

STANDARDS/MANUALS/ GUIDELINES FOR SMALL HYDRO DEVELOPMENT

1.7

General–

Model Contract for Execution and Supplies of Civil and E&M Works

Sponsor:

Ministry of New and Renewable Energy
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Lead Organization:

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AHEC-IITR, "1.7 General – Model Contract for Execution and Supplies of Civil and E&M Works", standard/manual/guideline with support from Ministry of New and Renewable Energy, Roorkee, November 2012.

PREAMBLE

There are series of standards, guidelines and manuals on electrical, electromechanical aspects of moving machines and hydro power from Bureau of Indian Standards (BIS), Rural Electrification Corporation Ltd (REC), Central Electricity Authority (CEA), Central Board of Irrigation & Power (CBIP), International Electromechanical Commission (IEC), International Electrical and Electronics Engineers (IEEE), American Society of Mechanical Engineers (ASME) and others. Most of these have been developed keeping in view the large water resources/ hydropower projects. Use of the standards/guidelines/manuals is voluntary at the moment. Small scale hydropower projects are to be developed in a cost effective manner with quality and reliability. Therefore a need to develop and make available the standards and guidelines specifically developed for small scale projects was felt.

Alternate Hydro Energy Centre, Indian Institute of Technology, Roorkee initiated an exercise of developing series of standards/guidelines/manuals specifically for small scale hydropower projects with the sponsorship of Ministry of New and Renewable Energy, Government of India in 2006. The available relevant standards / guidelines / manuals were revisited to adapt suitably for small scale hydro projects. These have been prepared by the experts in respective fields. Wide consultations were held with all stake holders covering government agencies, government and private developers, equipment manufacturers, consultants, financial institutions, regulators and others through web, mail and meetings. After taking into consideration the comments received and discussions held with the lead experts, the series of standards/guidelines/manuals are prepared and presented in this publication.

The experts have drawn some text and figures from existing standards, manuals, publications and reports. Attempts have been made to give suitable reference and credit. However, the possibility of some omission due to oversight cannot be ruled out. These can be incorporated in our subsequent editions.

This series of standards / manuals / guidelines are the first edition. We request users to send their views / comments on the contents and utilization to enable us to review for further upgradation.

Standards/ Manuals/Guidelines series for Small Hydropower Development

General	
1.1	Small hydropower definitions and glossary of terms, list and scope of different Indian and international standards/guidelines/manuals
1.2 Part I	Planning of the projects on existing dams, Barrages, Weirs
1.2 Part II	Planning of the Projects on Canal falls and Lock Structures.
1.2 Part III	Planning of the Run-of-River Projects
1.3	Project hydrology and installed capacity
1.4	Reports preparation: reconnaissance, pre-feasibility, feasibility, detailed project report, as built report
1.5	Project cost estimation
1.6	Economic & Financial Analysis and Tariff Determination
1.7	Model Contract for Execution and Supplies of Civil and E&M Works
1.8	Project Management of Small Hydroelectric Projects
1.9	Environment Impact Assessment
1.10	Performance evaluation of Small Hydro Power plants
1.11	Renovation, modernization and uprating
1.12	Site Investigations
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2.1	Layouts of SHP projects
2.2	Hydraulic design
2.3	Structural design
2.4	Maintenance of civil works (including hydro-mechanical)
2.5	Technical specifications for Hydro Mechanical Works
Electro Mechanical works	
3.1	Selection of Turbine and Governing System
3.2	Selection of Generators and Excitation Systems
3.3	Design of Switchyard and Selection of Equipment, Main SLD and Layout
3.4	Monitoring, control, protection and automation
3.5	Design of Auxiliary Systems and Selection of Equipments
3.6	Technical Specifications for Procurement of Generating Equipment
3.7	Technical Specifications for Procurement of Auxiliaries
3.8	Technical Specifications for Procurement and Installation of Switchyard Equipment
3.9	Technical Specifications for monitoring, control and protection
3.10	Power Evacuation and Inter connection with Grid
3.11	operation and maintenance of power plant
3.12	Erection Testing and Commissioning

