

# Tender Document

For

SUPPLY, ERECTION AND COMMISSIONING WORKS  
FOR  
FEEDER PIPELINE INCLUDING RELATED CIVIL WORKS  
FOR  
GAUNDAR – MHP(2x50KW)  
(Distt-.RUDRAPRAYAG)

Tender No.05/UREDA/MH-GAUNDAR/RPG/2021-22.



Uttarakhand Renewable Energy Development Agency (UREDA)  
Vikas bhawan, Rudraprayag,

Phone 7351476411, Email-uredarudraprayag@gmail.com

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**Uttarakhand Renewable Energy Development Agency (UREDA)  
Vikas Bhawan, Rudraprayag.**

**Phone 7351476411,Email: uredarudraprayag@gmail.com.**

**Tender Notice NO 05/UREDA/MH-GAUNDAR/RPG/2021-22**

Sealed tenders are invited For the Micro Hydro Project Gaundar from experienced firms/contractors for supply,erection and commissioning and Related civil works for Feeder pipeline and associated materials for MHP in Ukhimath block of Rudraprayag.

The tender document can be obtained from above mentioned office of the undersigned, during office hours on any working day from 26.08.2021 to 8.09.2021 up to 11.00AM by paying the cost of tender document of Rs.2360.00 (Non-refundable) through bank draft in favour of Project officer, UREDA payable at Rudraprayag. Cost of the document can be deposited with tender document in the form of DD as above.

The tenders shall be received at above office up to 12.30 P.M. on 08.9.2021.The tender should be submitted in two separate sealed envelopes. i.e. Part-1 TECHNICAL BID and Part-II FINANCIAL BID. Technical Bid must consist of EMD Bid Declaration of the Tender. The technical bid shall be opened at 2.00 P.M. on 08.9.2021 at above mentioned office. The financial bid of only those tenderers who qualify in technical bid shall be opened on same date or on a latter date for which communication shall be made on Email. The undersigned reserves the rights to reject any or all the tenders in full or parts without assigning any reason.

Project Officer

**TENDER FORM -I**

To,

**Project officer  
Uttarakhand Renewable Energy Development Agency.(UREDA)  
Vikas Bhawan, Rudraprayag.**

**Subject:** Tender for supply,erection and comissioning of Feeder pipeline and Related civil works for Gaundar project, in District Rudraprayag, Uttarakhand.

Dear Sir,

In compliance with your invitation for tender, the undersigned hereby offers supply,erection and comissioning of Feeder pipeline and Related civil works for reconstruction of Gaundar mh project( 2x50 kw) in District Rudraprayag, Uttarakhand in accordance with the provisions of the contract and agrees that upon receipt of written notice of award of the contract and within 07 calendar days, the undersigned will execute contract form in accordance with the tender as accepted.

The undersigned further agrees that if awarded the contract, he will commence this work within 30 days after the date of receipt of notice to proceed with the work and that he will carry out the work within the time limit fixed in accordance with the conditions of the contract.

Earnest Money for Rs (Rupees only) for project is enclosed as bank draft no . ..... Date: ..... Payable at ..... Name of bank .....

Tenderer is

A corporation organized in the state of .....

or

A registered partnership firm consisting of ..... Partners

or

An individual trading house as .....

Signature

Title

Address





## **DECLARATION BY THE TENDERER**

I. /We .....

(Hereinafter referred to as Tenderer) being desirous of tendering for the work, under this tender and having fully understood the nature of the work and having carefully noted all the terms and conditions, specifications etc. as mentioned in the tender document do hereby declare that-

1. The tenderer is fully aware of all the requirements of the tender document and agrees with all provisions of the tender document and accepts all risks, responsibilities and obligations directly or indirectly connected with the performance of the tender.
2. The tenderer is fully aware of all the relevant information for proper execution of the proposed work, with respect to the proposed place of works/ site, its local environment, approach road and connectivity etc. and is well acquainted with actual and other prevailing working conditions, availability of required materials and labour etc. at site.
3. The tenderer is capable of executing and completing the work as required in the tender and is financially solvent and sound to execute the tendered work. The tenderer is sufficiently experienced and competent to perform the contract to the satisfaction of UREDA. The tenderer gives the assurance to execute the tendered work as per specifications, terms and conditions of the tender on award of work.
4. The tenderer has no collusion with other tenderers, any employee of UREDA or with any other person or firm in the preparation of the tender.
5. The tenderer has not been influenced by any statement or promises by UREDA or any of its employees but only by the tender document.
6. The tenderer is familiar with all general and special laws, acts, ordinances, rules and regulations of the Municipal, District, State and Central Government that may affect the work, its performance or personnel employed therein.
7. The tenderer has never been debarred from similar type of work by any Government undertaking/Department. (An undertaking on Stamp paper (Rs.100/- ) in this regard shall have to be submitted)
8. The tenderer accepts that the earnest money may be absolutely forfeited by UREDA if the tenderer fails to sign the contract or to undertake the work within stipulated time.
9. This offer shall remain valid for acceptance for 04 (Four) months from the proposed date of opening of the Technical Bid.
10. All the information and the statements submitted with the tender are true.

**SECTION – I**  
**PART-I**  
**INSTRUCTION TO TENDERER**

- Tender in two parts Part-I for Earnest Money, Technical details and terms and condition and Part-II for price bid should be submitted complete with all respect in all schedules, documents etc. of the tender documents issued by UREDA
- Tenders should be received in UREDA office on the date and time as mentioned in tender form.
- UREDA right to split up the orders to various tenderers and also the right not to accept the lowest or any other tenders or all the tenders in whole or in part without assigning any reason for such non acceptance.
- Any tender not accompanied by earnest money will be disqualified and no further consideration will be given to such tender. Tenderers may note that no relaxation in this regard will be made.
- Validity of the offer will be four months of the date of opening of the tenders. Without this validity the tenders will be rejected.
- Before submission of the tender, tenderers are required to make themselves fully conversant with the technical specification, terms and conditions, so that no ambiguity arises a later date in this respect. The tenderers may visit the proposed site to make them selves fully conversant with the site and offer their rates accordingly.
- All information of the tender shall be in English, information in any other language will be accompanied with its translation in English. Failure to comply with this may disqualify the tender.
- The tender must contain the name, residence and places of business of the person or persons submitting the tender and may signed and sealed by the tenderer with his usual signature.
- If the tenderer find discrepancies in, or omissions from the specifications or other documents or if he is in doubt as to their meaning he should at once intimate UREDA and obtain clarification in writing prior to submitting the tender.
- Any approach from the tender representative or his agent trying to influence the decision on the tender, officially or otherwise, shall render the tender liable to be summarily rejected.
- The price offered should be inclusive of all charges what so ever may be. However break of basic price, excise duty, sales tax, packing forwarding charges, insurance charges, freight, handling and transportation upto the Road Head.
- Tender should be submitted in to two separate sealed envelopes as mentioned below:
- First envelope should bear tender no. and super scribed “ TC- MHP Phase I” should contain earnest money and terms and conditions. All the paper of tender documents except price bid duly signed should be submitted in the first envelope .All financial and technical conditions should be clearly explained and submitted



in the first envelope. Requisite earnest money in the form of cash deposit receipt with UREDA/Bank draft/bank guarantee of a nationalized bank should be attached and pledged in favor of “UREDA –ProjectRudraprayag”.

- Second envelope bearing tender NO. and super scribed “Price Bid- MHP Phase I” should contain only price bid .Any financial conditions , payment terms, rebate etc mentioned in price bid will make the tender invalid . Therefore, it is in the interest of the tenderer not to write anything extra in part -2 except price.
- The procedure of opening of the tender shall be as under :-
  - (b) First envelope bearing tender no. and super scribed “ TC MHP Phase I” shall be opened on the date as mentioned in tender notice by UREDA's Representative in the presence of tenderers who choose to be present
  - (c) Second envelope bearing tender specification number and super scribed “Price Bid- MHP Phase I” shall be opened on the date and time as decided by the tender committee. After opening of FIRST ENVELOPE, second envelope of only those tenderer shall be opened whose part-I/first envelope shall be financially cleared and found technically suitable.
- The tenders must be complete in all technical and commercial respect and may contain certificates, drawings informative literature etc. as required in the specification .Any other quarries made should promptly be replied within following time schedule.
- Telegraphic/ FAX quarry required to be replied by telegram /FAX- 4 days.
- Telegraphic/FAX quarry required to be replied by letter -10 days.
- Quarry letter to be replied by letter 15 days.
- Erasers and other changes should be initiated by the person /persons signing the tender.
- In the event the successful tenderer fails to sign the contract with UREDA of concerned project within specified time or withdraws his offer within the validity period or fails to accept the order for any reason whatsoever, then earnest money deposited by him shall be forfeited by UREDA.
- The tenderer should submit price bid duly signed on the original schedule attached with this tender document. This price schedule shall have to be submitted in second envelope super-scribed as “Price Bid- MHP Phase - I”.
- Each page of this tender document should be signed by the tenderer.

