reverse auction event shall be on FOR Landed cost BRPL Store/site basis inclusive of all relevant taxes, duties, levies, transportation charges etc.
6. The prices submitted by the bidder during reverse auction event shall be binding on the bidder.
7. The bidder agrees to non-disclosure of trade information regarding bid details e.g. purchase, identity, bid process/technology, bid documentation etc.
8. BRPL will make every effort to make the bid process transparent. However award decision of BRPL will be final and binding on the bidder.
9. The prices submitted during reverse auction event shall be binding on the bidder.
10. No request for Time extension of the reverse auction event shall be considered by BRPL.

Seal & Signature of Bidder

SECTION – V

TECHNICAL SPECIFICATIONS (TS)

**NITROGEN INJECTION FIRE PROTECTION
SYSTEM (NIFPS)**

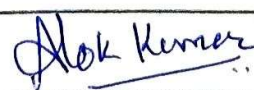
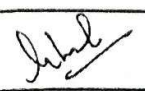
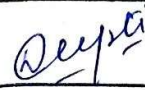
CMC/BR/26-27/FK/PR/RJ/1378

The detailed technical specifications of NIFPS



**Technical Specification for
Nitrogen Injection Fire Protection System (NIFPS)**

Specification no – BSES-TS-174-NIFPS-R0

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Technical Specification of Nitrogen Injection Fire Protection System (NIFPS)**1. INTRODUCTION**

Nitrogen Injection Fire Protection System (NIFPS) shall use nitrogen as fire quenching medium. The protective system shall prevent transformer/Reactor oil tank explosion and possible fire in case of internal faults. In the event of fire by external causes such as bushing fire, OLTC fires, fire from surrounding equipment etc, it shall act as a fast and effective fire fighter without any manual intervention. It shall accomplish its role as fire preventer and extinguisher without employing water and / or carbon dioxide.

2. SCOPE

2.1 Nitrogen Injection Fire Prevention and Extinguishing System (NIFPES) provided by the manufacturer/ vendor shall be complete in all respects. The scope shall cover design, supply, installation, connections, testing, commissioning and after-sales service of the system all associated items specified in these specifications.

2.2 The scope also includes the provision of heat/ fire detectors (sensors) herein after referred as the detector, required pipes, cable connections etc.

2.3 Any modifications if required for installation of Nitrogen Injection Fire Protection system on existing power transformer of various rating ranging from 10 MVA to 50 MVA shall be in scope of bidder. All material, tools, tackles, hardware, testing equipment and manpower required for the modification shall be in scope of bidder except for any type of civil work like fire wall, soak pit etc. Bidder if feels shall conduct physical survey of the power transformer to check feasibility and quantum of work involved.

2.4 BSES/Transformer manufacturer will provide all the necessary support for the effective installation of NIFPES to each other and the purchaser shall make available the required transformer tripping signals as needed for the successful functioning of the NIFPES. Requisite drawings etc will also be provided by the BSES to the OEM of NIFPES.

3. APPLICABLE CODES AND STANDARDS

The design and installation of the complete fire protection system shall comply with the latest applicable Indian standards

- a) IS 10028 (Part II): Code of practice for selection, installation, and maintenance of transformer
- b) Tariff Advisory Committee: Regulations for the electrical equipment of buildings
- c) National fire Codes 1993 of National Fire Protection Association (NFPA) USA
- d) Latest Central Electricity Authority Regulations, The Gazette of India, Extraordinary 2010: Safety
- e) Latest BIS standards

4. SPECIFICATIONS

4.1 Nitrogen Injection Fire Prevention and Extinguishing System (NIFPES) shall be designed to prevent the fire from taking place in the transformer and possible explosion of the transformer tank due to internal faults/ arcing etc. In case of fire inside the transformer tank, the NIFPES shall be capable of mitigating the fire, minimizing the damage to the transformer and thus avoiding the spread of fire.