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MODEL CONTRACT FOR EXECUTION AND SUPPLIES OF CIVIL AND ELECTRO-MECHANICAL WORKS

1.0 GENERAL

1.1 SCOPE

It has been observed that the contract documents for civil and E&M works of Small Hydropower Projects are drafted in much similar way as for the medium and large Hydropower Projects. Thus efforts have been made to simplify the contract documents in much smaller volume having conditions that give win-win solution for both the sponsor and the contractor who should feel comfortable and the contract documents should not be driven by the sponsor's needs to protect him from all sides.

This document has been prepared basically for run of river project which has the maximum number of components. For other types of development like storage, canal fall, in stream, components can be suitably reduced/ modified. The contract can be executed with following options:

- Option 1: a single contract for civil as well as E&M works
- Option 2: Separate contracts for civil works and E&M works
- Option3: Separate contracts for civil works, hydro-mechanical works and E&M works

This document has been prepared for executing the project on turnkey basis. However the developer of the project may choose to carry out the project engineering and supervision in house or by third party, manage the construction and procurement in house or by third party or complete Engineering, procurement and construction (EPC) by EPC consultant. Accordingly, the document need to be suitably modified.

1.2 DRAFT CONTRACT / AGREEMENT

The contract documents should include the followings:

- i) Notice inviting tender
- ii) Tender / Bid form
- iii) Letter of award
- iv) Agreement deed
- v) Schedule of quantities and prices
- vi) Information and instructions to tenderers/ bidders
- vii) Amendments / corrigendum to general and special conditions of contract
- viii) General conditions of contract
- ix) Special conditions of contract
- x) Technical specifications of contract
- xi) Schedules
- xii) Drawings

1.3 TYPES OF CONTRACTS

The Contracts for Small Hydropower Projects could be divided into the following categories:

- A. Civil Works
- B. Electro-Mechanical Works

1.3.1 Civil Works

1.3.1.1 Civil construction

For typical run of river Small Hydropower Projects, the components of the Civil Works could be the followings:

- i) Diversion weir and intake Structure,
- ii) Desilting Basin
- iii) Water Conductor System consisting of steel pipe or pipe manufactured out of other materials, open channel, tunnel, cut and cover section or a combination of all these.
- iv) Forebay / Surge Shaft
- v) Penstock Civil Works
- vi) Power House Civil Works
- vii) Switchyard Civil Works
- viii) Tailrace channel
- ix) Switchyard and Transmission line Civil Works

However for reservoir and canal fall based projects the list of civil works required to be suitably modified.

All the quantities can be put together in the bill of quantities and prices under each component of the work and one contract could be awarded to a single Agency. Sometimes due to non-availability of suitable Contractor, the work could be divided into suitable number of packages and this could be awarded to the prospective Contractors.

1.3.1.2 Hydro-mechanical works

The Hydro-Mechanical works include the design, manufacture, supply, erection & commissioning of the penstock, gates and hoists and valves. Penstock work is a special work which requires considerable technical knowledge of fabrication of the penstock pipes including welding of the pipes/penstocks. Hydro-mechanical works could preferably be awarded to the party which has sufficient experience in fabrication and erection of these works.

1.3.2 Electro-Mechanical works

Electromechanical Works would typically contain the design, manufacture, supply, erection & commissioning of the following electromechanical equipments:

- i) Turbine
- ii) Turbine Auxiliaries
- iii) Governor
- iv) Main Inlet Valves
- v) Generator
- vi) Indoor Switchgear and Outdoor Equipments

- vii) EOT/HOT Crane
- viii) Switchyard equipment including the Generator Transformer
- ix) Cable and Accessories

In order to save the efforts, given that the owner's organization may not be sufficient enough to handle the big quantum and technical nature of work; it is recommended that the entire work of supply should be included in one contract.