# SECTION – I

## PART II

### GENERAL CONDITIONS OF CONTRACT

#### 1.0 Definitions

1.1 In this contract the following terms shall be interpreted as indicated

- a. The term “UREDA” is Uttarakhand Renewable Energy Development Agency Govt. of UTTARAKHAND.
- b. “Purchaser” and or “Owner” means UREDA. Uttarakhand Renewable energy Development Agency.
- c. “Contractor”, “Bidder”, “Supplier” and “Tenderer” are synonymous and mean the person or persons, firm, company or consortium with whom UREDA has entered into a contract and includes the contractor's authorised personal representatives, successors and permitted assigns.
- d. “Engineer” means designated representative of UREDA to act as Engineer for the purpose of the contract.
- e. “Equipment” means and includes machinery, apparatus, materials, articles and things of all kinds to be provided under the contract, which will form part of the permanent works.
- f. “Work”, “Works” or “Permanent Works” means the work to be executed and includes all material /equipment to be supplied in accordance with contract.
- g. “Contract” means the agreement entered into by the UREDA and the contractors.
- h. “Contract Price” is the sum based on the form of tender as defined in the agreement.
- i. “Govt. ” means Government of Uttarakhand .
- j. “UPCL” means Uttarakhand Power Corporation Ltd.
- k. “Final Contract Price” means the aggregate of
  - (1) The contract price
  - (2) The amounts payable to the contractor in accordance with clause of the general conditions.
  - (3) The amounts payable to the contractor in respect of work performed on day work basis in accordance with General and Special Conditions subject to the deduction of any amounts due to UREDA by the contractor in accordance with the contract.
- l. “Constructional Plant” means all appliances or things of whatsoever nature required in or about the execution, maintenance or completion of the temporary works (as hereinafter defined) and execution and completion of the works but does not include for materials or other things intended to form or forming parts of the permanent works.

- m. “Temporary Works” means all temporary works of every kind required in or about the execution, maintenance or completion of the works but not forming part of the permanent works.
- n. “Drawings” means the drawings referred to in the specification and any modification of such drawings approved in writing by the engineer and such other drawings as may be furnished or approved in writing by the engineer from time to time and drawings referred by the supply along with the drawings.
- o. “Site” means the actual place or places to which equipment is to be delivered and/or where work is to be done by the contractor, together with so much of the area surrounding the said places as the contractor shall with consent of the engineer actually use in the connection with the works otherwise than merely for the purposes of the access to be said place or places.
- p. “Approved” means approved in writing, including subsequent written confirmation of previous verbal approval and (approval) means approval in writing including as aforesaid.
- q. “Specified” means as stated in any part of these general and special condition of contract and the associated technical specifications.
- r. “Taking Over” signifies that construction; fabrication, erection, performance tests and adjustments have been satisfactorily completed.
- s. “Warranty Period” is the twelve-month period following taking over during which the contractor guarantees the works against defects in design material and workmanship.
- t. “Final Acceptance Certificate” means the official notification by the UREDA to the contractor issued at the end of the warrantee period which indicates that the contractor has completed his obligation under the contract and that the payment of outstanding money due under the terms of the contract is justified.
- u. “Month” means English calendar month.  
“Week” means seven consecutive days.
- v. “Day” means calendar day.
- w. “Writing” includes any manuscript, typewritten or printed statement, under seal or hand.
- x. “Specifications” means “Technical Specifications” and the drawings forming part of this document.
- y. “Payment Certificate” means a certificate issued by the UREDA and/or, the engineer assigned by the UREDA confirming that the money claimed on a contractors invoice are correct and the claim for payment is justified under the terms of the contract.
- z. “Taking Over Certificate” means a certificate issued by UREDA and signed by engineer.
- aa. “Award”, “Accept” or “Letter of intent” means the official notice issued by the UREDA notifying the contractor that his tender has been accepted.
- bb. The works “Approved”, reasonable, suitable, acceptable, proper, satisfactory or works of like effect and import unless otherwise specified herein, means approved,

reasonable, suitable, acceptable, proper or satisfactory in judgement of the UREDA or engineer and is intended only to the extent of the judging compliance with the terms of the contract none of these terms implies that the UREDA or the engineer has any authority or responsibility for supervision of the contractors forces. Such supervision and the sole responsibility being strictly reserved for the contractor. .

- cc. “Consulting Engineer/Consultant” shall mean the experts empowered and duly appointed as such from time to time by the UREDA.

The headings or marginal notes in the contract document shall not be deemed to be part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.

## **1.2 Eligible Bidders**

The bidder shall provide satisfactory evidences concerning the following that

1. He is a firm, contractor, manufactures, supplier who have executed similar related works in other department or has completed at least one Hydro power project of similar or above capacity.
2. Has adequate financial stability and status to meet the financial obligations pursuant to the scope of works.
3. Has adequate field service setup to provide necessary field execution and after sales service support.
4. Has minimum turnover of over Rs.30 lac. each year during last 3 Years.

The above requirements are minimum and UREDA reserve the right to request for any additional information and also reserves the right to reject the proposal of any.

These general conditions shall apply to the extent that provisions in other parts of the contract do not supersede them.

## **1.3 Standards**

The goods supplied and works executed under this contract shall confirm to the standards mentioned in the technical specification and when no applicable standard is mentioned to the authoritative standard appropriate to the goods, the latest version of Indian Standard Institution or Bureau of Indian Specification shall be applicable.

## **1.4 Use of Contract and Information**

The tenderer shall not, without the UREDA's prior written consent, disclose the contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the purchaser in connection therewith, to any person other than a person employed by the tenderer in the performance of the contract. Disclosure to any such employed person shall be made in confidence and shall extensionally so far as may be necessary for purpose of such performance.

The tenderer shall not, without the UREDA's prior written consent, make use of any document or information enumerated in Para 1.4 except for purposes of performing the contract. Before Participating tender Tenderer should have duly phycial verify to the project site.

Any document, other than contract itself, shall remain the property of the UREDA and shall be returned (in all copies) to the purchaser on completion if so required by the tenderer.

### **1.5 Patent Rights and Royalties**

The tenderer shall indemnify the UREDA against all third party claims of infringement of patent, royalties, trademarks or industrial design rights arising from use of the goods, drawing or any part thereof.

### **1.6 Inspections and Tests**

The purchaser or its representative shall have the right to inspect and / or to test the goods to confirm their conformity to the contract. The special conditions of contract and/or the technical specifications shall specify what inspections and tests the purchaser requires and where they are to be conducted. The purchaser shall notify the supplier in writing of the identity of any representative retained for these purposes.

The inspections and tests may be conducted on the premises of the supplier or its sub-contractor(s), at point of delivery and/or at the good's final destination, where conducted on the premises of the supplier or its sub-contractor(s), all reasonable facilities and assistance including access to drawing and production data shall be furnished to the inspectors at no charge to the purchaser. Expenditure so occurred for such inspection shall be accountable to the contractor and no claim on such purpose will be entertained by the UREDA.

Should any inspected or tested goods fail to conform to the specifications, the purchaser may reject them and the supplier shall either replace the rejected goods or make all alternations necessary to meet specifications requirements free of cost to the purchaser.

Nothing in clause 1.6 shall in any way release the supplier from any warranty or other obligations under this contract.

### **1.7 Packing, Forwarding**

Contractors, wherever applicable, shall after proper painting, pack and crate all equipment in such a manner as to protect them from deterioration and damage during rail and road transportation to the site and storage at the site till the time of erection. The contractor shall be held responsible for all damages due to improper packing.

The contractor shall notify the UREDA of the date of each shipment from his works, and the expected date of arrival at the site for the information of the owner.

### **1.8 Demurrage, Etc.** All demurrage, and other expenses incurred due to delayed

Clearance of the material or any other reason shall be to the account of the contractor.

### **1.9 Insurance**

The goods supplied under the contract shall be fully insured against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery, erection and commissioning.

The contractor shall get insured Electro-Mechanical equipment and materials at its cost in the name of the UREDA in such insurance company or companies as may be approved by the UREDA against loss or damage caused by fire, burglary, flood, earthquake and riot and such other risks as the UREDA may require during the period of its storage, erection and commissioning by the contractor and shall deliver the insurance policy or policies in respect thereof to the UREDA before any payment as aforesaid is made to the contractor for the same. The contractor will pay all premium and sums of money for keeping such insurance a foot and will deliver to the UREDA receipts for every such payment within seven days after the same shall have become due. If the contractor shall neglect or refuse to effect such insurance as aforesaid or to keep the same on foot by making payments as aforesaid or fails to deliver such receipt as aforesaid to the UREDA, it shall be lawful for the UREDA to insure all the aforesaid equipment and materials to the amount aforesaid or to the amount of any deficiency at the cost of the contractor and to pay all premium on such insurance. The contractor will within ten days on demanded from the UREDA repay to the UREDA all money expended by the UREDA, in or about the aforesaid insurance and all other costs and expenses properly incurred by them hereunder and will pay interest at the prevalent bank lending interest rate upon any such sum until the same shall have been repaid by the contractor to the UREDA failing which the UREDA may recover the said amount from the security deposit or any other money due to the contractor under this contract or under any other contract with the UREDA or the government of Uttarakhand.