4.2 NIFPES system shall work on the principle of 'drain and stir' method of transformer oil. On activation of NIFPES, it shall isolate conservator tank oil from the oil in the main transformer tank,

Technical Specification of Nitrogen Injection Fire Protection System (NIFPS)

drain a pre-determined quantity of oil from the tank top through drain valve to reduce the tank pressure, and inject nitrogen gas from the bottom side of the tank through the inlet valves to create stirring action and reduce the temperature of oil to prevent/ mitigate the fire. On the operation of NIFPES, the quantity of oil removed from the tank shall be such that adequate amount of oil shall remain in the transformer to cover the active part of the transformer i.e. the 'core-coil' assembly. The NIFPES shall be designed in such a way that in case of external fire, the NIFPES may be operated manually, after electrically isolating the transformers from all sides. During operation of NIFPES, the oil flow pumps should also be tripped in case of OFAF/OFWF cooling of transformers in line with discussion with the end user / utilities.

4.3 Electrical isolation of transformer through master trip in addition to breakers shall be an essential pre-condition for activation of NIFPES.

4.4 Operational Controls

The system operation shall be automatic and shall be activated when the pre-set conditions of activation of the system are attained / triggered. The maximum time period for extinction of fire from commencement of nitrogen injection into the transformer shall be 30 second. In addition to automatic operation, facility for remote operation from the control room / remote control center (RCC) and manual operation from the Fire Extinguishing Cubicle (FEC) shall also be provided. The system shall operate in the following situations:

4.4.1 System Activation in Fire Prevention Mode

4.4.1.1 To prevent fire and explosion in the transformer including that from internal fault/ arcing, signals from the following shall be used to activate the NIFPES:

(i) Operation of any of the protective relays i.e. differential or restricted earth fault (REF) or over current;

AND

(ii) Operation of any of the protective relays [Buchholz Relay or Pressure Relief Valve (PRV) or the signal from Rapid Pressure Rise Relay (RPRR)]

AND

(iii) Operation / Feedback of tripping of associated circuit breakers or Master Trip

4.4.1.2 Transformer shall be electrically isolated and then only the NIFPES shall operate. In case of some problem in main protection system, the NIFPES shall derive the activation signal from the backup protection system.

4.4.2 System Activation in Fire Detection Mode

4.4.2.1 In case of fire detection mode, signals from the following shall be used to activate the NIFPES:

(i) Heat / fire detectors (sensors);

AND

(ii) Operation of any of the protective relays [Buchholz relay or Pressure Relief Valve (PRV) or Rapid Pressure Rise Relay (RPRR)]

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Technical Specification of Nitrogen Injection Fire Protection System (NIFPS)	

AND

(iii) Operation / Feedback of tripping of associated circuit breakers or Master Trip

4.4.2.2 Transformer shall be electrically isolated and then only the NIFPES shall operate. In case of some problem in main protection system the NIFPES shall derive the activation signals from the backup protection system.

4.4.3 Manual operation switch with a proper cover to avoid inadvertent operation of the switch, shall be provided in the control room / remote center and in FEC. Interlock shall be provided so that manual operation shall work only when the transformer is completely electrically isolated. NIFPES shall operate once the circuit breakers are isolated and feedback signal for isolation of breakers is received on NIFPES panel.

4.4.4 The NIFPES manufacturer should provide the warning information on the Control Box and Fire Extinguishing Cubicle (FEC) that "Ensure that HV and LV breakers are open before operating in Manual Mode" both in Hindi and English and the local language as prevalent.

4.5 Operation of System

4.5.1 On receiving the activation signal, the system shall:

- i. Open the quick opening drain valve of the transformer to drain its top layer oil (pre-determined quantity) and shut off the transformer conservator isolation valve (TCIV) to prevent flow of oil from the conservator tank to the main transformer tank; and
- ii. Open the valve to inject Nitrogen into the transformer tank to create stirring of oil.

4.5.2 There shall be interlock to prevent activation of the NIFPES, if the transformer is not electrically isolated. There shall also be provision for isolating the NIFPES during maintenance and /or testing of the transformer.

4.5.3 The system shall be designed in such a manner that Nitrogen purging shall commence only after ensuring that the oil draining and TCIV operation has commenced.

4.5.4 Automatic flow-sensitive transformer conservator isolation valve (TCIV) to be provided to prevent reverse oil flow from the conservator into the tank following tank rupture.