2.0 INSTRUCTIONS TO BIDDERS

2.1 GENERAL

2.1.1 Scope of Works

The scope comprises of the following works as per the details provided in the tender documents and required to complete the works including Operation and Maintenance for 12 Months after successful commissioning of the Project.

Design and Construction of a run of river project comprising of mainly following works:

- (a) Diversion weir and intake Structure,
- (b) Desilting Basin
- (c) Water Conductor System consisting of steel pipe or pipe manufactured out of other materials and or , open channel and or tunnel, cut and cover section or a combination of all these.
- (d) Forebay tank / Surge Shaft
- (e) Penstock Civil Works
- (f) Power House
- (g) Tail Race Channel
- (h) Approach Roads
- (i) Switchyard and transmission line Civil Works

Design, Construction, Supply, Storage, Erection, Testing and Commissioning of Hydro Mechanical works comprising of gates, penstocks and valves etc.

Design, Construction, Manufacture, Supply, Storage at site, Erection, Testing and Commissioning of Electro Mechanical Equipment with their auxiliaries, station auxiliaries, switchyard equipment and other related works mainly comprising the following:

- (a) Turbines & Auxiliaries
- (b) Generators and Auxiliaries
- (c) Transformer
- (d) Control, Protection and Metering Panels
- (e) LT Switchgear Panels
- (f) Station Auxiliaries
- (g) Switchyard Works including ...kV Equipment, Earthing and Fencing etc.
- (h) Transmission Line

2.1.2 Time for Completion

Project Engineering, procurement of equipment and construction Works shall be completed in its entirety within **Months (..... Months)** (including rainy or any other disruptive or non working seasons up to commissioning) from the date of issue of Letter of Award and upto commissioning, successful synchronization of the generating units with the grid and handing over the plant for commercial generation.

2.1.3 Eligible Bidders

This Invitation of Tender is open to all Tenderers of repute, who fulfill the following qualifying conditions.

- (a) Registered Proprietary firm.
- (b) Registered Member ship firm.
- (c) Limited company or limited corporation.
- (d) Government Undertaking / Enterprises.
- (e) Consortium or consortium of two or more firms/companies from (a) to (d) registered with registrar of firms/companies with appropriate authority under Company Act / Firms and Society Act.

Bidders shall provide such evidence of their continued eligibility up to the satisfaction of the PURCHASER, as the PURCHASER shall reasonably require.

2.1.4 Pre-Qualifying Criteria for Bidder

The bidders should meet the following minimum criteria for pre-qualification.

2.1.4.1 Financial Criteria

- a) **Average** annual turnover of last five financial years in all **class of engineering works** only shall be atleast **Rs. ...Schedule at** base year price level. The turnover of the years prior to base year shall be given weightage of 10% per year to bring them to price level of base year. The weightage shall be as under

Sr. No.	Year	Weightage
1	4 year prior to base year	1.4
2	3 year prior to base year	1.3
3	2 year prior to base year	1.2
4	1 year prior to base year	1.1
5	Base year	1.0

Bidders/consortium to qualify, the lead member should meet atleast **50%** of qualifying amount and each of the other members should meet minimum **25%** of qualifying

Remarks: In case of Consortium /Consortium bidders, the combined strength of all the members should meet the qualifying criteria. However for a consortium amount. The combined strength of all the members should meet the qualifying requirements.

- b) **Solvency Certificate :-**A solvency Certificate of minimum solvency of Rs (suggested format at Form 1-D of Annexure 2) from Nationalized Banks or Scheduled banks other than a cooperative bank located in India issued not earlier than 06 (six) Months from the last date of submission of bid is required to be submitted by the bidder. The certificate so produced by the Bidder may be got verified from the issuing Bank.

Average Net Worth (paid up share capital + reserves & surplus) of **last five** financial years should not be less than **Rs.** as certified by Chartered Accountant based on Financial Statement/Balance Sheets.

