



भारतीय विज्ञान शिक्षा एवं अनुसंधान संस्थान पुणे
INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH (IISER) PUNE
(An Autonomous Institution of the Ministry of HRD, Govt. of India)
Dr. Homi Bhaba Road, Pashan, Pune-411 008.

No: 23(1)/SE/IISER/2014/

Dated : 08.12.2014

NOTICE INVITING QUOTATIONS

The Superintending Engineer invites on behalf of the Director, IISER, Pune, sealed item rate quotations from authorised agencies for Piped LPG /GDS, registered/authorised by Oil/gas companies like HPCL, BPCL or IOCL for the work mentioned below.

Sr No.	Description of work in Brief	Estimated cost (Rs.)	Earnest Money Deposit (EMD) (Rs.)	Last date for application & Issue of the quotations	Date & time of Submission of quotations	Date & time of opening of quotations
1	2	3	4	5	6	7
1.	Providing piped gas (LPG) connections to 80 Nos multi storeyed faculty houses at IISER Pune.	18.34 Lakh	37,000/-	15/12/2014 up to 4.30 P.M.	18/12/2014 up to 3.00 P.M.	18/12/2014 At 3.30 P.M.

Time for completion is one month. The quotations forms and other details can directly be down loaded from iiserpune.ac.in website or can be obtained from the Superintending Engineer, IISER, Pune at free of cost.

Issued to:

All authorised pipe gas agencies for Government Oil company like HPCL, BPCL or IOCL



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INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
(IISER) PUNE

Volume-I
Bid Document

“Providing piped gas (LPG) connections to 80 Nos multi storeyed faculty houses at IISER Pune.”

TO BE SUBMITTED TO:

The Director
Main Building, IISER Pune Campus
Dr. Homi Bhabha Road,
Pashan, Pune - 411 008
Maharashtra

Name of work & Location : Providing piped gas (LPG) connection to 80 Nos multi storeyed faculty houses at IISER Pune.

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This Bid document consists of 31 (Thirty one pages).

**INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH
(IISER) PUNE**

SECTION I -NOTICE INVITING QUOTATIONS

1. The Superintending Engineer invites on behalf of the Director, IISER, Pune, sealed item rate quotations/bids from authorised agencies for Piped Gas/ LPG/GDS registered/authorised by Oil/gas company like HPCL, BPCL and IOCL for the work mentioned below.

Name of work & Location	: Providing piped gas (LPG) connection to 80 Nos multi storeyed faculty houses at IISER Pune.
Estimated cost (Approx.)	: Rs. 18.34 Lakhs
Period of completion	: 1 (One) month
Bid security/ EMD	: Rs 37,000/-
Last Dates & time of sale of Tender	: 15/12/2014 up to 4.30 P.M.
Last date & time of submission of tender	: up to 3.00 PM on 18/12/2014
Time & date of opening of Tender	: At 3:30 PM on 18/12/2014
2. The applicant should be a registered for Reticulated Piped Gas/ LPG/GDS contractor with Government Oil company like HPCL, BPCL and IOCL. The registration certificate should be valid till the last date of receipt of bids.
3. The time allowed for carrying out the work will be **one month**. Letter of transmittal at page number 7 should be signed by the bidder.
4. Bid documents may be obtained from the office of The Superintending Engineer, IISER Pune, Main building, Dr. Homi Bhabha Road, Pashan, Pune-411 008 w. e. f. **15/12/2014 to 18/12/2014 between 10 00 Hrs to 16 30 Hrs** free of cost or can be directly downloaded from IISER Pune website www.iiserpune.ac.in. Interested Bidders may obtain further information at the same address or on telephone No 020 25908082 fax- 020 25908186 or email – ysrajput@iiserpune.ac.in.
5. The agency shall have valid PAN/TAN/ESIC/PF numbers/certificates.
6. Bids must be accompanied by bid-security (Earnest Money Deposit) amount of Rs. **37,000/-** in the form of DD payable at Pune and drawn in favour of The Director; IISER Pune Bid Security shall have to be valid for 90 days beyond the validity of the bid.
7. **Bid Security,**
 - 7.1 The bid shall be accompanied by bid security amount of **Rs 37,000/-**. The bid security amount may be paid in any one of the following forms:
 - a) Deposit at call receipt of a Scheduled Bank Guaranteed by RBI, duly pledged in favour of The Director, IISER Pune payable at Pune.

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- b) Demand draft of any Scheduled Bank, drawn in Favour of The Director, IISER Pune payable at Pune.
- 7.2 Bid Security of unsuccessful Bidders will be returned to them within 90 days from the date of acceptance of bid of the successful Bidder.
- 7.3 The Bid Security may be forfeited, if
- The Bidder withdraws / modifies his Bid or any item thereof after opening of bid.
 - The successful Bidder fails to commence the work within one week time.
- 8 The Document duly completed and signed shall be submitted in sealed cover. The sealed cover super-scribed Tender Document for the work of **“Providing piped gas (LPG) connections to 80 Nos multi storeyed faculty houses at IISER Pune.”** . Sealed quotations/Bids must be dropped in the Tender box at IISER Main building, Engineering Section, Dr. Homi Bhabha Road, Pashan, Pune-411 008 on 18/12/2014 between **10:00 hrs to 15:00 hrs**. The bid, will be opened on the same day at **15:30 hours**, in the presence of the Bidders who wish to attend. If the office happens to be closed on the date of receipt of the bids as specified, the bids will be received and opened on the next working day at the same time and venue. Bidder who wishes to attend tender opening must carry a valid identity proof certifying his designation with said firm.
- 9 Cost of Bidding: The Bidder shall bear all costs associated with the preparation and submission of his Bid, and the IISER, Pune will in no case be responsible and liable for these costs.
- 10 **Site visit**
- 10.1 The Bidder should inform the IISER in advance about the proposed site visit.
- 10.2 The Bidder, at his own responsibility and risk is encouraged to visit, inspect and survey the Site and its surroundings and satisfy himself before submitting his bid as to the form and nature of the Site, the means of access to the Site, the accommodation he may require, etc. No land space shall be provided by IISER Pune for contractor labour camps.
- 10.3 In general, Bidders shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A Bidder shall be deemed to have full knowledge of the Site, whether he inspects it or not and no extra claims due to any misunderstanding or otherwise shall be allowed. It may be noted that works of other agencies are also in progress and work is required to be undertaken in co-ordination with already working agencies.
- 10.4 The costs of visiting the Site shall be at the Bidders' own expense. Any report shared at the site, by the IISER is subject to verification by the contractor. Any deviations of information in the report and the actual site will not be the responsibility of the IISER.
- 11 **Content of Bidding Documents**
- 11.1 Submission of a bid by a Bidder implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be executed and local conditions and other factors having a bearing on the execution of the works.
- 11.2 The Bidder shall submit the Bid, which satisfies each and every condition laid down in the bid documents, failing which, the bid is liable to be rejected.
- 11.3 The Bid shall contain no alterations or additions or overwriting, except those to comply with instructions issued by the IISER, Pune, or as necessary to correct errors made by
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the Bidder in which case such corrections shall be initiated by the person or persons signing the bid. Use of correction fluid is not permitted.

11.4 This Notice Inviting Tender shall form part of the Contract document.

12 Amendment of Bid Documents

12.1 Before the deadline for submission of bids, the IISER Pune may modify the bidding documents by issuing addenda and the same shall be put on IISER Pune website.