**1.10 Transportation :**The tenderer is required under the contract to deliver the goods to the project site. For community participation project, the material shall be transported from road head to the project sites by the Urja samiti of concern projects on its own cost under the supervision of the contractor / Bidder. In case of Rongkong project contractor shall arrange transport of material upto the project Site as its implementation is being done totally by the department/ UREDA..

**1.11 Spare Parts**

The supplier may be required to provide any or all of the following materials and notifications pertaining to spare parts manufactured or distributed / supplied by the supplier.

- i. Such spare parts as the UREDA may purchase from the supplier provided that this selection shall not relieve the supplier of any warranty obligations under the contract and
- ii. In the event of termination of production of the spare parts.
- iii. Advance notification to the UREDA of the pending termination, in sufficient time to permit the UREDA to procure needed requirements and

**1.13 Contract Performance Security Deposit**

As a contract security, the successful tenderer, to whom the work is awarded shall be required to furnish 3% Performance Security Deposit in favour of the project officer ureda Rudraprayag a contract performance Security deposited shall be treated as performacet guarantee & shall be released after Fifteen Month From completion of the work.

#### **1.14 Prices**

The price quoted for supply of equipments should be firm F.O.R. including excise duty, packing and forwarding, sales tax (at concessional rate applicable to govt. Department), freight, insurance and handling charges. The item wise prices shall be given in proformas (schedules of prices) given in section VII, indicating clearly the prices F.O.R. site head i.e. basic price, Packing and forwarding, Sales Tax, excise duty, freight, insurance and handling charges and freight from road side to site etc.

The concessional sales tax as applicable to govt. Department against various forms shall be paid at actuals.

The income tax and sales tax on works shall be deducted from the bill of the contractor as per Government rules applicable at the time of payment.

Price variation shall not be applicable.

#### **1.15 Delivery/ completion period**

The commencement of delivery/ project completion period shall be 4 months and shall be counted from the date of issue of letter of intent or date of signing of contract, whichever is earlier. The date of receipt of material in purchaser's store shall be deemed to be the date of delivery.

The delivery should be affected in serviceable lots/ sets of equipment. In case of part dispatch, the delivery shall be deemed to have been effective when last component/ part of the equipment of serviceable lot /set has been delivered.

#### **1.16 Negligence**

If the Contractor shall neglect to execute the work with due diligence and expedition or shall refuse or neglect to comply with any reasonable orders given to him in writing by the Engineer in connection with the work or shall contravene the provisions of the Contract, the Purchaser may give notice in writing to the Contractor calling upon him to make good the failure, neglect or contravention complained of. Should the Contractor fail to comply with such notice within a period considered reasonable by the Purchaser from the date of service there of, in the case of failure, neglect or contravention capable of being made good within that time or otherwise within such time as may in the opinion of the Purchaser reasonable necessary for making it good, then and in such case of Purchaser shall have the option and be at liberty to take the work wholly, or in part, out of the Contractors hand and may carry on the work necessary to complete the work envisaged in the Contract either by himself or his agents or may reconstruct at reasonable price with any other person or persons to execute the same or any part there of and provide any other materials tool, tackle or labour for the purpose of completing the works of any part thereof. In such event the Purchaser shall without being reasonable to Contract, for fair wear and tear of the same be entitled to seize and take possession and have free use of all materials, tools, tackle or other things which may be on site, for use at any time in connection with the work to the exclusion of any right of the Contractor over the same and the Purchaser shall be entitled to retain and apply and balance sum which may otherwise be then due on the Contract by him to the Contractor or such part there

as may be necessary, to the payment of the cost of execution of such work aforesaid.

If the cost of executing the work as aforesaid shall exceed the balance due to the Contractor and the Contractor fails to make good the deficit, the said materials, tools, tackle, construction plant or other things, the property of the Contractor as may not have been used up in the completion of the works may be sold by the purchaser and proceeds applied towards the payment of such difference and the cost of any incidental to such sale. Any outstanding balance existing after crediting the proceeds of such sale shall be paid by the Contractor on the certificate of the Engineer, but when all expenses costs and charges, incurred in this completion of the work are paid by the Contractor, all such materials, tools, tackle, construction plant or other things not used upon in the completion of the works and remaining unsold shall be removed by the Contractor. If the proceeds of the above sale of the Contractor's materials, tools, tackle, construction plant, etc. are insufficient to cover the cost of executing the aforesaid work, the balance remaining after crediting the proceeds of such sale shall be recoverable from the Contractor by action of law.

**1.17 Quantity**

The requirement mentioned in the schedule of quantity is tentative and is subject to increase or decrease at the time of finalizing the tender.

**1.18 Raw Materials**

No materials shall be arranged by the Purchaser/Corporation. Tenderers shall have to arrange the requirements of raw materials themselves.

**1.19 Warranty**

- i. The tenderer warrants that the Goods supplied under the contract are new, unused, of the most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the contract. The tenderer further warrants that the goods erected under this contract shall have no defect arising from design, materials or workmanship (except insofar as the design of material is required by the UREDA's specifications) or from any act or omission of the tenderer, that may develop under normal use of the supplied Goods in the conditions obtaining in the country of final destination.
- ii. This warranty shall remain valid as specified in Part-III. Special conditions of contract after the goods, or any portion thereof as the case may be, have been erected and commissioned.
- iii. The UREDA shall promptly notify the tenderer in writing of any claims arising under this warranty.
- iv. Upon receipt of such notice, the tenderer shall, with all reasonable speed repair or replace the defective Goods or parts thereof, without costs to the UREDA.
- v. If tenderer fails to remedy the defect(s) within a reasonable period, the UREDA may proceed to take such remedial action as may be necessary, at



the tenderer's risk and expense and without prejudice to any other rights which the UREDA may have against the tenderer under the contract.

### **1.20 Change Orders**

The UREDA may at any time, by a written order given to the tenderer make changes within the general scope of the contract in any one or more of the following:

- i. Drawings, designs or specifications, where Goods to be furnished under the contract are to be specifically manufactured for the UREDA.
- i. The method of transportation packing:
- iii. The services to be provided by the tenderer.
- iv. If any such change causes an increase or decrease in the cost of, or the time required of, the tenderer's performance of any part of the work under the contract, whether changed or not changed by the order, an equitable adjustment shall be made in the contract price or commissioning schedule or both, and the Contract shall accordingly be amended. All claims by the tenderer for adjustment under this clause must be asserted within thirty (30) days from the date of the tenderer's receipt of the UREDA's change order.

### **1.21 Subcontracts**

The tenderer shall notify the UREDA in writing of all subcontracts awarded under the Contract if not already specified in his bid. Such notification, in his original bid or later, shall not relieve the tenderer from any liability or obligation under the Contract.

### **1.22 Payment Terms:** The payment to the contractor shall be made through crossed cheque/RTGS/NEFT or bank demand draft as per schedule mentioned below

1. 30% cost shall be paid against the dispatch of material and after receiving the material at road head site of the project with duly stored.
2. 60% costs of works shall be paid after Supply,Erection,laying welding,commissioning and Testing, completion of the work.
3. 10 % costs of works shall be paid after one year completion of the work.

### **1.23 Delays in the Tenderer's Performance**

1. Performance of Services shall be made by the tenderer in accordance with the time schedule specified by the UREDA in its schedule of Requirements.
2. An executed delay by the tenderer in the performance of its delivery obligations shall render the tenderer liable to any or all of the following sanctions; forfeiture of its performance security, imposition of liquidated damages, and / or termination of the Contract for default.

3. If at any time during performance of the Contract, the contractor or its subcontractor(s) should encounter conditions impeding timely delivery of the services, the contractor shall promptly notify the UREDA in writing of the fact of the delay, its likely duration and its cause's. As soon as practicable after receipt of the contractor notice, the UREDA shall evaluate the situation and may at its discretion extend the contractor time for performance, in which case the extension shall be ratified by the parties by amendment of the contract.

**1.24 Liquidated Damages :** If the contractor fails to perform the services within the time period(s) specified in the Contract, the UREDA shall, without prejudice to its other remedies under the Contract, deduct from the Contract price, as liquidated damages, a sum equivalent to 1/2 percent of the price of the unperformed services for each week of delay or part there of until actual performance, up to a maximum deduction of 10% of the delayed services contract price. Once the maximum is reached, the UREDA may consider termination of the contract.

**1.25 Termination for Default**

1. UREDA without prejudice to any other remedy for breach of contract by written notice of default sent to the contractor terminate the contract in whole or in part.
  - 1 If the contractor fails to deliver the Services within the time period(s) specified in the contract, or any extension thereof granted by the purchaser or
  - 2 If the contractor fails to perform any other obligation(s) under the contract.
  - 3 In the event the UREDA terminates the contract in whole or in part, the UREDA may get upon such terms and in such manner, as it deems appropriate, services similar to those executed and the supplier shall be liable to services any excess costs for such similar. However, the contractor shall continue performance of the contract to the extent not terminated.