Remarks: In case of Consortium bidders/Consortium the combined strength of all the member s should meet the qualifying criteria. However for a consortium to qualify, the lead member should meet at least **50%** of qualifying amount and each of the other members should meet minimum **25%** of qualifying amount.

Has not suffered loss in four of the last five financial years

Remark: This is applicable to lead members as well as other members in case of consortium.

2.1.4.2 Experience criteria

The Bidder or any of the members of the consortium bidder must have executed Power Projects or Components of Power Projects **to the extent of Rs. ----- Schedule** during the last five financial years,

2.1.4.3 Technical criteria

The bidder should have experience of design and construction , on turn key basis of at least one hydropower project having capacity of at least..... kW or above. The project should be in successful operation for minimum one year. The bidder shall have to tie up with Turbine Generator manufacturer, who have supplied generating sets for hydro power project of unit capacity..... kW or above and which is in successful operation for atleast one year since commissioning. The bidder shall also have to tie up with a reputed and experienced civil contractor for execution of civil and hydro-mechanical works of Hydropower house.

OR

Bidder should be a manufacturer of similar Turbine and / or Generator sets having supplied at least two sets of unit capacity kW or above for hydro power project which should be in satisfactory operation for minimum of one year. However, such reputed manufacturer of Turbine and/or Generator shall have to tie up with a manufacturer of Generator or Turbine (only if the lead bidder manufacturers either Turbine or Generator and not both). The bidder shall also have to tie up with a reputed and experienced civil contractor for execution of civil and hydro-mechanical works of hydro power house.

OR

Bidder should be a reputed and experienced civil contractor engaged in design and execution of complete civil works of hydro power project having at least 1000 kW station

capacities which has been in successful operation for at least one year since commissioning. However, the firm shall have to tie up with (i) Turbine and Generator manufacturer having experience of manufacturing similar Hydro turbine generator of unit capacity kW or above for canal based hydropower project and are in successful operation for at least one year since commissioning and (ii) a firm having experience in complete erection and commissioning of hydro mechanical and electromechanical equipment for a SHP of station capacity kW or above for small hydro power project.

Note: In case of work executed in the past as Consortium the certificates enclosed in support of the qualification criteria should indicate their **share holding** in those consortium. Copies of those consortium agreements forming part of those Contract Agreements should be enclosed with the pre-qualification document.

2.1.5 Requirements for the Bidder as Consortium

Bids submitted by a consortium of two or more firms as members shall comply with the following requirements:

- (a) The bid, and in case of a successful bid, the Form of Contract Agreement, shall be signed by authorized representative so as to be legally binding on all members.
- (b) One of the members shall be nominated to be in charge; and this nomination shall be evidenced by submitting a power of attorney signed by legally authorized signatories of all the members;
- (c) The member in charge shall be authorized to incur liabilities, receive instructions for and on behalf of any or all members of the consortium and the entire execution of the Contract, including receiving payments.
- (d) All members of the consortium shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms, and a relevant statement to this effect shall be included in the authorization mentioned under (b) above as well as in the Form of Bid and the Form of Contract Agreement (in case of a successful bid)
- (e) A copy of the agreement entered into by the consortium members shall be submitted with the Pre-qualification document (Envelope "B") as well as in Price Bid (Envelope 'C').
- (f) The consortium agreement should indicate precisely the responsibility of all members of JV in respect of planning, design, construction, equipment, key personnel, work execution, financing etc., of the project. This should not be varied/ modified subsequently.
- (g) The shareholding of the Lead Member of the Consortium shall not be less than 51%.
- (h) The figures of physical experience and financial turn over of each member of a Consortium shall be added together to determine the Consortium compliance with minimum qualifying criteria as given in Clause 2.1.4 above.
- (i) No firm, individual company or corporation will join more than one joint venture.
- (j) If the bidder have executed the works in the past as Lead Member (or Member) in a Consortium, then the bidder's experience and physical performance will be only considered to the extent of their share holding in those consortium, irrespective of the actual experiences and physical

performance of the individual member of those consortium and irrespective of any internal understanding among the members of those consortium (s).