13 Submission of Bid Documents

The bid submitted by the Bidder shall comprise the following in Main single envelop,

Envelope 1 -Bid security and a registration certificate for Reticulated Piped Gas/ LPG/GDS with Government Oil company like HPCL, BPCL and IOCL.

Envelope 2 –Commercial documents (All tender documents issued by IISER in original)
All the envelopes should be sealed & super scribed with appropriate Envelope number, Tender Name with heading as defined above in clause 1

Bid document downloaded from IISER Pune website shall contain and the pages duly signed by the bidder. In case of any missing pages, it will be presumed that bidder had the complete knowledge of the bid document and NIQ shall be processed as per terms and conditions of the NIQ.

14 The Director, Indian Institute of Science Education & Research, Pune shall be the "Accepting Authority" hereinafter referred to as such for the purpose of this Contract.

15 Bid Validity

15.1 The bids submitted shall remain valid for acceptance for a period of 90 days from the date of opening of the bid. If any bidder withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the IISER, Pune, then the IISER, Pune shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidder shall not be allowed to participate in the re-tendering process of the work.

16 Bid Opening

16.1 On the due date and time IISER, Pune will first open envelope containing EMD of all bids received in the presence of the Bidders or their representatives who shall choose to attend. In the event of the specified date for Bid opening being declared a holiday by the IISER, Pune, and the Bids will be opened at the appointed time and location on the next working day.

16.2 If all Bidders have submitted unconditional Bids together with requisite Bid security, then all Bidders will be so informed then and there. Conditional bid shall be rejected. If any Bid does not contain Bid security or does not meet the eligibility criteria defined under clause 2 of NIQ in the manner prescribed in the Bid documents, then that Bid will be rejected and the Bidder informed accordingly & The bid will be returned to him without opening. All other valid Bids shall be considered for further process.

16.3 The Bidder's name, the Bid prices, any discounts and such other details as the IISER, Pune may consider appropriate, will be announced by the IISER, Pune at the time of opening.

17 Clarification of Bids

17.1 To assist in the examination and comparison of Bids, the IISER, Pune may, at its discretion, ask any Bidder for clarification of his Bid, including breakdown of unit rates.

The request for clarification and the response shall be in writing or by email / fax, but no change in the price or substance of the Bid shall be sought, offered, or permitted except as required to confirm the correction of arithmetic errors discovered by the IISER, Pune in the evaluation of the Bids.

17.2 No Bidder shall contact the IISER, Pune on any matter relating to his bid from the time of the bid opening to the time the contract is awarded.

17.3 Any effort by the Bidder to influence the IISER's bid evaluation, bid comparison or contract award decisions, may result in the rejection of his bid.

18 Indian Institute of Science Education and Research Pune, does not bind itself to accept the lowest or any other bid, and reserves the right to reject any or all of the tenders received without assigning any reasons. Bids in which any of the prescribed conditions are not fulfilled or any conditions including that of the conditional rebate put forth by the bidder shall be summarily rejected.

19 If the Bid of the successful Bidder is seriously unbalanced in relation to the Engineer-in-charge or his representative's estimate of the cost of work to be executed under the contract, the IISER, Pune may require the Bidder to produce detailed rate analysis for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those rates with the implementation/construction methods and schedule proposed.

20 **Award Criteria**

The IISER, Pune shall award the Contract to the Bidder whose evaluated offer / bid has been determined to be the financially lowest and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified under clause 2 of NOQ, to execute the Contract satisfactorily. The Board of Governors of IISER reserves the right to accept or reject any application and to annul the pre-qualification process and reject all applications at any time, without thereby incurring any liability to the affected applicants or specifying the grounds for the Employer's action.

21 The contractor whose tender is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the tendered amount within 15 days from the issue of letter of acceptance. This guarantee shall be in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the 15 days including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor and without prejudice to any other right or remedy.

22 **Disclosures**

Any change in the constitution of the contractor's firm, where it is a partnership firm, as declared in the prequalification documents submitted by the bidders at the time of submission of pre qualification documents, should be disclosed to the IISER, Pune, at any time between the submission of bids and the signing of the contract.

Superintending Engineer
For & on behalf of the Director, IISER, Pune

LETTER OF TRANSMITTAL

From

To

**THE DIRECTOR,
INDIAN INSTITUTE OF SCIENCE EDUCATION & RESEARCH (IISER)**
900, NCL INNOVATION PARK,
Dr.HOMI BHABAHA ROAD, PUNE – 411 008

Sub: SUBMISSION OF BID DOCUMENTS FOR THE WORK OF " Providing piped gas (LPG) connection to 80 Nos multi storeyed faculty houses at IISER Pune.

Sir,

Having examined the details given in press notification and the tender document for the above work, I/we hereby submit the tender documents and other relevant information.

1. I/We hereby certify that all the statements made and information supplied in the enclosed forms and accompanying statements are true and correct.
2. I/We have furnished all information and details necessary for eligibility criteria and have no further pertinent information to supply.
3. I/We submit the requisite certified solvency certificate and authorize the Director, IISER, Pune – 411 008 to approach the Bank issuing the solvency certificate to confirm the correctness thereof. I/We also authorize Project Engineer, Pune to approach individuals, employers, firms and corporation to verify our competence and general reputation.
4. I/We submit the following certificates in support of our suitability, technical know-how & capability for having successfully completed the following works

Name of Work:

Certificate from

- 1.
- 2.
- 3.

- 1.
- 2.
- 3.

Enclosures:

Seal of applicant

Date of submission

Signature(s) of applicant(s)

Tender Form**Item Rate Quotations & Contract for Works**

Sub: SUBMISSION OF TENDER DOCUMENTS FOR THE WORK OF " Providing piped gas (LPG) connection to 80 Nos multi storeyed faculty houses at IISER Pune.

- (a). Bids to be submitted by (time) 3.00 PM on **18/12/2014** to Superintending Engineer, Indian Institute of Science Education and Research, Pune
- (b). Bids to be opened in presence of tenderers who may be present at 3.30 hours on **18/12/2014** in the office of the Superintending , Indian Institute of Science Education and Research ,Pune

Issued to : _____ (contractor)

Signature of officer issuing the documents -----

Designation

Date of Issue :

TENDER

I/We have read and examined the notice Inviting quotations, Schedule, Specifications applicable, Drawings & Designs, General Rules and Directions, special conditions, Schedule of Rate and all other contents in the bid document for the work.

I/We hereby tender for the execution of the work specified for the Director Of Indian Institute of Science Education and Research Pune (IISER-Pune) within the time of one month viz, schedule of quantities and in accordance in all respects with the specifications, designs, drawings, instructions and with such materials as are provided for and in respects in accordance with such conditions so far as applicable.

We agree to keep the bid valid for (90) ninety days from the due date of its opening and not to make any modifications in its terms and conditions.

A sum of Rs (figure)------(in words) -----

has been deposited in Deposit at call Receipt of a Schedule bank/demand draft of a scheduled bank/bank guarantee issued by a Schedule Bank as earnest money. If I/we, fail to furnished the prescribed performance guarantee within prescribed period, I/we agree that the said Director Of Indian Institute of Science Education and Research Pune(IISER-Pune) or his successors in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely, if i/we fail to commence work as specified, I/we agree that Director Of Indian Institute of Science Education and Research Pune(IISER-PUNE) or his successors in office shell without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit to execute all the works referred to in the bid documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, maximum up to 30% and shall be paid as per quoted rates.

Further, I/We agree that in case of forfeiture of earnest money or both earnest money & performance guarantee as aforesaid, I/We shall be debarred for the participation in the re-tendering process of the work.