4.6 Technical Particulars

4.6.1 The OEM of NIFPES shall be responsible for design of the complete system and shall submit the drawings and design calculations for the number of detectors, sizing of drain pipe, Nitrogen injection pipe, Nitrogen cylinder capacity, number of injection points etc and get approval from the user. The facility shall be provided to test the system by operation of valves [Nitrogen injection valve, TCIV and Oil Drain Valve (ODV)] when the transformer is in service, without actually draining the oil and injecting Nitrogen in real time operation by obtaining the feedback signal from the valve. The Nitrogen injection scheme shall be designed in such a way that the Nitrogen shall not enter the transformer tank even in case of passing/leakage of valve.

4.6.3 The user shall provide two distinct station auxiliary DC / AC supplies for control power supply purposes. The system shall work on station DC / AC supply with voltage variation as per relevant standards. The control box of nitrogen injection fire prevention and extinguishing system shall have facility to receive these DC / AC supplies for auto changeover of supply. It shall be the Supplier's/ NIFPES OEM's responsibility to further distribute power to the required locations. In case system

Technical Specification of Nitrogen Injection Fire Protection System (NIFPS)

operational DC / AC power supply requirement is different than station auxiliary DC / AC supply, then all necessary converters shall be provided by the NIFPES OEM.

4.6.4 Following minimum indications and alarms shall be provided in the control cubicle in the control room:

- (a) DC supply 'ON'
 - (b) AC supply 'ON'
 - (c) Total System Healthy
 - (d) DC supply fail
 - (e) AC supply fail
 - (f) System out of Service
 - (g) Differential relay trip
 - (h) Restricted Earth Fault (E/F) Relay Trip
 - (i) Over current Relay Trip
 - (j) PRV trip / RPRR trip
 - (k) Buchholz Relay trip
 - (l) Master Relay trip [(HV, IV and LV (Tertiary Voltage))]
 - (m) Nitrogen cylinder pressure low
 - (n) Pre-Fire alarm
 - (o) Heat / Fire detector / Sensor faulty Signal
 - (p) Heat / Fire Detector / Sensor alarm signal
 - (q) Nitrogen injection Valve open
 - (r) Nitrogen injection Valve close
 - (s) Nitrogen injection Valve leakage
 - (t) Oil drain Valve open
 - (u) Oil drain Valve Close
 - (v) Leakage in Oil drain valve
 - (w) TCIV Open
 - (x) TCIV Closed
 - (y) Cable fault signal for interconnecting cable for transformer trip signals
 - (z) Auto operation failed
 - (aa) NIFPES system in Auto Mode
 - (bb) NIFPES system in Manual Mode
 - (cc) NIFPES system in Test / Maintenance mode
- 4.6.5 Other indicators, which supplier / user consider necessary shall also be provided.

4.6.6 The following push buttons shall be provided as a minimum:

- (a) Mode Selection Switch, Auto / Manual / (test / Off)
- (b) Lamp test push buttons
- (c) System reset push button
- (d) Detector reset push button, if applicable.
- (e) Manual extinction push-button for manual operation of the system
- (f) Hooter reset push button

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4.6.7 The above indications may be in the form of Lamps / Annunciator Window / Human Machine Interface (HMI) as desired by end user.

4.6.8 Apart from the above list, Nitrogen cylinder pressure indication manometer with adequate number of adjustable 'Normally Opened (NO)' contacts shall also be provided in FEC. In addition to manometer for local reading a transmitter shall also be provided to monitor the reading to be displayed on control box in control room.

4.6.9 In case of fire in the transformer and fulfilling the conditions of defined logic for NIFPS operation for fire extinguishing mode or fire prevention mode, alarm (Audio & Visual) will be available in control room.