- (k) The financial experience and physical performance of sub contractor of the bidder will not be taken in to consideration. Also the financial experience and physical performance of the bidder will not be taken in to consideration for the works executed as a subcontractor.

2.1.6 Disqualification

Even though the bidder satisfies the above requirements, they are subject to be disqualified if they have.

- (a) Made untrue or false representations in the forms, statements and attachments required in the pre-qualification documents and/or.
- (b) Record of poor performance such as abandoning the work, not properly completing contracts etc. or financial failures.

2.1.7 Submission of Bids

The Bid should be submitted in the prescribed forms without any alteration and the same should be signed in the manner laid down hereunder:

If the Bid is submitted by a proprietary firm, it shall be signed by the proprietor above his full name and full name of his firm with its name and current business address.

If the Bid is submitted by a firm in membership, it shall be signed by all the members of the firm above their full names and current business addresses, or by a person authorized by the power of attorney of the firm, for signing the Bid; in which case a certified copy of the power of attorney shall accompany the Bid. A certified copy of the membership deed, the certificate of registration issued by the Registrar of Firms under the provisions of the Indian Membership Act, 1932 and current business address of all the members of the firm shall also accompany the Bid.

If the Bid is submitted by a company incorporated under the provisions of the Companies Act, 1956, it shall be signed by a person duly authorized (as per Bid Form-1) by Director of the company holding the power of attorney for signing the Bid in which case a certified copy of the power of attorney along with the board resolution under the common seal of the company shall accompany the Bid. Such limited company may be required to furnish satisfactory evidence of its existence before the contract for the Works is awarded.

If the Bid is submitted by a group of firms, the sponsoring firm shall submit complete information pertaining to each of the firms in the group and state along with the bid as to which of the firms shall have the responsibility for Bidding and for completion of the Tender Documents and furnish evidence admissible in law in respect of the authority assigned to such firm on behalf of the group of firms for Bidding and for completion of the Tender Documents. The full information and satisfactory evidence pertaining to the participation of each member of the group of firm in the Bid shall be furnished along with the Bid.

All witnesses and sureties shall be persons of status and their full names, occupation and addresses shall be stated below their signatures.

Each page of the Bid shall be signed by the Bidder in the manner set out above and all such signatures shall be dated.

Any change in the legal status of the applicant subsequent to submission of pre-qualification application will render the application as non-responsive.

The particulars of the proposed work given herein are provisional and must be considered only as advance information to assist applicant.

In case of Power of Attorney, the original Power of Attorney shall be shown on demand by Officers of PURCHASER at the time of opening of tender or whenever demanded.

As the subject Contract is Turnkey Contract involving detailed engineering design and construction drawings, procurement of equipment and Construction of all in line structures, the Bidder not having their in house consultancy expertise for the design should associate with Consultant(s) having, design experience in similar type of work. The application by such Bidders in association with a Consultant(s), signed MOU between the firm and Consultant(s) shall be considered as adequate proof for such association subject to the condition that the Bidder shall alone be liable severally for execution of Contract in accordance with the terms and conditions and a relevant statement to this effect shall be included in the MOU. Design capability of in house consultancy, experience and / or their design consultants shall be assessed by the Purchaser. If the design consultant(s) of the Contractor is not found suitable, the Purchaser shall have right to advice the Contractor to change his design consultant(s). Copy of MOU shall be submitted with the PQ Document (Envelope 'B') and as well as Price Bid (Envelope 'C')

2.1.8 One Bid Per Bidder

A firm shall submit only one Bid in the same Bidding process, either individually as Bidding Company or as a Member of a Bidding Consortium. No firm can be a subcontractor while submitting a Bid individually or as a party of a joint venture or Bidding Consortium in the same Bidding process. A firm, if acting in the capacity of Subcontractor in any Bid, may participate in more than one Bid, but only in that capacity. A Bidder who submits, or participates in, more than one Bid will cause all the proposals in which the Bidder has participated to be disqualified.