I/We hereby declare that I/we shall treat the tender documents drawings and other records connected with the work as secret/ confidential documents and shall not communicate information / derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the state or IISER Pune.

Dated

Signature of Contractor

Seal

Postal Address

Witness :

Address:

Occupation:

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for and on the Director IISER, Pune for sum of Rs.....(Rupees.....).
.....).

The letters referred to below shall form part of this contract Agreement:-

(a)

(b)

(c)

For & on behalf of the Director, IISER Pune

Signature.....

Dated.....

INDIAN INSTITUTE OF SCIENCE EDUCATION AND RESEARCH PUNE**(i) General Rules & Directions**

1. All work proposed for execution by contract will be notified in a form of invitation to tender prominently displayed in public places and signed by the officer inviting tender or by publication in Newspapers as the case may be.

This form will state the work to be carried out, as well as the date for submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the application, and the amount of the security deposit and performance guarantee to be deposited by successful tenderer and the percentage, if any, to be deducted from bills. Copies of specification, designs and drawings and any other documents required in connection with the work signed for the purpose of identification by the officer inviting tender shall also be open for inspection by the contractor at the office of officer inviting tender during office hours.

2. In the event of the tender being submitted by a firm, it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power of attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act' 1952.
3. Receipts for payment made on account of work, when executed by a firm, must also be signed by all the partners, except where contractors are described in their tender as a firm in which case the receipts must be signed in the name of the firm by one of the partners, or by some other person having due authority to give effectual receipts for the firm.
4. Any person who submits a tender shall fill up the usual printed form, stating at what rate he is willing to undertake each item of the work. Tenders, which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort, including conditional rebates will be summarily rejected. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name and number of the works to which they refer, written on the envelopes.(Applicable for Item Rate Tender only)

The rate(s) must be quoted in decimal coinage. Amounts must be quoted in full rupees by ignoring fifty paise and considering more than fifty paise as rupee one.

- 4 A. In case of Percentage Rate Tender, tenderer shall fill up usual printed form, stating at what percentage below/above (in figures as well as in words) the total estimated cost given in schedule of quantity at schedule-A, he will be willing to execute the work. Tenders, which propose any alteration in the work specified in the said form of the invitation to tender, or in the time allowed for carrying out the work, or which contain any other conditions of any sort including conditional rebates, will be summarily rejected. No single tender shall include more than one work, but contractor who wish to tender for two or more works shall submit separate tender for each. Tender shall have the name & number of the works to which they refer, written on the envelopes.
5. The officer inviting tender or his duly authorized representative will open tenders in the presence of any intending contractors who may be present at the time, and will enter the amounts of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt for the earnest money shall thereupon be given to the contractor who shall thereupon for the purpose of identification sign copies of the specifications and other documents mentioned in Rule-I. The earnest money of all unsuccessful bidders shall thereupon be returned to the contractor remitting the same, without any interest.
6. The officer inviting tenders shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender.
7. The receipt of an accountant or clerk for any money paid by the contractor will not be considered as any acknowledgement of payment to the officer inviting tender and the contractors shall be responsible for ensuring that he procures a receipt signed by the officer inviting tender or a duly authorized cashier/accounts officer.
8. The memorandum of work tendered for and the schedule of materials to be supplied by the department and their issue-rates, shall be filled and completed in the office of the officer inviting tender before the tender form is issued. If a form is issued to an intending tenderer without having been so filled in and incomplete, he shall request the officer to have this done before he completes and delivers his tender.
9. The tenderers shall sign a declaration under the official Secret Act 1923, for maintaining secrecy of the tender documents drawings or other records connected with the work given to them. The unsuccessful tenderers shall return all the drawings given to them.

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- 9A. Use of correcting fluid, anywhere in tender documents is not generally permitted. Such Tender is liable for rejection.
10. In the case of Item Rate Tenders, only rates quoted shall be considered. Any tender containing percentage below / above the rates quoted is liable to be rejected. Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, if a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall unless otherwise proved be taken as correct. If the amount of an item is not worked out by the contractor or it does not correspond with the rates written either in figures or in words, then the rates quoted by the contractor in words shall be taken as correct. Where the rates quoted by the contractor in figures and in words tally, but the amount is not worked out correctly, the rates quoted by the contractor will unless otherwise proved be taken as correct and not the amount. In event of no rates has been quoted for any item(s), leaving space both in figure (s), word (s), and amount blank, the rate for such item will be considered as per Departmental estimates and the amount will be worked out accordingly. In the event of any bidder writes "Not quoted" against any item of works then this will be considered as **conditional tender** and will be summarily rejected.
11. In the case of any tender where unit rate of any item/items appear unrealistic, such tender will be considered as unbalanced and in case the tenderer is unable to provide satisfactory explanation, such a tender is liable to be disqualified and rejected.
12. All rates shall be quoted on the tender form. The amount for each item should be worked out and requisite totals given. Special care should be taken to write the rates in figures as well as in words and the amount in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word 'Rs' should be written before the figure of rupees and word 'P' after the decimal figures, e.g. Rs. 2.15 P and in case of words, the word 'Rupees' should precede and the word 'Paise' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only' it should invariably be up to two decimal places. While quoting the rate in schedule of quantities, the word 'only' should be written closely following the amount and it should not be written in the next line.
13. (i) The Contractor, whose tender is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the tendered amount within 15 days from the date of letter of acceptance. This guarantee shall be in the form of Deposit at call receipt of any scheduled bank/ banker's cheque of any scheduled bank/Demand draft of any scheduled bank /Pay order of any scheduled bank or Government Securities or Fixed Deposit Receipt or

Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form.

(ii) The Contractor, whose tender is accepted, will also be required to furnish by way of Security Deposit for the fulfillment of his contract, an amount equal to 5% of the tendered value of the work and shall be released after the defect liability period of one year from the date of completion of the work. The Security Deposit will be collected by deductions from the running bills of the contractor at the rates mentioned above and the earnest money deposited at the time of tenders, will be treated as a part of the Security Deposit. The security amount will also be accepted in the shape of Government Securities. Fixed Deposit Receipt and Guarantee Bonds of a Scheduled Bank or State Bank of India will also be accepted for this purpose provided confirmatory advice is enclosed.

14. On acceptance of the tender, the name of the accredited representative(s) of the contractor who would be responsible for taking instructions from the Engineer-in-Charge shall be communicated in writing to the Engineer-in-Charge.
15. Sales-tax/Vat, (except service tax) purchase tax, turnover tax or any other tax on material in respect of this contract shall be payable by the contractor and IISER Pune will not entertain any claim whatsoever in respect of the same. However, in respect of service tax, same shall be paid by the contractor to the concerned department on demand and it will be reimbursed to him by the Engineer-in-Charge after satisfying that it has been actually and genuinely paid by the contractor.
16. The contractor shall give a list of IISER employees, if any, related to him.
17. The tender for the work shall not be witnessed by a contractor or Contractors who himself/ themselves has/ have tendered or who may and has/ have tendered for the same work. Failure to observe this condition would render, tenders of the contractors tendering, as well as witnessing the tender, liable to summary rejection.
18. The tender for composite works includes, in addition to building work, all other works such as sanitary and water supply installations ,drainage installation, External Façade, Electrical works, Heating ventilation and air conditioning system, Integrated Building Management system, Lifts, roads and path etc. The tenderer apart from being a registered contractor (B&R) of appropriate class, must associate himself with agencies of appropriate class which are eligible to tender for sanitary and water supply drainage, electrical Heating ventilation and Air conditioning system, Integrated Building Management system, Solar Water Heating system works in the composite tender.