**1.26 Force Majeure**

Force Majeure is herein defined as any cause which is beyond the Control of the Contractor or the Owner as the case may be which they could not foresee or with a reasonable amount of deligence could not have foreseen and which substantially affect the performance of the Contract, such as:

- (a) Natural phenomena, including but not limited to floods, draughts, earthquakes and epidemics:
- (b) Acts of any Government, domestic or foreign, including but not limited to war, declared or undeclared, priorities, quarantines, embargoes:  
Provided either party shall within fifteen (I 5) days from the occurrence of such a cause notify the other in writing of such causes.

The contractor or the owner shall not be liable for delays in performing his obligations resulting from any force majeure cause as referred to and or defined above.

The date of completion will, subject to hereinafter provided, be extended by a reasonable time even though such cause may occur after contractors performance of his obligations has been delayed for other causes.

#### **1.27 Termination for Insolvency**

UREDA may at any time terminate the contract by giving written notice to the contractor without compensation to the contractor, if it becomes bankrupt or otherwise insolvent, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will occur thereafter to the UREDA.

#### **1.28 Termination for Convenience**

1. The purchaser, may in written notice sent to the supplier, terminate the contract, in whole or in part at any time for its convenience. The notice of termination shall specify the termination is for the purchaser's convenience, the extent of which performance of work under the contract is terminated, and the date upon which such termination becomes effective.
2. The Goods that are complete and ready for shipment within 30 days and also the work which are to be completed with in 30 days after the supplier's receipt of notice of termination shall be purchased/ paid by the purchaser at the contract terms and prices. For the remaining goods, the purchaser may reject.

#### **1.29 Resolution of Disputes / Arbitration**

1. The purchaser and the supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the contract.
2. If after thirty (30) days from the commencement of such informal negotiations, the purchasers and the supplier have been unable to resolve amicably a contract dispute, all such matter shall be referred in writing to the sole arbitration of the Principal Secretary/Secretary, Renewable Energy Department, Govt. of Uttarakhand, Dehradun or a person nominated by him.
3. Subject to aforesaid, the Arbitration Act, 1996 and the rules there under or any statutory modifications thereof for the time being in force shall be deemed to apply to the arbitration proceedings under this clause.
4. Work under the contract shall if reasonably possible, continue during the arbitration proceedings and due if any, payable by the purchaser to the contractor with respect to the work not in dispute shall not ordinarily be withheld on account of such proceedings unless it becomes necessary to withhold the same.
5. The proceedings, if any, in relation to the arbitration referred to above, shall be held by the arbitrator aforesaid at Dehradun and all legal proceeding, if any, arising out of and in connection with the said clause shall be in the course of competent jurisdiction at Nainital/Dehradun in the state of Uttarakhand.

6. No decision given by the engineer in accordance with the forgoing provisions shall disqualify him as being called as a witness or giving evidence before the arbitrators on any matter whatsoever relevant to the dispute of difference referred to the arbitrators as aforesaid.

### **1.30 Measurement of Parameter of Power House (Performance)**

1. Power generation will be measured in kilowatt hour on the control panel. Similarly frequency, voltage, current will also be measured on control panel.
2. Head at inlet of turbine shall be measured by pressure gauge.
3. Discharge by the rectangular notch plate located on tail race
4. Speed shall be measured by tachometer. The contractor will arrange the required measuring instruments and facility at site.
5. The performance figures in respect of output, efficiency and guarantee there of would be as per the technical specification of the system.

### **1.31 Governing Language and Measures**

The contract shall be written in the language of the bid i.e. English as specified by the purchaser in the instructions to Bidders that English version of the Contract shall govern its interpretation. All correspondence and other documents pertaining to the contract, which are exchanged by the parties, shall be written in that same language. Metric system of standards shall be used exclusively in the contract.

### **1.32 Applicable Law**

The contract shall be interpreted in accordance with the laws of the purchaser's country i.e. India. The station of purchaser Headquarter Dehradun shall have exclusive jurisdiction in all matters arising under this contract.

### **1.33 Notices**

Any notice given by one party to the other pursuant to the contract shall be sent in writing or by telegram or fax / cable and confirmed in writing to the address specified for that purpose in the special condition of contract.  
A notice shall be effective when delivered or on the notice's effective date which ever is later.

### **1.34 Duties and Taxes**

Stamp duty and taxes required as per Govt. rule shall be deposited by contractor to Govt. account and certificate of this reference should be produced to UREDA.

### **1.35 Tenderer to Inform Himself Fully**

The tenderer shall be deemed to have carefully examined all tender documents to his entire satisfaction. If he shall have any doubt as to the meaning of any portions of the tender document, he shall before signing the contract, set forth the partitions thereof and submit them to the purchaser in writing, in triplicate, in order that such doubt may be removed, the purchasers will provide such clarifications as may be necessary, in writing to the tenderers. Any information otherwise obtained from the engineer shall not in any way relieve the tenderer of his responsibility to fulfill the obligations under contract.

# **SECTION -I**

## **PART III**

### **SPECIAL CONDITIONS OF CONTRACT**

**1.0** The following special conditions of contract shall supplement the general condition of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract.

**1.1 Inspection and Tests**

The following inspection procedures and tests are required by the Purchaser in the presence of UREDA's representative if so desired by UREDA.

**Inspection at works**

The Purchaser, his duly authorized representative and/or an outside inspection agency acting on behalf of the purchaser shall have at all reasonable times access to the Supplier's premises or works and shall have the power at all reasonable times to inspect and examine the materials and workmanship of the works during its manufacture or erection and if part of the Works is being manufactured or assembled in other premises or works, the Supplier shall obtain for the Purchaser and for his duly authorized representative, permission to inspect as if the Works were manufactured or assembled in the Supplier's own premises or works.

The Supplier shall give the Purchaser/Inspector 1 month's written notice of any material being ready for testing. Such tests shall be to the Supplier's account except for the expenses of the Inspector. The Purchaser/Inspector, unless witnessing of the tests is virtually waived will attend such tests within 15 (fifteen) days of the date on which the equipment is notified as being ready for test/inspection.

The Purchaser or Inspector shall within 15 (fifteen) days from the date of inspection as defined herein give notice in writing to the Contractor, of any objection to any drawings and all or any equipment and workmanship which in his opinion is not in accordance with the Contract. The Contractor shall give due consideration to such objections and shall either make the modifications that may be necessary to meet the said objections or shall confirm in writing to the Purchaser/Inspector giving reasons therein that no modifications are necessary to comply with the Contract.

When the factory tests have been completed at the supplier or Sub-Contractor's work the Purchaser/Inspector shall issue the dispatch instruction after completion of tests but if the tests are not witnessed by the purchaser/Inspector than the dispatch instructions shall be issued after receipt of Test certificates of the concerned equipment by the purchaser / Inspector and it's checking thereon. Failure of the purchaser/Inspector to issue of dispatch instructions shall not prevent the supplier from proceeding with the works. The completion of these tests or the issue of the dispatch instruction shall not bind the purchasers to accept the equipment should it, on further tests after erection is found not to comply with the contract.

In all cases where the contract provides for tests whether at the premises of works of the supplier or of any Sub Contractor, the supplier, except where otherwise specified, shall provide free of charge such items as labour, materials, electricity, fuel, water, stores, apparatus and instruments as may be reasonably demanded by the Purchasers / Inspectors or his authorized representative to carry out effectively such tests of the equipment in accordance with the contract and shall give facilities to the purchaser /inspector or to his authorized representative to accomplish testing.

The inspection by purchaser / Inspector and issue of dispatch instruction there on shall in no way limit the liabilities and responsibilities of the Supplier in respect of the agreed quality assurance program forming a part of the contract.

## **1.2 Warranty Quality**

The supplier shall warrant as per standards for quality that anything to be furnished hereunder shall be free from all defects and faults in material, workmanship and manufacture, shall be of the highest grade and consistent with established and generally accepted standards for material of the type ordered, shall be in full conformity with the specifications, drawings or samples, if any and shall if operable, operate properly. This warranty shall survive inspection of, payment for and acceptance of the goods, but shall expire (except in respect of complaints of which the supplier has been notified period to such date) after the period or date specified in sub-clause hereof).

## **1.3 Notices**

For the purpose of all the notices, the following shall be address of the purchaser and supplier.

**Purchaser:** - Uttarakhand Renewable Energy Development Agency, Rudraprayag. Uttarakhand.

**Supplier:** - -----(to be filled in at the time of contract signature)

## **1.4 Time - The essence of contract**

The time and the date of completion of the Works as stipulated in the Award Letter, shall be deemed to be the essence of the contract. The supplier shall so organize his resources and perform his work as to complete it not later than 3 months.

## **1.5 Delays by the Purchaser or his Authorized Agents**

In case the Supplier's performance is delayed due to any act of omission on the part of the purchaser or his authorized agents, then the Supplier shall be given due extension time for the completion of the work to the extent such omission on the part of the purchaser has caused delay in the Supplier's performance of his work. Regarding reasonableness or otherwise of the extension to the time, the decision of the Engineer shall be final.

In addition, the supplier shall be entitled to claim demonstrable and reasonable compensation if such delays have resulted in any increase in the cost. The Engineer shall examine the justification for such a request for claim, and if satisfied, the extent of compensation shall be mutually agreed depending upon the circumstances at the time of such an occurrence.