2.1.9 Cost of Bidding

The Bidder shall bear all costs associated with the preparation, submission, clarification, and to attend discussions/conference in connection of this tender. The PURCHASER in no case will be responsible or liable for those costs whatsoever.

2.1.10 Site Visit

The Bidder is advised to visit and examine on his own and the site of works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the Bid and entering into a contract for the design-build and completion and commissioning of the works. **The costs of visiting the Site and investigation etc shall be at the bidders (or tenderers) own expense.**

2.1.11 Tender Documents

The contents of tender documents are as stated below, and should be read in conjunction with any addendum issued, if any:

NIT	Notice Inviting Tender
Section - I	Instruction to Bidders
Section - II (Part A)	Conditions of Contract
Section - II (Part B)	Special Conditions of Contract
Section - III (Part A)	Schedules and Bid Forms
Section - III (Part B)	Bid Forms for Price Schedules
Section - III (Part C)	Forms for Technical Schedules
Section - IV	Project Details and Drawings
Section - V	Technical Specification of Civil and Hydro Mechanical Works
Section - VI (Part A)	General Technical Specifications for Electro-Mechanical Works
Section - VI (Part B)	Technical Specifications for Electro-Mechanical Works

The Bidder is expected to examine carefully all instructions, forms, terms, specifications and other information in the tender documents. Failure to furnish all information required by the bidding documents or submission of a bid not substantially responsive to the tender documents in every respect will be at the bidder's own risk and may result in rejection of its bid. Bids which are not responsive to the requirements of the tender documents may be rejected.

2.1.11.1 Bidder requiring procurement of priced publications as Indian

Codes and other national standards, International standards like IEC n, and Circulars issued by the Department time to time or Govt. Publications can be obtained from respective offices of the concerned department at any place in India on payment.

All forms and schedules are to be filled, signed and stamped by the bidder, even if there is no information is being furnished by the bidder.

2.1.12 Clarification of tender documents and pre-bid meeting

- (a) A prospective Bidder requiring any clarification of the Tender documents may notify the Purchaser in writing or by e-mail or by fax at the Purchaser's mailing address preferably within 30 (thirty) days of start of sale of tender. The Purchaser will respond in writing to any request for clarification or modification of the tender documents that it receives no later than fifteen (15) days prior to the deadline for submission of bids prescribed by the Purchaser. Written copies of the Purchaser's response (including an explanation of the query but not identification of its source) will be sent to all prospective Bidders that have received the tender documents.
- (b) The Bidder is advised to visit and examine the site where the facilities are to be installed and its surroundings and obtain for itself on its own responsibility all

information that may be necessary for preparing the bid and entering into a contract for supply and installation of the facilities.

- (c) The Bidder and any of its personnel or agents will be granted permission by the Purchaser to enter upon its premises and lands for the purpose of such inspection, but only upon the express condition that the Bidder, its personnel and agents will release and indemnify the Purchaser and its personnel and agents from and against all liability in respect thereof and will be responsible for death or personal injury, loss of or damage to property and any other loss, damage, costs and expenses incurred as a result of the inspection.
- (d) The Bidder's designated representative is invited to attend a pre-bid meeting, which, if convened, will take place at the venue and time stipulated in the NIT or intimated by the Purchaser at later date. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage. The Bidder is requested, as far as possible, to submit any question in writing or by e-mail or by Fax, to reach the Purchaser not later than one week before the meeting. It may not be practicable at the meeting to answer questions received late, but questions and responses will be transmitted as indicated hereafter. Minutes of the meeting, including the text of the questions raised and the responses given, together with any responses prepared after the meeting will be transmitted without delay to all Purchasers of the tender documents. Any modification of the tender documents which may become necessary as a result of the pre-bid meeting shall be made by the Purchaser exclusively through the issue of an addendum and not through the minutes of the pre-bid meeting.