19. The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the Project Engineer-cum-Estate Officer may at his discretion without prejudice to any other right or remedy available in law cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.
20. Time is essence of this agreement and the contractor agrees to pay compensation for delay @ 1.50% of tendered amount per month maximum 10% of tendered amount. Director IISER, Pune decision on the amount of compensation to be levied shall be final and binding on the contractor.
21. Defect liability period shall be one year from the actual date of completion of the work.

Form of Performance Security (Guarantee)

Bank Guarantee Bond

1. In consideration of the Director IISER Pune (hereinafter called "IISER-Pune") having offered to accept the terms and conditions of the proposed agreement between-----
-----and----- (hereinafter called "the said Contractor(s)") for the work -----
----- (hereinafter called "the said agreement") having agreed to production of an irrevocable Bank Guarantee for Rs.----- (Rupees -----
-----only) as a security/guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement.

We ----- (hereinafter referred to as "the Bank") hereby (indicate the name of the Bank) Undertake to pay to the IISER Pune an amount not exceeding Rs-----.(Rupees -----only) on demand by IISER Pune

2. We -----do hereby undertake to pay the amounts due and payable (indicate the name of the Bank) under this Guarantee without any demure, merely on demand from the IISER Pune stating that the amount claimed as required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the bank shall be conclusive as regards the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs----- (Rupees-----only)
3. We, the said bank further undertake to pay the IISER Pune any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the Contractor(s) shall have no claim against us for making such payment.

4. We, ----- further agree that the guarantee herein contained shall (indicate the name of the Bank) remain in full force and effect during the period that would be taken for the performance of the said agreement and that it shall continue to be enforceable till all the dues of the IISER Pune under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-Charge on behalf of the IISER Pune certified that the terms and conditions of the said agreement have been fully and properly carried out by the said Contractor(s) and accordingly discharges this guarantee.
5. We, ----- further agree with the IISER Pune that the IISER Pune (indicate the name of the Bank) shall have the fullest liberty without our consent and without affecting in any manner our obligation hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said Contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the IISER Pune against the said contractor(s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be

relieved from our liability by reason of any such variation or extension being granted to the said Contractor(s) or for any forbearance, act of omission on the part of the IISER Pune or any indulgence by the IISER Pune to the said Contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor(s).
7. We, ----- lastly undertake not to revoke this guarantee except (indicate the name of the Bank) with the previous consent of the IISER Pune in writing.
8. This guarantee shall be valid up to-----unless extended on demand by the IISER Pune. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs----- (Rupees-----only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged.

Dated the -----day of-----for----- (indicate the name of the Bank)

Proforma of Agreement

ARTICLE OF AGREEMENT is made at Pune on the day of..... 2014 between Indian Institutes Of Science Education and Research Pune, (IISER Pune) (Herein after referred to as the employer which expression shall includes its successors and assigns where the context so admits) of the one part and -----

(Hereinafter referred to as the "contractor(s) which expression shall include his/their respective heirs, executors, administrators and assigns where the context so admits) of the other part.

WHEREAS the employer is desirous of getting the work.....done and caused drawings, schedule of quantities, terms and conditions and specification describing the work to be executed and completed maintained.(hereinafter called "the works")and has accepted a tender of the CONTRACTOR for the execution, completion and guarantee of such works.

AND WHERE AS the contractor has deposited a Sum Of Rs.-----

----- With employer as security

for the due performance of this agreement as provided in the said Conditions.

NOW IT IS HEREBY agreed and declared by and between the parties as follows.

- (a) In consideration of the payments to be made to him as herein after provided the contractor shall upon and subject to the condition herein contained and the said conditions executed and complete the work shown upon the said drawings and such further detailed drawings which may be furnished to him and described in the said specifications and the said priced schedule of quantities within ----- from the date of order to commence the work.
- (b) The employer shall pay to the contractor such sum that shall become payable hereunder at the times and in the manner specified in the said conditions.
- (c) Time is essence of this agreement and the contractor agrees to pay compensation for delay @1.50% of tendered amount per month maximum 10% of tendered amount.
- (e) The documents mentioned below under (g) shall form the basis of this agreement and the decision Engineer or the Engineers in Charge, in reference to all matters of dispute as to material and workmanship shall be final and binding on both the parties.
- (f) The employer through the Engineer-in-Charge reserves to himself the right of altering the drawings and the adding to or omitting any items of works or of having portions of the same carried out departmentally or otherwise and such alterations or variations shall not violate agreement.

(g) This agreement comprises the work said above and the entire subsidiary work connected there with, even though work may not be shown on the drawings or described in the said specifications or the priced schedule of quantities.

This agreement contains the following documents in addition to pages of articles of agreement.

- (a) NIT/WORK ORDER
- (b) Item rate tender form & contract for works.
- (c) General Rules and Directions
- (d) Special Condition of contracts
- (e) Technical specifications
- (f) Tenders drawings
- (g) Price Schedule/ Schedule of Quantities
- (h) All corresponds between the parties until award of contract.

In witness whereof the parties hereto have their respective hands the day and the year herein above written.

Signed by for and on behalf of the employer.

Superintending Engineer

Witness (1)-----

Witness (2)-----

Signed by the said contractor

Address-----

Witness (1)-----

Countersigned

Witness (2)-----

SPECIAL CONDITIONS

The Tenderer/bidder submitting the Tender should read the schedule of quantities, approved makes if any, Specifications for the works and other terms and conditions given in the NIQ and drawings.

The following conditions, which shall form part of the Tender NIQ, are specially brought to the notice for compliance while filling the bidder:-

1. The tendered rates shall be inclusive of all types of taxes (except service tax), duties, octroi/LBT, levies, works contract tax, packing, transportation, handling, storage at site, necessary transit insurance, etc. i.e. the rates quoted by the contractor shall be firm and final. Nothing extra will be paid on any account. Service tax is not applicable in this work however in case the same is demanded by competent authority the same shall be paid by the agency on demand and shall be reimbursed to the agency against paid documentary evidence.
2. The contractor is advised to visit the site of work to have an idea of the execution of work, failure to do so will not absolve their responsibility to do the work as specified in agreement.
3. All the materials to be used in the work shall be good quality and will be got approved from the Engineer in charge before use at site.
4. The contractor has to make his own arrangement for the storage of the material at site, necessary watch and ward of the electrical installation during the execution of work till the same is handed over to the IISER, Pune. No extra payment will be made on this account. No space within the campus shall be provided for labour huts. However, limited space for construction of stores for storage of materials brought to site by the contractor for execution of work shall be provided on request from the agency.
5. No T & P will be issued to the contractor by the department.
6. All debris at site shall have to be removed by the contractor before handing over the installation to the department.
7. Tenderer/bidders are advised to quote rates in words and figures for each item and work out the total amount in figures.
8. The tenderer/bidder are advised to inspect and examine the site, buildings, drawings and its surroundings and satisfy themselves before submitting their Tender/bid. The tenderer/bidder shall be deemed to have full knowledge of the site whether he inspects it or not and no extra

charges consequent on any misunderstanding or otherwise shall be allowed.

9. Tenderers/bidders who propose any alteration in the work specified in the said form of invitation to Tender, or in the time allowed for carrying out the work, which contain any other condition (s) of any sort including conditional rebate will be summarily rejected. Rates of such Tenders/bids shall neither be read out, not entered in the Tender opening register at the time of opening of Tenders.

10. All the statutory recoveries shall be made from the running bills of the contractor like Security deposit, Income tax, Surcharge, etc or any other statutory recovery as per Government of India norms at the prevailing rates and in the manner prescribed by Government of India.