## **1.6 Deductions from Contract Price:**

All costs, damages or expenses which the purchaser may have paid, for which under the contract the Supplier is liable, will be claimed by the purchaser. All such claims shall be billed by the purchaser to the Supplier regularly as and when they fall due. Such bills shall be supported by appropriate and certified vouchers and explanations to enable the Supplier to properly identify such claims, shall be paid by the Supplier within 15 (fifteen) days of the receipt of the corresponding bills and if not paid by the Supplier within the said period, the purchaser may then deduct the amount, from any moneys due or becoming due to the Supplier under the contract or may be recovered by actions of law or otherwise, if the Supplier fails to satisfy the purchaser of such claims.

## **1.7 Engineer's Supervision:-**

All the work shall be carried out under the direction and to the reasonable satisfaction of Engineer. The Supplier shall be responsible for the correctness of the positions, levels dimensions of the works according to the drawing with not standing that he may have been assisted by the Engineer in setting out the same.

## **1.8 Engineer's Decision**

In respect of all matters, which are left to the decision of the Engineer including the granting or withholding of the certificate, the engineer shall, if required to do so by the contract give in writing a decision thereon.

If in the opinion of the Supplier, a decision made by the Engineer is not in the accordance with the meaning and intent of the contract, the Supplier may file with the Engineer within 15 (fifteen) days after receipt of the decision, a written objection to the decision. Failure to file an objection within the allotted time will be considered as acceptance of the Engineer's decision and the decision shall become final and binding.

The Engineer's decision and the filling of the written objection there to shall be a condition precedent to the right to request arbitration. It is the intent of the agreement that there shall be no delay in the execution of the works and the decision of the Engineer as rendered shall be promptly observed.

## **1.10 Co-operation with other contractor and Consulting ENGINEERS**

The Supplier shall agree to co-operate with the purchaser's other contractors and consulting Engineers and freely exchange with them such technical information as is necessary to obtain most efficient and economical design and to avoid unnecessary duplication of efforts. The Engineer shall be provided with three copies of all correspondence addressed by the Supplier to other sub-contractor and consulting Engineer in respect of such exchange of technical information.

## **1.11 No Waiver of Rights**

Neither the inspection by the purchaser or the Engineer or any of their officials, employees, or agents not any order by purchaser or the Engineer for payment of money or any payment for or acceptance of, the whole or any part of the works by the purchaser or the Engineer, nor any extension of time, nor any possession taken by the engineer shall operate as a waiver of any provision of the contract, or of any power herein reserved to the purchaser, or any right to damages herein provided, nor shall any wavier of any breach in the contract be held to be a wavier of any other or subsequent breach.

### **1.12 Liability for Accidents and Damages**

Under the contract, Supplier shall be responsible for loss or damage to the plant until the plant is taken over. The supplier shall also, during the warranty period, assume all responsibilities for direct damages covering personal injury, or property damage caused by manufacturing defects or faulty erection resulting on the failure of the equipment being supplied.

### **1.13 Grafts and Commissions etc**

Any graft, commission, gift or advantages given, promised or offered by or on behalf of the Supplier or his partner, agent, officer, director, employee or servant or any one of those on their behalf in relation to the obtaining to the execution of this or any other contract with purchaser shall in addition to any criminal liability which it may incur, subject the Supplier to the cancellation of this and all other contracts and also to payment of any loss or damage to the purchaser resulting from any cancellation. The purchaser shall then be entitled to deduct the amount so payable from any moneys otherwise due to the Supplier under the contract.

### **1.14 Suspension of Work**

The purchaser reserves the right to suspend and reinstate execution of the whole or any part of the works without invalidating the provisions of the contract. The Engineer will issue orders for suspension or reinstatement of the work to the Supplier in writing. The Engineer will issue the time for completion of the works to the Supplier in writing. The time for completion of the works will be extended for a period equal to duration of the suspension.

The purchaser will pay any necessary and demonstrable costs incurred by the Supplier as a result of such suspension of the works provided such costs are sustained to the satisfaction of the Engineer. The purchaser Shall not be responsible for any liabilities if suspension or delay is due to some default on the part of the Supplier or his sub-contractor.

### **1.15 Defense or Suits**

If any action in court is brought against the purchaser or Engineer or an officer or agent of the purchaser, for the failure or neglect on the part of the Supplier to perform any acts, matters, covenants or things under the contract, or for damage or injury caused by the alleged omission or negligence on the part of the Supplier, his agents, representatives or his-contractors, or in connection with any claim based on lawful demands of sub-contractors workmen. Suppliers or employees, the supplier shall in all such cases indemnify and keep the purchaser, and the Engineer and/or his representatives harmless from all losses, damages expenses or decrees arising of such action.

### **1.16 Legal Formalities / Clearances**

All legal formalities/clearances regarding electrical safety & royalties etc. are to be obtained by the tenderer before the operation of powerhouse. The tenderer shall comply with Indian Electricity Act and the rules made there under. He will also comply with the rules framed by the Govt. of Uttarakhand, enforced by the Director, Electrical Safety (U.K.) General condition of Contract, Special Condition of Contract, Technical Specifications and drawings, Price Schedule and salient features of site, are the part of this Contract.



## **SECTION - II**

### **PART-I**

#### **GENERAL TECHNICAL SPECIFICATIONS & SCOPE OF WORK**

##### **1. INTRODUCTION & SCOPE OF WORK**

The contract includes the Supply of mild steel Feedar Pipeline pipe (5.0 mm thick) and other related material for on-going Micro hydel projects in Ukhimath block of Rudraprayag. This includes, manufacturing, supply, testing, transit insurance covering all risks, packing, shipment, delivery to project site of road head, The Material/equipments will be offered based on standard design. The details of project wise requirement & respective location are mentioned below.

Sl.NO	Project Name	capacity	Size mm (ID)	Qty. length, Mtre
1.	Gaundar	100 Kw	650	125

##### **2. ACCESS**

The contractor will clear access path (Katcha Path). The sites are remotely located. The detailed distances are available& mentioned.

##### **3. SITE BUILDING, STORAGE, WORKSHOPS**

No site office/ residential facility shall be provided by the purchaser. Contractor has to make his own arrangements for boarding/lodging/office, store shall be arranged by urja Samiti for safeguard of material supply at road head.

##### **4. POWER AND WATER SUPPLIES**

It should be clearly understood by the tenderer that these sites are located in remote area of Rudraprayag district in Hills and does not have public power supply and water supply.

##### **5.0 FABRICATION AND ERECTION OF FEEDAR PIPE LINE**

##### **5.1 GENERAL**

The scope of these specifications covers complete design, fabrication, supply, transportation to site, erection, testing and commissioning of steel feeder pipe of diameter, as spectified, length as needed to complete the job.

The work of fabrication and erection of steel feeder pipe shall be carried out in accordance with the drawing approved by th Engineer-in-Charge with additions, alterations and modifications made from time to time and also according to any other drawing that may be supplied to the contactor, during the operation of the contract.

This specification covers manufacture, supply, transportation to site, erection, testing and commissioning & whatsoever required for successful commissioning of steel Feedar Pipelines of diameter as specified and their accessories, and of length as specified and of thickness not less than the design thickness including a reasonable allowance for corrosion complete in all respects including painting. All accessories listed here under besides pipes, bifurcation / trifurcation multiple manifold pieces, reducers, bends, make up pieces, valves, steel test bulk heads, required for carrying out hydraulic pressure tests whether in field or workshop shall also be provided and installed by the contractor.

- (i) Manholes with manhole covers.
- (ii) Air vents.
- (iii) Fill pipe and drainage pipe connections.
- (iv) Expansion joints.
- (v) Base plates for Saddles including embedded parts, if any.
- (vi) Flanged connections to match the turbine inlet valve.
- (vii) Piezometric connections, if required.

The work of fabrication and erection of steel Feedar Pipeline shall be carried out in accordance with the drawing enclosed with the tender, with additions alternations and modification made from time to time and also according to any other drawings that would be supplied to the contractor, during execution of contract.

All operations except concreting are covered under these specifications.

## **5.1. RATES**

The quoted rates shall be inclusive of all taxes, duties, levies etc. and should include the cost of materials of approved quality at the work site, furnishing of all T&P, labour and performing all works required for the completion of the work in accordance with the details.

## **5.2 SPECIFICATION**

The item wise detailed specifications are intended for general description of quality, workmanship, etc. desired for the items covered in the schedule of items. The specifications are not however, intended to cover all the minutest details and the work shall be executed according to the spirit of the tender specifications. In absence of specifications, the particular items of work shall be executed as per the relevant I S Codes.

## **5.3 MATERIALS**

### **5.3.1 QUANTITIES**

Quantities are described in **Schedules**

### **5.3.2 MATERIAL SPECIFICATIONS**

The feeder pipe straight pieces and bends shall be fabricated from ERW (electric resistance weld) or spiral welded steel pipes API tested and manufactured, by steel authority of India Ltd (S.A.I.L.). Alternatively, these could be manufactured from M.S. plants conforming to latest edition of I.S.S. (Tested Quality) by cold rolling and welding.