4.7 Technical Data Sheet

4.7.1 The following are the technical requirements of the NIFPS:

Sl. No.	Item	Requirements
1.	System Activation time after Fire detection	Maximum 10 second
2.	Fire Extinction period on commencement of Nitrogen injection	Maximum 30 second
3.	Fire detectors'/ sensors' "heat sensing" temperature	Flash point temperature of the transformer oil minus 5 °C with tolerance of +/- 2°C.
4.	Power supply source for:	
4.1	Control Box	For operation: 48-220 VDC / substation DC voltage For DC fail alarm: 230 VAC AC-DC / DC-DC converter, timer shall not be used for reliable operation.
4.2	Fire extinguishing cubicle	For illumination and heating: 230 VAC
5.	Nitrogen Cylinder and Valve (PESO approved)	Cylinder as per IS:7285 (Part 2) and Valve as per IS:3224 (latest) both having the BIS Mark
6.	Nominal Cylinder Pressure	150 kg /cm ² (+/- 10%)
7.	Minimum Cylinder Pressure for refilling	50 kg /cm ²
8.	Degree of protection of: (a) FEC (b) Heat (fire) detector / sensor and Signal / Junction box	(a) IP 65 (b) IP 65

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Sl. No.	Item	Requirements
9.	Steel Sheet of FEC, Control Box and Signal Box	All panels shall be fabricated from corrosion resistance Stainless Steel (SS 304) grade. The thickness of sheet shall be 3.0 mm minimum.
10.	Color of all panels and Nitrogen Injection pipes	Shade 538 of IS: 5
11.	Heat (fire) detector / sensor	OEM shall furnish the technical details
12.	Minimum distance of FEC from the Transformer	FEC should be at a safe distance from Transformer (preferably 5-7 meters). Firewall (minimum 2 hrs fire withstand capacity) will be provided around FEC with the height of 600 mm from the top of FEC to protect it from fire of the transformer.
13.	For conservator valve of flow-based mechanism, flow rate for closing of flow-based conservator isolation valve	Between 60-70 Ltrs. / Minute (lpm).
14.	Pipes (Oil Drain and Nitrogen Injection)	MS, GI coated, Class C as per IS: 1239, latest Standard.

4.7.2 In case the pressure in the nitrogen cylinder exceeds the rated pressure, there shall be a provision for extracting the excess nitrogen to attain the safe pressure in the nitrogen cylinder.

4.8 Details of Supply of System/ Equipment and Other Related Activities

4.8.1 The fire extinguishing cubicle (FEC) with base frame and containing at least the following. (However, all other components that are necessary for fast, reliable and effective working of the fire protection system shall deemed to be included in the scope of supply):

- (i) Nitrogen gas cylinder and cylinder valve having the Petroleum and Explosive Safety Organization (PESO) certificates of sufficient capacity.
- (ii) Pressure regulator with indicators for nitrogen pressure of the cylinder and actual injection pressure through nitrogen cylinder and manometer with sufficient number of adjustable 'Normally Open (NO)' contacts.
- (iii) Oil Drain Assembly including oil drain valve and its equipment for operation, oil drain pipe extension of suitable size and strength for connecting pipes to Oil Storage Tank, along with level switch / oil seepage detecting sensor for detecting leakage in oil drain valve;
- (iv) Mechanical release device for oil drain and nitrogen gas release;
- (v) Limit switches for monitoring of the systems;
- (vi) Panel lighting;
- (vii) Flanges on top of the panel for connecting oil drain in case of oil drain mechanism is part of fire extinguishing cubicle (FEC) and nitrogen injection pipes for transformer;
- (viii) Fire Extinguishing Cubicle (FEC) shall have proper illumination.

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(ix) The heater with thermostat shall be provided in the FEC. Heater shall be operated as per the setting of the thermostat.

(x) Mandatory spares as applicable.

In case, oil drain mechanism is not a part of FEC – the related items shall be as per the Original Equipment Manufacturers (OEM's) design however, the functional requirements shall have to be met.

The FEC shall be provided with canopy / shed protected from 3 sides to avoid water ingress and protect the FEC from direct sunlight and radiant heat. The canopy / shed shall be designed to cover almost more than half of the FEC height from top.

4.8.2 Control box / cubicle shall be installed in the control room of the substation for monitoring the NIFPES operation, automatic control and remote operation with alarms, indications, switches, push buttons, audio signal etc. Control Box / Cubicle should be microprocessor based / Programmable Logic controller (PLC) based, compatible to be interfaced with user's Supervisory Control and Data Acquisition (SCADA) system in the Substation / Switchyard.