11.Recovery towards WCT/VAT @ 2% shall be made from the bills of the agency.

12.IISER Pune is GRIHA rated campus and agency has to keep the campus/surrounding clean and dispose of the waste materials and clear the site from all debries as per directions of Engineer in charge.

13. Bidders shall obtained all required permissions/no objection certificates from respective authorities, third party inspection of the installation etc and shall coordinate with the local gas distributor for getting the gas bank commissioned. Cost towards getting no objections certificate, fire permission and coordination etc shall deemed to be inclusive in the quoted rates and nothing extra shall be payable. Bidders are requested to quote their rates accordingly.

14. No advance payment shall be made.

15. Bidder shall submit the running & final bill for the work executed in the required format.

TECHNICAL SPECIFICATIONS GAS PIPELINE WORK FOR LPG

In general wherever applicable the work shall be executed as per latest CPWD specifications, technical specifications, IS specification applicable for LPG and terms and conditions of the NIQ

A SCOPE OF WORK :

The scope of work includes design, supply, installation/ erection, testing & successful commissioning and handing over to IISER Pune the complete LPG Gas Pipeline Work.

B LOCATION / BUILDINGS WHERE GAS SERVICES ARE TO BE PROVIDED :

Gas services (LPG) are to be provided in 80 nos faculty houses G+10 storeyed 2 nos block at IISER Pune.

C BATTERY LIMITS : Complete work in IISER Pune campus.**1.0 TECHNICAL SPECIFICATION FOR PIPING WORK :**

1.1 This specification governs the requirements for design, manufacture, welding, fabrication, erection, testing, cleaning & commissioning of the piping work.

2.0 SERVICE GAS :

2.1 LPG

3.0 SCOPE OF WORK BY CONTRACTOR :

3.1 In general, the scope of work of contractor shall include the following without being limited to the same. Scope of supply of various materials for fabrication and erection shall be as per details given in special conditions of contract.

3.2 Supply of piping materials to work site/shop, fabrication and erection of all piping system in accordance with this specification, enclosed specifications for pipes, valves, painting, etc. applicable drawings and standards and also necessary modifications which shall come during erection.

3.3 Fabrication and erection of pipe supports, supporting fixtures, brackets,. as per pipe support standards and drawings and instructions of Engineer-in-Charge.

3.4 Underground piping including covering materials, excavation and backfilling. Anchor Block/insert lock, supports, and pedestal (concrete) pipe sleepers.

3.5 The contractor shall also bear the cost of repair, changes, replacement, etc. due to noncompliance with the standards, codes or due to disregard of instructions given by Engineer-in-Charge.

- 3.6 A) Dye - penetrant test for All 100 % of the total no. of joints, etc. as required by EngineerIn Charge.
- 3.6 Flushing, cleaning and testing of all piping system.
- 3.7 Providing two coats of red oxide zinc chromate primer and oil painting on all MS/CS pipes/structural supports, etc.
- 3.8 Any other items as required in the drawings/specifications to be fabricated and erected from pipe/plate materials.

4.0 Erection of Valves :

- 4.1 Supply & Erection of all types of valves such as globe, ball etc. as per BOQ

5.0 FABRICATION OF SUPPORTS:

- 5.1 Fabrication of all types of pipe supports, provided as per the instructions of the Engineer-in-Charge, will be paid on weight basis. Materials for fabrication of support will be supplied by Contractor. Bolts, nuts & washers will be supplied by Contractor.

6.0 BASIS OF WORK, CODES & STANDARDS :

- 6.1 The complete piping work shall be carried out in accordance with Approved Drawings and standards and any drawings/ documents prepared by contractor and duly approved by Engineer-in-Charge/Owner.
- 6.2 Approved for Construction" drawing and sketches issued by EPIL to contractor such as Piping and equipment layout plans.

7.0 SPECIFICATIONS :

- 7.1 Welding Procedure/Qualification : ASME B 31.3/31.8, ASME Sec IX & IS: 817
- 7.2 ASME Sec IX & IS: 814 : Material Specifications, Welding rods, Electrodes & filler wire etc.
- 7.3 ANSI-B-16.5 : Pipe Flanges & Flanged Fittings
- 7.4 ASME/ANSI-B-16.10 : Face-to-Face & End-to-End Dimensions of Valves
- 7.5 ASME/ANSI-B-16.21 : Non-metallic Flat Gaskets for Pipe Flanges.
- 7.6 ANSI-B-18.2.1 : Square & Hex Bolts & Screw.
- 7.7 ANSI-B-18.2 : Stud & Nuts.

-
- | | | | |
|-----|---|---|---------------|
| 7.8 | ASTM A 312 TP 304/316, Seamless,
ANSI B36.19 | : | Pipes. |
| 7.9 | ASTM A 312 TP 304/316/ ANSI B 36.19 | : | Pipe Fittings |
| | | | : |
| 8.0 | IS Standard or Equivalent | : | Gauges |

8.0 SPECIFICATIONS FOR PIPE JOINTS :

PIPE JOINTS

- 8.1 In general joints shall be butt welded as specified in the applicable valve & piping specifications, with flanges and butt weld fittings used on where required.
- 8.2 Fabricated piping system shall be erected as detailed on piping layout drawing and as advised by the Engineer-in-Charge. The contractor shall provide adequate field joints bearing in mind the fact that there may be variations in locations of equipments, equipment nozzles, inserts, structures, etc. but not limited to the aforesaid contingencies only. In certain cases site measurement may have to be taken before commencement of fabrication.
- 8.3 Flange joints shall be used at connections to vessels, equipments, valves, flanged fittings and wherever required for ease of erection and maintenance as indicated in the drawings.

9.0 EDGE PREPARATION :

- 9.1 The edges to be welded shall be prepared to meet the joint design requirements by any of the following methods.

10.0 WELDING :

- 10.1 Welding of butt joints/socket weld joints, etc. has been broadly described in the "Welding Specification".

11.0 STRUCTURE STEEL :

- 11.1 The work covered consists of fabrication and erection of structural steel pipe supports in strict accordance with specification and applicable drawings.

12.0 WELDING SPECIFICATION:

- 12.1 All welding shall have full thickness penetration and shall be done by the TIG process. Tack welds lacking penetration shall be chipped out completely and re-welded properly.
- 12.2 In multiple pass welding, each layer shall be cleaned of all slag, scale and other foreign matter and any serious defects chipped out before subsequent welding is done. Next

run of weld shall be carried out only after thorough inspection, rectification and preparation of the previous run. Use stainless steel chipping tools and wire brushes for cleaning.

- 12.3 The completed weld shall be cleaned of slag and spatter if any.
- 12.4 No under cutting of pipe adjacent to the completed weld will be permitted.
- 12.5 Pipes shall be brushed with stainless steel wire brushes and then cleaned for a distance of at least 50mm from the weld area. Filler material shall also be cleaned in similar manner.
- 12.6 In order to get optimum benefit, carbide precipitation has to be avoided. Also it is essential to retain the high strength resulting from cold works. It is therefore, extremely important to control the temperature and duration of welding very effectively. By using purging and trailing gas of TIG welding and large current for extremely short periods of time in MMA welding, the desired optimum results may be achieved.
- 12.7 Root pass shall be made with electrodes/filler wires recommended in the welding specification chart. The preferable size of the electrode is 2.5 mm diameter (12 SWG) but in any case not greater than 3.25 mm (10 SWG)
- 12.8 The root run of butt joints should be executed properly so as to achieve full penetration with complete fusion of the root edges. Weld projection inside the pipes shall not exceed 3mm, wherever not specified by the applicable code. All root run will be done by TIG welding for Butt Joints.
- 12.9 While welding is in progress, care should be taken to avoid any kind of movement of the components, shocks, vibrations and stresses to prevent occurrence of weld cracks.
- 12.10 Wherever grinding wheels are required for grinding purpose, for stainless steel suitable type of grinding wheels shall be used. Separate grinding wheels and wire brushes should be used for carbon steels and stainless steels.
- 12.11 Welding shall be free from undercuts and other defects.
- 12.12 Each weld joint should have workmen like finish.