The Feeder pipe-straight pieces and bends shall be fabricated from spiral welded steel pipes API tested and manufactured by Steel Authority of India Ltd.(SAIL) or other reputed manufacturer ISPAT, TISCO. Alternatively these could be manufactured from M.S. Plates confirming to latest edition of IS 2002/ASTM-537 CL1(tested quality) by cold rolling and welding. WYE piece (bifurcater) and reducer pieces shall in any case be manufactured from M.S. Plates confirming to latest edition of IS:2002 (tested quality) or as approved by Engineer in contract. If M. S. pipe of required thickness and diameter is not available from SAIL / reputed manufacturer. A certificate has to be furnished by the contractor from original manufacturer / authorised dealer of non-availability and inability to supply the required pipe. All bends and reducers etc shall be fabricated from these pipes / plates etc.The materials and equipment used in the fabrication, manufacture and erection of Feedar Pipeline including welding electrodes bolts, nuts, washers, gaskets painting material etc. shall be of best commercial quality, manufactured by firms of repute and standing and guaranteed for their quality and performance.

### **5.3.3 MATERIAL TESTS**

Manufacturer's test certificates in respect of all materials used in the manufacture/fabrication/erection of Feedar Pipelines shall be submitted by the Contractor in triplicate before using such materials.

### **5.3.4 DESIGN**

Drawings to be executed shall be provided by the UJVN Limited. The design and plate thickness of various pipes, bends, bifurcation / trifurcation pieces, reducers, make up pieces, steel test bulkheads, etc. shown in the specification and drawings are tentative. The contractor shall check the design and work out Feedar Pipeline plate thickness based on the latest guidelines / codes of practice issued by Bureau of Indian Standards and modify the design wherever necessary. The maximum permissible design stresses shall be as mentioned in paragraph.

### **5.3.5 PERMISSIBLE STRESSES**

Stresses in the material used for fabrication shall be limited to the following or as per latest guidelines/CWC Manuals.

- |                                  |                             |
|----------------------------------|-----------------------------|
| (i) Direct compression / Tension | 0.45 of yield point stress. |
| (ii) Tension in bending          | 0.45 of yield point stress. |
| (iii) Shear stress               | 0.35 of yield point stress. |
| (iv) Bearing stress (in steel)   | 0.35 of yield point stress. |
| (v) Bearing stress (in concrete) | 40 Kg/Sq. m.                |

### **5.3.6 LAYOUT**

The setting out for all structures etc. shall be done by the contractor at his own cost by the help of the general grid of the plot and bench marks given by the Engineer -in-Charge. He shall extend all help with instruments, materials and men to the Engineer-in-Charge for checking the layout and levels. The contractor shall be solely responsible for correctness of laying of Feedar Pipeline. The checking and approval by the Engineer-in-Charge will not absolve the contractor from the responsibility or erecting the equipment in true alignment and in accordance with the drawings.

Making benchmark pillars and reference line pillars etc. and maintaining them till the completion of the work shall be the responsibility of the Contractor. No extra payment shall be made for such services.

The contractor shall complete all preliminary work at site well before the arrival of fabricated pipes/manufactured bends, such as, keeping in readiness winches, mobile crane, jig poles, all tools and tackles, welding sets etc. as part of the contract and any other work that may be necessary to start erection immediately after the fabrication.

The contractor shall arrange for adequate number of erection equipment, supervision, labour and other arrangement so as to carry out the work effectively and in the specified time schedule.

### **5.3.9 FABRICATON**

#### **5.3.9.1 PREPARATION**

The fabrication of steel feeder pipe shall be in accordance with these specification and requirements of latest edition of I.S. code.

The fabrication of bends and pipe etc shall be in accordance with these specifications and the requirement of I.S. 2825. Where the requirement of this code is in conflict with the requirement of these specifications, the more stringent conditions of the two shall govern.

Each pipe section shall be made with the minimum number of welds, as the length and size of plates might permit. Normally longitudinal joints shall be located at quarter points and staggered between adjoining sections. Longitudinal joints shall not interest manholes or other outlets, if any. In the case of bens, the longitudinal joints shall be staggered 45° to the plane of bend. The normal length of each section shall be three to five meters. The contractor shall ensure that each shop

fabricated section can be transported to site conveniently and economically and it can be handled for erection safely.

The ends of the pipe sections shall be normal to the axis of the pipe within a tolerance of 2mm on the radius. The edges of the plates of each section shall be properly prepared for in-situ welding.

Plates to be welded shall be cut accurately to size and shape either by gas or machine shearing. Cold shearing may be resorted provided that the sheared edge is cut back through machining or chipping for a distance of one quarter of the plate thickness but in no case less than 3 mm.

Flame cut edges shall be uniform and smooth and shall be free from loose scale and slag accumulations before being welded. All edges shall show sound metal free from lamination, surface cracks and other injurious defects. All plates shall be bent or rolled cold to true circular section, with the curvature continuous from the edges of the plates. Correction of curvature by blows will not be permitted. Particular care shall be taken in matching the edges of adjoining plates and sections to ensure that the inner surfaces of the pipe section are in conformity of a maximum allowable off set at any point by 2 mm. Allowance shall be made for shrinkage due to welding the circumferential joints and care shall be taken to maintain within close tolerance the lengths selected for in-situ assembly so that when the pipes are completely assembled and erected, the overall length will be as shown in the drawings. Ends of adjoining sections to be field welded together shall fit properly and shall not vary in the inside circumference by more than 10 mm.

Ends of adjoining sections, where necessary, shall be machined before welding to make the faces in plane truly normal to the axis of the pipe.

The shell section of the complete Feeder Pipeline (s) shall be circular within the limits specified. Measurement for this purpose shall be made at the surface of the parent metal and not at the weld, fitting or other raised parts. There shall be no flats or peaks at welded seams and any local departure from circularity shall be gradual.

The difference between the maximum and the minimum diameter at any cross-section of shell welded longitudinally shall not exceed 1% of the nominal internal diameter with maximum of  $D1 = 650$  where  $D1$  is the internal diameter in mm.

Before any welding is commenced, it shall be ensured that the prepared edges are in alignment to meet the requirements of the welding process and defects in alignment at the surface plates are not more than:

- i) 10% of the nominal plate thickness with the maximum of 3 mm for longitudinal joints.
- ii) 10% of the maximum nominal plate thickness plus 1 mm with a maximum of 4 mm for circumferential joints.

### **5.3.9.2 Alignment and Tolerances**

Before any welding commences it shall be ensured that the prepared edges are in alignment to meet the requirements of the welding process and defects in alignment at the surface plates are not more than 3% of the maximum nominal plate thickness plus 1mm with a maximum of 4mm for circumferential joints.

### **5.3.9.3 FLANGES, BOLTS, ETC.**

All flanges, including bolts, gasket, piezometer connections and plugs as may be required shall be installed on the steel liner sections as shown on the drawings or as directed by the Engineer-in-Charge.

Bolts, Nuts and Studs shall be made out of steel confirming to IS: 1364 – 1992, IS: 1862 – 1975. Gasket material shall confirm to IS: 638 – 1979.

Flanges required for the Turbine Inlet Valve shall either be procured from the Turbine manufacturer or shall be manufactured by the contractor as per the design and the requirement of the Turbine Inlet Valve. This condition shall also apply to Bolts, Nuts and Gaskets etc.

### **5.3.9.4 BENDS AND FITTINGS**

All Bends, Reducers etc. shall be made up of short segments of pipe with mitered ends. The bends shall be made with equal deflection angle except for the end ones, which shall be half of the deflection of other sections. The number of sections shall be as shown in the drawings.

### **5.3.9.5 EXPANSION JOINTS**

The expansion joints wherever provided for the Feedar Pipeline shall be furnished complete as shown in the approved drawing with bolts, studs, nuts and packing etc. The sleeves of the expansion joint shall be formed accurately to the required dimensions to provide close stuffing boxes for the packing and to ensure watertight joints. While the inner surface of the outer sleeve of the expansion joint shall be machined, the outer surface of the inner sleeve, shall either be given a nickel cladding or machined smooth and metallised with stainless steel (for a distance of 150 mm on either side of packing) to prevent corrosion and facilitate smooth movement of packing. The longitudinal welds on outside of the inner sleeve and inside of the outer sleeve shall be ground flush. The parts shall be carefully fabricated with close tolerance between sliding surfaces with an allowance of 3 mm on the dimensions. The expansion couplings shall be a product of a reputed manufacturer/supplier subject to the approval of the Engineer-in-Charge.

### **5.3.9.6 WELDING**

#### **5.3.9.6.1 GENERAL**

Surfaces to be welded shall be clear and free from mill scale, rust, paint or any other foreign matter. All welding will be performed by electric method using a process, which will exclude the atmosphere from the molten and where practicable automatic welding equipment shall be used. All welding shall be done in accordance with the requirements of fabrication and inspection as specified in the relevant IS codes. All welding electrodes required for the fabrications and installation of the feeder pipe and accessories covered under these specifications shall be furnished by the contractors. Where weld is deposited in successive layers such layers shall be cleaned of all slag and other deposits before the next

layer is deposited. Tack weld joints shall be chipped or flame gouged to sound metal before depositing weld metals to the backsides of joints. Defects in weld shall be chipped or flame gouged until sound metal is reached on all sides and the resulting cavity shall be reworked. The welding of temporary attachments to the feeder pipe sections for the purpose of holding or aligning of sections shall be limited to essential requirements subject to the approval of the Engineer-in-Charge. Careful chipping and flame cutting shall remove all such attachments and welding shall repair any damage to sections, if required. All longitudinal and circumferential welds in the pipe shells and for the ends of stiffener rings shall be of double weld butt joint or single weld butt joint. The root of the welds shall be chipped to clean sound metal and the weld shall then be deposited to obtain and removed by grinding. All welding shall be performed all over and feeder pipe section to be welded shall be protected from excessive cold and humidity. All welds that fail to pass the specified test shall be required to the satisfaction of the Engineer-in-Charge.