4.8.3 The required number of detectors shall be located at strategic locations as finalized during detailed engineering. The location of detector shall be as per the design of OEM.

4.8.4 All the control / power cables between the NIFPES panel and the transformer shall be Fire Survival Cable type up to the thermal limit (in case of fire and or explosion). Fire survival cables shall be suitable to withstand a temperature of 750 °C. Further, Technical Data sheet and applicable valid type test report as per applicable latest IS shall be submitted to the user during detailed engineering.

All cables shall be laid in GI conduits / pipes, if desired by the user.

4.8.5 Transformer Conservator Isolation Valve (TCIV) shall isolate the conservator oil from the main tank's oil. This valve shall be located in the piping between the conservator and the Buchholz relay.

4.8.6 The nitrogen gas cylinder shall be of sufficient capacity considering the actual quantity of the transformer oil. The margin of safety shall be 3 times the oil to be drained (as per OEM design), for example if the oil quantity to be drained is 1500 litres (i.e. 1.5 m³) then 4.5 m³ volume of nitrogen is required. Considering the rated pressure of the gas filled in the cylinder as 150 kg/cm², accordingly the capacity of the nitrogen cylinder shall be decided by the OEM of NIFPES in consultation with transformer manufacturer.

4.8.7 SCADA compatibility

i. The NIFPES shall be provided with IEC 61850 / RS 485 / TCP IP compatible port or using suitable converters for integration with user's SCADA system.

ii. The ethernet switch, patch cord, Light Interface Unit (LIU) and Fibre Optic (FO) cable are not included in the present scope.

4.8.8 Drain Oil Storage Tank

A drain oil storage tank for each transformer shall be provided at suitable location with appropriate construction material having appropriate capacity (as decided by the user). All precautions shall be taken so that there is no overflow/spill of the drained oil. Design of the drain system and storage thereof to be provided by the OEM. In case the user has his own design of the drainage system, he can opt for the same.

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4.8.9 Mandatory Spares

Cylinder filled with Nitrogen of required capacity per substation	1 No.
Fire Detectors per transformer	3 No's.
Regulator assembly per sub-station	1 No.

5. TESTS

i. Factory Acceptance Test (FAT)

Functional verification of the offered parameters of NIFPES shall be conducted at the works of NIFPES manufacturer. The Test procedure shall be as per Annexure – A.

ii. Type Test for Detector

Type test report of the detector shall be submitted to the user along with the design/drawing documents. The detector shall be tested as per the procedure given below:

Testing of the detector	Type of the detector along with its make and model number is to be mentioned in this column	Procedure	Requirement	Observed Value
		1. Detector is to be tested by immersing it in the heating liquid with temperature measurement arrangement or by suspending in hot air oven with temperature measurement. 2. The temperature of the liquid / air is to be increased at the rate of 1 °C per minute and reading of the thermocouples to be noted. 3. Thermocouple for measuring the temperature is to be provided at the tip / surface of the detector. 4. The temperature of the liquid / air is to be increased till the detector activates.	The detector shall activate at the flash point temperature of the transformer oil minus 5 °C with tolerance of +/- 2°C	The temperature, at which the detector activates, is to be recorded.

iii. Site Acceptance Test (SAT) / Performance Test

a) SAT / Performance test of the NIFPES shall be carried out after the completion of installation at site. It shall also be ensured that the interfacing of NIFPES with SCADA has been completed by the user before SAT. These tests shall include simulation and verification of the response of the complete system without actual draining of the oil and injection of the Nitrogen gas. In addition to

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the above, additional mutually agreed tests as considered necessary shall be conducted. SAT shall also include to test the provisions as specified in Para-3.6 "Operation of System" above.

b) SAT shall also include demonstration of the system checking by simulation method when transformer is in online condition as mentioned in Para- 3.7 "Technical Particulars" above.

c) For flow based TCIV vendor to demonstrate the locking / closing of TCIV valve at specified flow rate as per technical data sheet. Necessary arrangements to demonstrate the requisite flow rate and measuring instruments as required shall be made available by OEM for conducting SAT.

d) Installation and pre-commissioning test after installation of the system shall be carried out jointly by the OEM and the user's representative before the system is put in service. All the system checks as per approved SAT procedure shall be performed to the satisfaction level of the end user / client.