13.0 ELECTRODES & FILLER WIRES :

- 13.1 Welding electrodes with a suitable coating/filler wires shall be in accordance with IS:814/ASME Sec. II, latest edition and of a recognised quality. These shall be approved by Engineer-in- Charge before being used in the work. Approved makes are to be used. The contractor shall submit batch test certificate from the electrode manufacturer. The following specifications of electrodes are recommended for welding:
- 13.2 General structural welding : AWS-E-6012

-
- 13.3 Carbon Steel : AWS-E-6018/7018
- 13.4 Carbon Steel to stainless steel : AWS-E-310/309
- 13.5 Stainless Steel filler wire -AISI 304/316 : A 121
- 13.6 All electrodes shall be purchased in sealed containers and stored properly to prevent deterioration. The electrodes removed from the containers shall be kept in holding ovens at temperatures and time recommended by the electrode manufacturer. Out of the oven, time of electrodes before they are consumed, shall not exceed the limits recommended by the electrode manufacturer. The electrodes shall be handled with care to avoid any damage to the flux covering.

14.00 TESTING AND COMMISSIONING :

14.1 Hydraulic Testing :

All piping shall be hydrostatically tested for 1.5 times of working pressure after completion of fabrication.

14.2 Pneumatic Testing :

All piping shall be pneumatically tested for the specified pressure where called for.

After successful commissioning of the pipelines, the contractor shall conduct performance tests on the equipment to satisfy the engineer that all the equipment perform to the rated outputs. Equipment like valves, fittings etc. shall be replaced (not repaired) if the same is not giving rated output.

15.0 LAYING & PROTECTION OF BURRIED PIPING :

15.1 No primer paint is required.

15.2 Three coats of cold coal tar (SHALIMASTIC H.D. or equal) shall be applied resulting in a final film thickness of 0.79 mm. simultaneously in inner-wrap of Fibre glass reinforced or equal shall be pulled into it. Manufacturer's recommendation shall be followed for the coat tar application.

15.3 Immediately following the application of the inner-wrap a layer of outer-wrap (Fibre glass based impregnated with coat tar or equal) shall be applied to the external surface of the coating.

15.4 The coating shall then be allowed to dry and shall be protection from burrs, scratches and sharp edges.

16.0 PIPING LAYOUT :

16.1 The route given is tentative and may change with execution quantities as actually executed shall be measured at site and paid accordingly. The bidder shall prepare the drg and submit the same for approval of the Engineer in charge.

17.0 COLOUR CODE FOR PIPING :

17.1 The colour code scheme is identified for identification of the individual service of the pipeline.

LPG : Red

18.0 SITE VISIT & DRAWING PREPERATION :

18.1 The vendor may desire to make a visit to the site to take exact measurement at site prior to

Quoting of the subject work would be allowed do so with prior information to this office.

successful vendor.

19.0 DEVIATION :

19.1 Vendors are required to quote for the material as per the technical specifications and work as mentioned in the Tender.

20.0 WARANTEE PERIOD :

20.1 Warrantee Period: 12 months from the date of Commissioning and vendor shall rectify/replace if any defect developed within the period, free of cost. In any circum stances no additional charge will be paid on any account i.e. Transportation/ Mobiliasation / Lodging /Boarding etc.

21. TECHNICAL SPECIFICATIONS OF PIPE,PIPE FITTINGS AND VALVES :

LPG Manifold System and Piping Components :

LPG Manifold system shall consist all components shown in drawing and makes and specification as per below. System complete in all respect from Design to use with Hyd and Pneumatic Test Certificates and all OEM test certificates for brought out items.

1)M.S. fabricated support framework for in Cylinders and Manifolds etc:

The cylinders will be fitted to M.S. fabricated support framework fabricated using ISMC 75 x 40, ISA 65X65X5. Framework shall be designed to hold 24Nos +24 Nos nos. 47 /50 Ltrs. W.C. cylinders. The framework shall be of knockdown type, assembled using M.S. fasteners. It shall be freestanding, floor-mounted type with footplates fixed to the floor by anchor bolts and painted Black Colour. Frame will also consist of Chain to hold cylinder firmly.

Construction : Arc Welding and Bolting.

Finish : One Coat of Primer & two Coates Synthetic enamel Paint.

Material Used ; **MS. Channel /Angle/ Plate as per IS : 808/1730 / 1731**

2)Manifold Header:

Gas Service : LPG

Working Pressure	:	10.50 Bars
Hyd. Test Pressure	:	15.75 Bars
Operating Temp.	:	50 Degree C
MOC	:	Pipe: SS 304, 1.5" NB, SCH 40 Seamless Pipes as per ANSI B 36.19
		Fittings from SS 304 Bar stock./ Machined as per requirement
Construction Pieces etc.	:	TIG Welding for Header, Tee pieces Elbows, Cross
Testing Type	:	Hydraulic & Pneumatic Testing 10 x 2 Cylinders.
Welding Code	:	ASME B 31.3/ 31.8

3)Flexible Hose:

Make	:	COMAP/ Surksha- HP/ United works as per Is standard
Material of construction	:	Nylon Braided Hose
Working Pressure	:	10 Bars.
Size	:	¼" size.
Length	:	3 Feet long.

Port Isolation Valve for Manifold :

Make	:	COMAP/ Vanaz/ United Works , Messers
Material	:	Brass
Size	:	3/8 " BSP or as required
Type	:	Needle / Ball Type
Working Pressure	:	10.5 Bars

Main and Manifold Isolation Valve for Manifold :

Make	:	COMAP/Shenco / United Works, Messers
Material	:	Brass
Size	:	3/8 " BSP or as required
Type	:	Ball
Working Pressure	:	10.5 Bars

Pressure Gauge:

Make	:	Forbes Marshall, WIKA, Warea Instruments,
Gauge Bourdon	:	
Type	:	Bourdon tube Pressure gauge
Dial size	:	100 MM
Range	:	0 to 280, 0-16 kg/cm ²
Accuracy-	:	1:1% of full-scale division
Bourdon tube	:	SS 316
Thread	:	½" NPT/ B.S.P (Male)
Mounting	:	Direct Mounting
Connections	:	Bottom connection
Housing	:	Weather proof housing
Pointer	:	Micro type adjustable pointer
Standard	:	Indian Or European or equivalent Standard

Pressure Gauge and Vent Isolation Valve:

Type	:	Needle type
Make	:	COMAP/ Vanaz/ United Works Vanaz , Messers

Material of construction : Brass
 Size : As per Standard.
 Working Pressure : 10.5 Bars.

Pressure Regulator:

Make : COMAP/ Vanaz/ Nirmal Industries . United Works ,
 Messer
 Type : Single Stage
 Body and Cap : Brass
 Diaphragm and Internal Trim : as per Manufactures standard/ Rubber
 Inlet Pressure : 0 to 10.5 Bars.
 Outlet pressure : 0.3 to 10 Bars
 Gas Service : LPG
 Flow Rate : 200 NM3 / Hr.
 Inlet connections : 1 " BSP Or as required
 Outlet / inlet connections : 1 " BSP Or as required
 Standard : As per Manufactures Standard.