#### **5.3.9.6.2 Qualification of Welders**

All welders assigned to manual welding shall have successfully passed the test, conducted by the contractor as prescribed for welder qualification as per IS: 817-1966

#### **5.3.9.6.3 WELDING TESTS IN SHOP**

These tests will be required in case tested spiral-welded pipes or ERW pipes have been used by the Contractor. All circumferential welds made in the shop irrespective of the fact whether feeder pipe are manufactured out of MS Plates or from spiral welded pipes or ERW pipes shall be subjected to one of the two above mentioned tests.

#### **5.3.9.7 UNIT AND MATCH MARKING**

Each part of the steel Feeder Pipeline and its auxiliary part shall be legibly marked to show the unit of which it is a part and match marked to show its relative position in the finished structure to facilitate assembly in the field. Each section shall be marked to show top of vertical diameter and the direction of flow.

The contractor shall prepare marking/drawing of the Feeder Pipeline Assembly indicating clearly the location of each section and appurtenant part in the completed structure and shall furnish the Engineer-in-Charge with such drawings.

#### **5.3.9.8 DISPATCH AND TRANSPORT**

The contractor shall include and provide for securely protecting and packing the equipment so as to avoid damage in transit and shall be responsible for all losses or damage caused by or occasioned by any defect in packing and the Engineer-in-Charge will take no responsibility on this account.

Each piece, sub-assembly or package dispatched separately shall have its identification mark distinctly embossed or painted on its container and shall be labeled or tagged with description label, mentioning the specification/part number, and the mark number of piece or the number of the parts grouped in such assemblies or contained in the package. Each sub-assembly or package shall be prepared so that slings for handling may be attached whenever required.

Wherever it is unsafe to attach slings to the box, the boxed parts shall be packed with slings attached to the parts and the slings shall project through the box so that the attachment is adequately protected against abrasion during transport and all long slender pieces shall be adequately supported and blocked.

All transport and handling from the workshop to the site and from the site store to work-site shall be done by the contractor without any extra charge.

Before dispatch, the contractor shall determine the net weight of each piece or assembly that is to be dispatched as a unit and such finished weight exclusive of boxes, crates or skids shall be furnished to the Engineer-in-Charge and shall be painted on the respective pieces, or assemblies or stated on tags attached thereto.

### **5.3.9.9 PAINTING**

#### **5.3.9.9.1 GENERAL**

The contractor, shall furnish, prepare and supply all materials for cleaning, painting and coating of the feeder pipe and its accessories. Machined start surfaces, screw threads and surfaces that will be in rolling or sliding contact will be shop coated with a rust preventive compound and if painting is required shall be cleaned and painted in accordance with the painting schedule. Cleaning, painting or coating shall be performed prior to, during or after installation of the feeder pipe subject to the approval of the Engineer-in-Charge.

#### **5.3.9.9.2 PAINTING SCHEDULE**

<b>SL. NO.</b>	<b>ITEM</b>	<b>METHOD OF SURFACE PREPARATION</b>	<b>PAINTS OF COATING MARERAIL</b>
01	Machined surfaces that will be in rolling or sliding contact and that will not be lubricated	A	Gasoline soluble rust preventive compound.
02	Exterior surface that will be to atmosphere.	B	1 Red lead priming paint type IV. 2 Phenolic resin aluminum Paint.
03	Exterior surface that will be covered with backfill	B	Relevant American Water Works association specification

#### **5.3.9.10 FINAL ACCEPTANCE**

The final Acceptance of the feeder pipe will be given only after the successful completion of field hydrostatic test for leakage (Leakage test) as specified earlier. This final acceptance will not in any way absolve the Contractor of his responsibility for any damage that may occur to feeder pipe within five year of its commissioning.

### **10. Valves & Gates**

Generally, valves shall be leak-proof in either flow direction (except for non-return valves) when the nominal pressure is applied.

All valves with design pressures higher than PN 10 and diameters larger than DN 100 shall be workshop-tested for tightness and soundness of materials.



Valves shall close clockwise and be provided with position indicators/marks on hand wheel. The drive units of motor-driven valves shall also be provided with hand wheels for manual operation.

To facilitate operation, large valves and gates shall be provided with by-pass lines for pressure balancing, if required.

Valves spindles and pins shall be of stainless steel, spindle nuts and bushes of bronze, the body of cast steel. No valve in cast iron body will be accepted.

All pressure reduction valves; safety valves and similar components shall be workshop-tested and provided with a work certificate

## 10. Tools and Appliances

The scope of work shall include all customary and special tools, as well as auxiliary devices including lifting devices, ropes, etc. necessary for total assembly and disassembly of all parts of the supplied Works. Furthermore, all accessories for maintenance shall be supplied and included in the Tender. The total price for tools and devices as required by this article shall be included in the Total Tender Price.

The special lifting devices and tools designed and supplied for the project, can be used by the Contractor during erection and will be handed over to Purchaser in good working condition without any wear and tear.

All lifting devices and wire ropes slings to be used at site shall be tested at works and test certificate shall be supplied to the Engineer.

## **LIFTING FACILITIES**

The contractor will use his own lifting facilities for erection and for unloading trucks.

## **6. LABOUR, WORK PERMITS, ACCOMODATION AND INSURANCE**

The contractor shall insure the staff for any mishape casualty. The contractor shall make the necessary arrangements for such living accommodation as may be required for his workforce. The contractor shall be responsible for the behavior on site of all personnel employed by him.

## **7. MEDICAL FACILITIES**

The contractor shall make his own arrangements where these services may be required for his expatriate or locally engaged staff at no additional cost to the purchaser. These shall show major dimensions and shall include schedules detailing all items with all relevant information

## **9. SUBMISSION OF DRAWING AND INFORMATION**

The Drawings and Information required by this contract shall be delivered to the Engineer within the reasonable periods after the date of SIGNING THE AGREEMENT.

- iii. Slope

## SALIENT FEATURES (GAUNDAR MHP)

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### 1. GENERAL

**1.1 NAME OF PROJECT** : Gaundar Micro Hydro Project

### 1.2 LOCATION:

- (a) State : Uttarakhand
- (b) District : Rudraprayag
- (c) Block : Ukhimath
- (c) Village : Gaundar
- (d) Access : (i) By Metalled motarable road from  
Rishikesh to Rudraprayag = 145 km  
Rudraprayag to Uniyana = 80 km  
bridle path from Uniyana to power house=10km

#### *Geographical Coordinates*

- (a) Longitude : 79<sup>0</sup>-35'-55" N
- (b) Latitude : 30<sup>0</sup>-35'-50" E
- (c) Reference topo sheets : 53 N/2

### 2. HYDROLOGY

- (a) Name of stream : Morkhanda Gad
- (b) Discharge observed on 25.8.2010 : 2.64 cumec
- (c) Dependable flow as adopted : 0375 cumec  
In Design for power generation
- (d) Type of stream : Perennial

### 3. DIVERSION WEIR

- (a) Type : RR Stone Masonry Gravity type
- (b) Length : 16.00 m

### 4. INTAKE CUM POWER CHANNEL

- (a) Design Discharge : 0.44 m<sup>3</sup>/s
- (b) Length : 150 m
- (c) Bed slope : 1:200
- (d) Shape : Rectangular stone masonry
- (e) Size
  - Width : 0.80 m
  - Total depth : 0.65 m
- (f) Water depth : 0.45 m
- (g) Free board : 0.20 m

## 5. DESILTING TANK CUM FOREBAY

### 5.1 Desilting Tank

(a)	Design discharge	:	0.44 m <sup>3</sup> /s
(b)	Length	:	9.5 m
(c)	Width	:	2.00 m
(d)	Water depth	:	1.0 m
(e)	Free board	:	0.20 m
(f)	Type/ Material	:	R.C.C.

### 5.2 Forebay Tank

(a)	Design discharge	:	0.375 cumec
(b)	Size	:	10.0 m x 3.00 m
(b)	Water Depth	:	1.00 m
(c)	Freeboard	:	0.2 m
(d)	Type/Material	:	R.C.C.