6. DOCUMENTS TO BE SUBMITTED

Drawing submission shall be as per the matrix given below. All documents/ drawing shall be provided in soft copy. Deviation sheet and GTP shall be provided in excel sheet. Language of the documents shall be English only. Deficient/ improper document/ drawing submission may liable for rejection.

S.no	Documents to be submitted	With the bid	After Award	
			For Approval	Prior to dispatch
1	Copy of specification along with company seal & signature on each page.	✓	✓	
2	Guaranteed technical particulars	✓	✓	
3	Outline dimension drawing for each major component, general arrangement drawing showing component layout and general schematic diagrams.	✓	✓	
4	Type test certificates, where available, and sample routine test reports	✓	✓	
5	Detailed reference list of customers already using equipment offered during the last 5 years with particular emphasis on units of similar design and rating	✓		
6	Details of manufacturers quality assurance standard and programme and ISO 9000 series or equivalent national certification.	✓		
7	Deviations from this specification. Only deviations approved in writing before award of contract shall be	✓		

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S.no	Documents to be submitted	With the bid	After Award	
			For Approval	Prior to dispatch
	accepted.			
8	Recommended spare parts and consumable items for the five years of operation with prices and spare parts catalogue with price list for future requirements.	✓		
9	Transport / shipping dimension and weights, space required for handling parts for maintenance	✓		
10	Quality assurance program.	✓	✓	
11	Programme for production and testing		✓	
12	General description of the equipment and all components, including brochures		✓	
13	Inspection and test reports carried out in manufacturers works			✓
14	Test certificates of all bought out items.			✓
15	Operation and maintenance instructions as well as trouble shooting charts.			✓

7. DEVIATIONS

List of deviations shall be stated in writing with the tender by reference to the Specification clause / GTP/ Drawing. In absence of such a statement, requirements of the Specification shall be assumed to be met without exception by the bi

Technical Specification of Nitrogen Injection Fire Protection System (NIFPS)**Annexure – A****Format for the Factory Acceptance Test**

1. Visual Inspection: Visual examination of the NIFPES equipment i.e. Fire Extinguishing Cubicle, Control box/cubicle, Signal Box, Transformer Conservator Isolation Valve, heat/fire detectors, cables, etc shall be made as per the approved drawings.

2. Functional Test: Functional test shall be carried out on one (1) set out of the total manufactured lot for the respective order as minimum in presence of user / user nominated inspection agency. Following are the list of critical items to be used in FAT out of manufactured lot for the respective Purchaser Order:

(i) Fire Extinguishing Cubicle with its internals, Nitrogen cylinder meant for internal testing can be used during FAT testing. However, connection of cylinder shall be in line with regulator valve intended for dispatch.

(ii) Control Box with its internal components and accessories.

(iii) Signal box with its internal components and accessories.

(iv) Detector

(v) TCIV Valve.

(vi) ODV Valve.

(vii) SCADA compatibility of all the signals over RS 485 / IEC protocol as applicable.

(viii) Pressure and leakage test on Oil storage Tank

3. Functional Test of Transformer Isolation Conservator Valve (TCIV):

Sl. No.	Test	Procedure	Requirement	Remarks
1.	Leakage Test	Immerse the TCIV (Valve body) in the oil at the inlet pressure of 4 kg/cm ² for 6 hours.	There should be no leakage from TCIV body	
2.	TCIV Close test	For oil flow rate based TCIV: i. Mount TCIV with approx. 3 degree inclination on test jig ii. Switch ON oil Pump iii. Increase oil flow rate gradually	• TCIV should close at flow rate specified herein. • Flap closing shall be visible through transparent glass inspection window. • Normally open (NO) contacts in TCIV should close / TCIV Close indication in control Box should be reflected.	
3.	Reset Test	Reset the TCIV in the normal position.	• Close contact in TCIV should become open/ TCIV open indication in control Box	

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			should be reflected. • Flap opening shall be visible through transparent glass inspection window.	
4.	High voltage test	Apply 2 kV AC for 1 minute between terminals and body of TCIV	TCIV should withstand.	