E) Outlet Isolation Valve Low Pressure :

Service : LPG
 Type : Ball Valve
 Make : COMAP/ Vanaz/ United Works , Messer SHENCO / GG
 Valves /
 BDV VALVES/AUDCO
 Material of construction : SS 304/Brass
 Size : 1.5 "/1/2 " , 1 "
 Op. pressure : 21 Kg /cm2
 Operating Temperature : 50° C
 Design & Type : BS 5351 & Two/Three piece Construction
 End to End Dimensions : As per ASME B 16.10
 Type of Operation : Manual, Plastic Coated Hand lever

F) Inside Lab LPG Pressure Regulators :

Make : COMAP/ Vanaz/ Nirmal Industries/ United Works ,
 Messers
 Type : Single Stage
 Body and Cap : Brass / Al
 Diaphragm and Internal Trim : Brass/ Al
 Inlet Pressure : 0 to 10.5 Bars.
 Outlet pressure : 0.3 to 10 Bars
 Gas Service : LPG
 Inlet connections : ½ " NPT F
 Outlet / inlet connections : ½ "OD Tube

22 RUNNING-IN-PERIOD

After satisfactory final inspection as stated the contractor shall demonstrate the trouble free running of the installation for a period of not less than 10 days before IISER Pune takes over. The duty cycle of the plant/system during this Running-In-Period shall be 10-12 Hours. After the installation has operated for 10 days period without any breakdown or abnormal / unsatisfactory operation of during this period, the Gas Pipeline Work for LPG, shall be deemed to have run trouble-free. The contractor should include one year of free running maintenance after completion of 10 days of trouble free running including replacement of defective parts etc. at his own cost.

The contractor shall arrange at his own cost for all staff, fuel, POL, and other consumables during Trial run, Commissioning and Running-in-Period upto the date of acceptance. Nothing extra shall be paid on this account. LPG used during testing shall be in the scope of vendor and nothing extra shall be payable.

23 DEFECTS LIABILITY PERIOD

- a) The defects liability period shall be for 12 months and the same shall start from the date of handing over to IISER PUNE after successful commissioning and completion of the work (which shall be the day from which the gas pipeline system starts proper functioning). During this defects liability period, the contractor shall rectify all the defects like leakages etc. The contractor shall also train the personnel as deputed by the IISER PUNE, about the method of operation and maintenance of the gas pipeline work, its functioning and control.

24 GUARANTEES

- a) The guarantee shall cover each & every material whether manufactured by the contractor or not. The contractor shall replace the defective parts with new ones. Replaced parts shall also be covered by a similar guarantee.
- b) The replaced parts shall be of genuine make and subject to approval by the IISER PUNE.
- c) The contractor shall guarantee the performance of the entire process, equipment and pipeline for a period of one year from the date of handing over to IISER PUNE.

25 IDENTIFICATION OF PIPELINE FOR DIFFERENT GASES

All different gas pipelines shall be color coded for identification as per applicable standards. A color band (strap) of 100 mm width shall be provided on pipe at a distance of 6 mtrs.

26 DOCUMENTS TO BE SUBMITTED

26.1 DOCUMENTS TO BE SUBMITTED ALONGWITH THE BID

- a) Tender document with Complete BOQ as per terms and conditions of NIQ.

26.2 DOCUMENTS TO BE SUBMITTED AFTER AWARD OF WORK

- a) System description, Detailed technical specifications of all Pipeline & Fittings, Operation & Control Philosophy, P&I diagram, General arrangement, Layout drawings of gas pipeline work.
- b) Contractor shall submit G.A. drawings, detailed working of cut-out and openings.
- c) Before commencing work, the Contractor shall prepare and submit all above drawings/documents etc. for Gas pipeline work in required nos. These drawings must be approved by the IISER PUNE before execution of work and shall become part of the contract.
- d) The Contractor shall, within 1(one) week of receipt of a Letter of award of contract, submit 4(four) copies of all working drawings.
- e) Within 7 days of receipt of letter of award of contract, the Contractor shall obtain from the EPI/IISER PUNE all the information he needs to prepare his design/drawings and shall have any interaction with the EPI/IISER PUNE to finalise all parameters.

The Contractor will be responsible for any discrepancies, errors and omissions in the drawings or particulars submitted by him even if these have been approved by the EPI/IISER PUNE.

- f) On approval of these drawings (within 1 weeks of submission of full documentation), the Contractor shall submit 8(eight) copies of approved working drawings incorporating corrections / comments, if any, and shall immediately commence work.
- g) On completion of work, the contractor shall supply four sets of CD's and 8 (eight) copies of all As-built drawings, catalogues, equipment operation & maintenance manuals and spare parts list at the time of handing over of the plants.
- h) The Contractor shall carry out all the work strictly in accordance with drawings, details and instructions of IISER PUNE.
- i) Approval of the drgs from the competent authorities before start of the work.

ADDITIONAL APPROVED MAKES OF MATERIAL

Sr. No.	Description of work / Material	Specifications	Approved Makes
A.	System design, manufacturing, commissioning and certification of Reticulated System of LPG	OISD –162 and IS- 6044,	Oil industry safety directives and Indian standard
	Three stage pressure regulation: 1 st stage: 7 to 1.5/1.2kg/cm ² 2 nd stage: 1.2/1.5 to 0.15/0.3 kg/cm ² 3 rd stage: 0.15/0.3 to 0.03 kg/cm ²		
B.	Design, supply, providing, fabricating, and installation, testing, painting (with 2 coats of primer and 2 coats of 1 st quality paint), commissioning gas cylinder manifold to suit the capacity for 14.2 kg		
1	Manifold Pipe	Seamless carbon steel schedule 40, 1" size, IS 3601	Maharashtra Seamless
2	Non Return valve	To sit all pigtail, size 3/8"	Itap/Comap/KJ/Eqv
3	Click On adaptors	Standard Spec. With built-in NRV	Vanaz/Gaso/Star/Eqv.
4	Hydraulic Cylinder Pigtails	R/1SN EN853 3125 PSI Flame Resistant	Suraksha/Gazflex/Eqv
5	Isolation valve: For manifold & gas train	Forged steel body, Min 2 to 25 kg/cm ²	Audco (L&T)/Comap/United
	For Pressure gauges	Glycerin Field ball valve	Guru/Leibiz/Pioneer
6	Gas filter (flanged / Screwed)	Flow up to 40 Kg/hr	Vanaz
7	1 st stage regulator (Flanged)	IP: 1 to 9 kg/cm ² OP: 2-1.2 Kg/cm ²	Vanaz/United
8	Auto changeover valve (Screwed end)	Flow: up to 40kg/hr IP: 1 to 9 kg/cm ² OP: 2-1.2 Kg/cm ²	Vanaz / Comap / United
9	Slam shut off valve/ over pressure valve (Flanged / Screwed)	Pressure setting 1.8 kg/cm ²	Vanaz / Comap / United
10	Safety relief valve / Pop Action Valve (Screwed end)	Pressure setting 2.7 kg/cm ²	Anil Eng. / KJ Industries
11	Flame arrestor	Nicrom mesh, screwed end	Vanaz/SKN/KJ
	Piping from manifold to the individual flat	M.S.ERW 'C' class	Jindal / Tata