## 6. FEEDAR PIPELINE

(a)	Numbers	:	1 No. with one bifurcation piece
(b)	Diameter Main pipe	:	450 mm (I.D.)
(c)	Thickness	:	4.0 mm (for M.S. pipe)
(d)	Length	:	105.00 m (Approx.)
(e)	Design discharge	:	0.1375 m <sup>3</sup> /s
(f)	Material	:	MS

## 7. POWER HOUSE

(a)	Type	:	Surface p/h, walls of C.C. Blocks (1:3:6) with intermediate R.C.C. columns. Roof covered with GI sheets over steel trusses supported on RCC columns.
(b)	Size	:	11.0 m x 6.0 m x 4.0 m
(c)	Capacity	:	2 x 50 kW
(d)	Gross head	:	54.25 m
(e)	Net head	:	50.45 m

## 8. TAIL RACE

(a)	Design discharge	:	0.375 cumec
(b)	Length	:	50 m
(c)	Shape	:	Rectangular stone masonry
(d)	Slope	:	As per terrain
(e)	Size	:	
	Width	:	0.70 m
	Water depth	:	0.35 m
(f)	Free board	:	0.20 m

## **9.0 ELECTROMECHANICAL EQUIPMENTS**

### **(a) Turbine**

- (i) Type : Cross Flow
- (ii) Number : Two No.
- (iii) Capacity of turbine : 2 x 50 kW

### **(b) Generator**

- (i) Type of generators : Horizontal Synchronous
- (ii) Number : Two Nos.
- (iii) Capacity of Generator : 50 kva, 415 kV, 3 Phase, 0.8 pf

## **10. POWER**

- i. Installed Capacity : 100 kW
- ii. Generation
  - (a) At 90% load factor : 0.788 Million Units
  - (b) At 60% load factor : 0.526 Million Units

## SECTION – VII

### SCHEDULE OF QUANTITIES & PRICES (Financial Bid)

NAME OF WORK- Supply,Erection,Laying,Welding,Commissoning and Testing of Feeder Pipe Line including Related Civil Works For Gaundar (2 x 50 kW) MHP.

Sl. No.	Details of Material/equipment	Prices inclusive of all taxes & duties and freight upto site			
		Qty.	Unit	Rate Rs/ unit	Amount, Rs.
1	2	3	4	5	6
1	Earth work in Excavation in all kinds of soil by mechanical means (Hydraulic excavator)/ manual means over areas (exceeding 30cm in depth. 1.5m in width as well as 10 sqm on plan) including disposal of excavated earth, lead upto 50m and lift upto 1.5m, disposed earth to be levelled and neatly dressed.	17.62	Cum		
	Hard rock (blasting prohibited) Upto 3 m depth including 1.5 m depth in hardrock	15.68	Cum		
2	Providing and laying in position cement concrete 1:3:6 (1 Cement : 3 fine sand : 6 graded stone aggregate 40 mm nominal size) including the cost of centring and shuttering vibrating finishing, curing, T&P etc. as per direction of E/I.	5.19	Cum		
3	Providing RCC. M-20 with nominal mix of (1:1.5:3) with 2 cm down graded, approved coarse aggregates approved coarse sand and cement excluding cost of reinforcement and including shuttering, scaffolding vibrating, providing construction joints, finishing, curings, T&P etc. complete as per direction of E/I.	62.72	Cum		
4	Providing and laying of wire crates 3.00x1.50x1.50 in size with GI wire conforming to IS: 280 & IS:4826 in 150mm x 150mm mesh laid with stone boulders. as per direction of Engineer-in- charge. GI wire 8 gauge BWG	27.00	Cum		
5	Plastering with cement mortar 1:4 (1 cement: 4 fine sand), 15 mm thick on brickwork in substructure as per technical specification Clauses 613.4 & 1204	37.12	sqm		
6	Supplying, fitting and placing HYSD bar reinforcement (Fe 415) in substructure complete as per drawings and technical specification Clauses 1002, 1005, 1010 & 1202	3.16	TON		
7	Supply, Laying , Fixing ,welding and welding of MS Feeder Pipe line 650 mm dia and 5 mm Thick including Paint/Coating outer & innerside as per Scope of Work.	10013.75	KG.		

Sl. No.	Details of Material/equipment	Prices inclusive of all taxes & duties and freight upto site			
		Qty.	Unit	Rate Rs/ unit	Amount, Rs.
1	2	3	4	5	6
			Total Rs.		

## SCHEDULE OF QUANTITIES & PRICES (Financial Bid)

### SECTION –VIII

#### FORMS AND SCHEDULES

This section contains a list of formats for providing various information about the bidder for ascertaining the credentials of the firms and facilitate evaluation of the bid.

The tenderer is required to fill in these formats and submit with Part-I of the tender without which the tender shall be considered as incomplete.

PROFORMA FOR BANK GUARANTEE FOR TENDER GUARANTEE  
(TO BE STAMPED IN ACCORDANCE WITH STAMP ACT)

Ref-----  
Date: -----

Bank Guarantee No. -----

**Sr.Project officer**  
**Uttarakhand Renewable Energy Development Agency,**  
**Vikas bhawan , Rudraprayag.**

Dear Sir,

**In accordance with your invitation to tender under your specification**  
**No. ----- M/s -----,Having its Registered/Head**  
**Office at -----(herein after called the tenderer) with to**  
**participate in the said tender for -----As an irrevocable**  
**bank guarantee for an amount of -----valid for -----days**  
**from -----. Its required to be submitted by the Tenderer as a**  
**condition precedent for participation in the said tender, which amount is liable to be**  
**forfeited on the happening of any contingency mentioned in the tender Documents.**

We, The -----Bank at ----- having our head  
office at -----guarantee and undertake -----(Local  
address) to pay immediately on demand by Sr. Project Officer, UREDA. The amount of -  
----- (in figures and words)

Without any reservation, protest demur and recourse. Any such demand made by said  
Purchaser/Owner shall be conclusive and binding on us irrespective of any dispute or  
difference raised by the tenderer. This guarantee shall be irrevocable and shall remain  
valid upto-----. If any further extension of this guarantee is required, the same be  
extended to such required period (not exceeding one year) on whose behalf this guarantee  
is issued.

In witness where of the Bank, through its authorized officer, has set its hand and stamp  
on this -----day of-----20-----.

WITNESS ----- (Signature)  
----- (Signature)

(Name)  
(Designation with Bank Stamp)  
(Official Address)  
(Official Address)  
Attorney as per  
Power of Attorney No. -----  
Date : -----



FORM OF AGREEMENT

(Referred to clause 3 of Form ‘A’)

THIS AGREEMENT made on the day of 20\_\_ BETWEEN (hereinafter referred to as “the Contractor”) of the one part AND the UREDA (hereinafter called “the purchaser”) of the other part;

WHEREAS the purchaser is about to erect and maintain the Feedar Pipeline material and related other material (hereinafter called “the works”) and for the purpose requires the supply of Feedar Pipeline pipe & other associated material mentioned and specified in certain general conditions, specifications, schedules, drawings, form of tender, covering letter and schedule of prices which, for the purpose of identification, have been signed by ..... on behalf of the Contractor and ..... (the Engineer or the Purchaser) on behalf of the Purchaser all of which are deemed to form part of this Contract as though separately set out herein and are included in the expression “Contract” whenever herein used.

AND WHEREAS the Purchaser has accepted the tender of the Contractor for the supply and delivery of the said plant and machinery for the sum of .....

Upon the terms and subject to the conditions hereinafter mentioned.

NOW THESE PRESENT WITNESSES and the parties hereto hereby agree and declare as follows, that is to say, in consideration of the payment to be made to the Contractor by the Purchaser as hereinafter mentioned the Contractor shall and will fully provide the said plant and machinery for the said works on the terms and conditions mentioned in the Contract.

AND in consideration of the due provisions of the said plant and machinery by the Contractor and due performance of his part of contract, the Purchaser does hereby for himself, his successors or assigns convenient with the Contractor that he, the Purchaser, his successors or assigns will pay to the Contractor the said sum of .....

or such other sum as may be become payable to the Contractor under the provision of the Contract, such payments to be made at such time and in such manner as is provided by this contract.

IN WITNESS WHEREOF the parties hereto have signed this Deed hereunder on the dates respectively mentioned against the signatures of each.

Signed (For and on behalf of the Purchaser) (date) In the presence of

Signed (Contractor) (date) In the presence of

## SCHEDULE 'B'

### DECLARATION

(To be executed on a non-judicial stamp paper of Rs. 100/- with a revenue stamp of Rs. 1/- affixed)

To,  
**Project officer**  
**Uttarakhand Renewable Energy Development Agency,**  
**Vikas bhawan , Rudraprayag.**

Name of Tenderer.....

Tender No. 05/UREDA/MH-GAUNDAR/RPG/2021-22  
and date of Opening: - -----”.

In consideration of the UREDA having treated the Tenderer to be an eligible person whose tender may be considered, the Tenderer agrees to the condition that the proposal in response to the above invitation shall not be withdrawn within three months from the date of opening of the tender; also to the condition that if hereafter the Tenderer does withdraw his proposal within the said period, the Earnest Money deposited by him may be forfeited to the UREDA and at the discretion of the purchaser, the purchaser may debar the Tenderer from tendering for a minimum period of one year reckoned from the date of opening of the tender.

Signed this day of

Place

Signed by

State title

(Whether  
Proprietor/Partner)

Witness:

Name of the firm

Signature

Address of the firm

Name

Seal of the firm

Address