4. Functional Tests for detector

4.1 The operating temperature shall be as per the requirement mentioned in technical data sheet.

4.2 Live demonstration test: To verify the working of the system, live demonstration is to be conducted in both fire prevention and extinguishing mode. Following are to be ensured:

- (i) Demonstration is to be carried out at the works of NIFPES Manufacturer. It shall be the responsibility of NIFPES manufacturer to arrange a suitable location for live testing.
- (ii) A dummy tank of minimum 5000 litres oil capacity and filled with oil, should be used as a transformer tank for testing.
- (iii) The detector for testing shall be placed as per the design of OEM.
- (iv) The FEC and Control Box manufactured for the said Purchase Order are to be used for live testing.
- (v) Separate filled Nitrogen cylinder should be used for live tests.
- (vi) Testing shall be conducted as per procedure mentioned below:

5. Testing in Fire Prevention Mode

5.1 Procedure:

- (i) Oil Drain Pipe, Nitrogen Injection pipe, FEC, Control box / Cubicle, Signal box, TCIV, oil storage tank with all necessary pipes and cable connections shall be connected with transformer tank.
- (ii) Nitrogen gas Cylinder pressure should be recorded.
- (iii) The NIFPES System shall be made ON.
- (iv) Any one set of input of the fire prevention mode shall be generated by a suitable method.

5.2 Observations/ Results:

- (i) After fulfilling of required condition, system gets activated in auto mode.
- (ii) Oil Drain shall be started and TCIV shall start closing.
- (iii) Nitrogen should be injected.

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5.2.1 Following Indications on control box will turn on:

a)	Differential trip / PRV trip/RPRR trip / Buchholz Relay trip / Master Relay trip [HV, IV and LV to ensure that the Circuit Breakers are open] Restricted Earth Fault (REF) Relay Trip / Over current Relay Trip as per logic
b)	Nitrogen Injection valve open
c)	Oil Drain valve open
d)	TCIV Valve closed
e)	Audio Alarm activated

5.2.2 For flow based TCIV valve the LPM at which it closes shall be measured, which shall be in line as mentioned in technical specifications, and the recorded values to be noted.

5.3 Testing in Fire Detection Mode (By igniting the transformer oil of the tank)

5.3.1 Procedure:

- i. There should be an opening on the dummy transformer tank to ignite the transformer oil.
- ii. The detector for testing shall be placed as per the design of OEM.
- iii. Oil Drain Pipe, Nitrogen Injection pipe, FEC, Control box, Signal box, TCIV, oil pit with all necessary pipes and cable connections shall be connected with dummy transformer tank.
- iv. The NIFPES shall be made ON.
- v. The Buchholz Relay or PRV or RPRR Trip and Master Relay trip (HV, IV and LV) Signal shall be activated by a suitable method.
- vi. Ignite the transformer oil by any method such as pouring any flammable liquid or any suitable chemical spray and igniting the flame.
- vii. Note the time taken between commencement of fire and fire detection (Fire Alarm signal is received) takes place.
- viii. Note the time taken between commencement of Nitrogen injection and fire gets extinguished.

5.3.2 Observations:

- (i) After fulfilling of required conditions of fire extinguishing mode system should get activated in auto fire extinguishing mode.
- (ii) TCIV shall start closing and Oil Drain should start.
- (iii) Nitrogen injection shall begin.
- (iv) Following Indications on control box will turn on:

i)	PRV trip/RPRR trip / Buchholz Relay trip / Master Relay trip [HV, IV and LV] / Fire / Heat Detector as per logic
ii)	Nitrogen Injection valve open

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iii)	Oil Drain valve open
iv)	TCIV Valve closed
v)	Audio Alarm activated

5.3.3 Results:

Sl. No.	Details	Requirement	Observations
1.	System activation time after Fire detection	Maximum 10 seconds	 Seconds
2.	Fire Extinction period on commencement of Nitrogen injection	Maximum 30 seconds	 Seconds