12	<p>Piping from Gas Storage to the vertical raisers</p> <p>Under Ground Piping – Seamless coating with Anti corrosive pipe coat</p> <p>Copper Piping from Meter outlet to Kitchen platform</p>	<p>size from ½" to 2", confirming IS 1239</p> <p>M.S.ERW 'C' class size from ½" to 2", confirming IS 1239</p> <p>Seamless</p> <p>Anneled copper as per IS 2501-10mm 1mm wall thickness</p>	<p>Maharashtra Seamless</p> <p>Nissan/Indigo</p>
13	Second stage pressure regulator with under pressure cut off facility to the gas supply in case of any leakage	<p>Input pressure: 1.2 Kg/cm²</p> <p>Outlet pressure: 0.15 / 0.3 kg/cm²</p> <p>Flow: 40KgN/m³</p>	Vanaz / United
14	Third stage pressure regulator with under pressure cut off facility in case of excess flow from this regulator it will automatically shut off supply.	<p>Input pressure: 100 / 300 mb</p> <p>Outlet pressure: 30 mb</p> <p>Flow: 2.5 m³/ hr max</p>	United/Comap
15	Gas Meter	<p>Maximum working pressure: 0.2 Mbar</p> <p>Q max: 2.5 m³/hr</p> <p>Q Min: 0.016 m³/hr</p> <p>Inlet & outlet: ¾"</p>	Raychem/Comap
16	Quarter turn valve at kitchen platform or gas geyser	½" or ¼" SS. Body	RN /Comap
17	Fittings	"VS" Forged Pipe Fittings as per IS:1239	VS

VOLUME -II - COMMERCIAL BID

SCHEDULE OF QUANTITY (BOQ)

Name of Work: Providing piped gas connection system for faculty housing (80 quarters)at IISER Pune.

Sr. No.	Description	Approved Make	Qty	Unit	Rate in figures & words	Amount= (Col 4 x col 6)
1	2	3	4	5	6	7
1)	Cylinder Manifold Supply, Installation, Testing & Commissioning of cylinder manifold for LPG cylinders of 14.2Kg, including all accessories & componentes as listed below. The bank size will be 24 nos. of 14.2kg cyls. Active & equal nos. as stand-by. The cylinders will be arranged in staggered manner.					
1.1	25mm dia CS Seamless pipeline sch. 40 for the Manifold	Maharashtra Seamless / Prakash / Jindal	30	m		
1.2	Lugs	Standard	48	Each		
1.3	Click On/off adaptors for all cyls.	NEC/ Gaso/ Star/ Vanaz	48	Each		
1.4	Non Return Valve	JSI/ Comap/ KJ/L&T	48	Each		

Sr. No.	Description	Approved Make	Qty	Unit	Rate in figures & words	Amount= (Col 4 x col 6)
1	2	3	4	5	6	7
1.5	Flexible metal covered pigtaills	NEC/ Suraksha/ Gazflex	48	Each		
2)	Pressure Regulating Station - PRS Supply & Installation of Pressure Regulating Station with Auto Change Over valve connecting two LPG cylinder Manifolds.					
2.1	25mm dia CS Isolation Ball Valves	L & T/ Flowcon/ United	6	Each		
2.2	Pressure Gauge 4" dial range (0-10 Kg/cm2) with suitable Isolation valves on the cylinder manifold	Guru/ Leibiz/ Pioneer	7	Each		
2.3	25mm dia Isolation Valve ASA 300	L & T/ Flowcon/ United	2	Each		
2.4	Auto Change Over valve with adjustable pressure regulator	Comap/ United/ Vanaz	1	Each		

Sr. No.	Description	Approved Make	Qty	Unit	Rate in figures & words	Amount= (Col 4 x col 6)
1	2	3	4	5	6	7
2.5	25mm Master CS Ball Valve / Safety Relief Valve	L & T/ Flowcon/ United	1	Each		
2.6	Pop Action Valve with Isolation Valve	L & T/ Flowcon/ United	1	Each		
2.7	25mm Over Pressure Shut off Valve	Comap/ United/L&T	1	Each		
2.8	1st Stage Regulator	Vanaz/ United/L&T	1	Each		
2.9	Manifold Fittings	Standard	48	Each		
3)	Connection from Manifold to the Kitchens					

Sr. No.	Description	Approved Make	Qty	Unit	Rate in figures & words	Amount= (Col 4 x col 6)
1	2	3	4	5	6	7
	Supply, Erection, Testing of stainless steel/ MS seamless pipeline (IS:1239) including fittings viz. elbows, isolation ball valve (all risers to kitchens/top of building will have an isolation valve at bottom at convenient location at an accessible level), reducers, coupling etc. wherever required. Pipeline to be laid will be at different level, wall mounted, under ground as per site conditions etc.					
3.1	25 NB Stainless steel grade 304 Seamless Pipe below ground level in existing pipe casing.	Maharashtra Seamless / Prakash / Jindal	100	m		
3.2	25 NB M S Seamless pipe Main & Lateral LPG Line	Maharashtra Seamless / Prakash / Jindal	155	m		
3.3	20 NB M S Seamless pipe Riser from lateral pipeline to top of buildings & End connection of Riser.	Maharashtra Seamless / Prakash / Jindal	375	m		

Sr. No.	Description	Approved Make	Qty	Unit	Rate in figures & words	Amount= (Col 4 x col 6)
1	2	3	4	5	6	7
3.4	15 NB M S Seamless pipe tapping from risers to PRS-2 in the kitchens.	Jindal	175	m		
3.5	25 NB CS Ball Valve - Per Building	L & T/ Audco/ Virgo	8	Each		
3.6	20 NB M S Seamless pipe Riser Main Ball Valve	L & T/ Audco/ Virgo	8	Each		
3.7	Pressure Gauge with Isolation Valve	Guru/ Leibiz/ Pioneer	8	Each		
4)	Pressure Regulating Station - 2 Supply, erection, Testing & commissioning of Pressure Regulating Station - 2 before the Meters in the kitchens.					

Sr. No.	Description	Approved Make	Qty	Unit	Rate in figures & words	Amount= (Col 4 x col 6)
1	2	3	4	5	6	7
4.1	15 NB Isolation brass Ball Valve with locking arrangement.	Comap/ Audco/ Virgo	80	Each		
4.2	Pressure Regulator with inbuilt UPSO. Inlet Pressure - 0.5 - 1.0 Kg/cm2. Flow to match the meters.	NEC/ United/ Comap	80	Each		
4.3	10 NB Copper Pipeline imm thick annealed copper tube	NEC/ United/ Comap	400	Rmt		
4.4	P/F 10 NB Flash back arrester of approved make in kitchen	GCE/MESSER	80	each		
4.5	Gas Tap valve	JSI/ Standard/L&T	80	Each		

Sr. No.	Description	Approved Make	Qty	Unit	Rate in figures & words	Amount= (Col 4 x col 6)
1	2	3	4	5	6	7
4.6	Diaphragm Type Gas Meter 1 nos. in each flat in the kitchen.	Raychem/ Comap	80	Each		
4.7	Meter Fitting Set	JSI/ Standard/L&T	80	Each		
4.8	Fittings (painting, paint, display boards, etc.)	Standard	1	Job		

5 Gas Alram at Gas Bank						
5.1	a) Gas Alarm Panel 1 channel b) LED Display (Power Supply 230V c) Gas Detector Explosive proof Industrial Grade, GR 11A & 11B d) External Siren e) Powder Coated Stand f) 4 Core 1.559mm FRLS, ISI (10m).	Standard	1	Job		
5.2	Automatic Shut off 1" Solenoid Valve Additional	Standard	1	Each		
Gross total						