2.1.13 Amendment of bidding document

At any time prior to the deadline for submission of bids, the PURCHASER may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective bidder, or as a result of pre-bid meeting modify the tender documents by issuing and amendment.

Any amendment thus issued shall be part of the tender documents and shall be communicated to all the bidders who have purchased the bidding documents.

To give prospective Bidders reasonable time to take an amendment into account in preparing their bids, the purchaser may extend, if necessary, the last date for submission of Bids.

2.2 PREPARATION OF BIDS

2.2.1 Language of Bid

The bid and all correspondence and documents, related to the bid, exchanged between the Bidder and the PURCHASER and authorized officers shall be written in the **English** language. Supporting documents and printed literature furnished by the Bidder may be in another language provided they are accompanied by an accurate translation of the relevant passages in the English language, in which case, for purposes of interpretation of the Bid the English translation shall prevail.

2.2.2 Price Bid

The bidder shall quote his price in the prescribed forms given in Annex.4. The contractor is to quote the bid price in lump sum and on a single source responsibility basis after careful analysis of cost involved for the performance of complete work considering all specifications and conditions of contract.

The rates and prices quoted by the Bidder are not subject to adjustment during the performance of the Contract for taxes, duties and any other levies.

Notwithstanding anything that is stated, the price once accepted by the PURCHASER shall be final and shall not be subject to any claim on any grounds whatsoever.

All duties, taxes, and other levies payable by the contractor as per State / Central Government rules, shall be included in the contract value quoted by the Bidder.

The Bidder shall furnish the price breakup of both supply and services along with breakup for Taxes and duties. While giving price breakup, Bidder should keep in mind that payment for various works and services shall be made as per the Price Breakup given in Bid documents.

2.2.3 Construction programme and submission of design and drawings

The Bidder shall include in his Bid (Envelope B), a detailed construction programme for executing the Project, describing broadly the Technology and Construction Methodology of Major Components of the Project including survey, investigation, soil exploration, design & Engineering, estimation, construction, completion of total project and trial run of total system. A list of tentative engineering drawings for all works (civil and electro-mechanical) to be submitted along with their schedule.

2.2.4 Bid Forms and Price Schedules

The Bidder shall complete the Bid Forms for qualification, price schedules and technical schedules furnished in the tender documents in the manner and detail indicated therein.

2.2.5 Bid Currencies

All prices shall be quoted in Indian Rupees or as specified

2.2.6 Bid Validity

Bids shall remain valid for a period of not less than **180 (One Hundred Eighty) days** from the date of opening of pre-qualification document (Bid Part I-B).

During the above-mentioned period no plea by the Bidder for any sort of modification of the Bid based upon or arising out of any alleged misunderstanding, misconceptions or mistake or due to any reason(s) whatsoever will be entertained.

In exceptional circumstances, prior to expiry of the original time limit, the **Purchaser** may request the bidders to extend the period of validity for a specified additional period. Such request to the Bidders shall be made in writing. A Bidder agreeing to the request will not be permitted to modify his Bid, but will be required to extend the validity of his E.M.D. for the period of the extension.

2.2.7 Earnest Money Deposit

Earnest money worth Rs..... (Rupees) in the form of CDR/NSC, Bank Draft, Fixed Deposit Receipts or Bank Guarantee from Scheduled Commercial Bank in Form 8 (of Annex 2) shall be deposited alongwith the Bid by the Tenderer.

Any Bid not accompanied by Earnest money in an acceptable form shall be rejected as **non-responsive**.

The Earnest money of the unsuccessful bidders will be returned, after the drawl of agreement by the successful bidder or expiration of the period of Bid validity which ever is earlier.

The Earnest money of the successful Bidder will be returned when the Bidder has signed the Contract Agreement and has furnished the required Security Deposit towards faithful execution of the contract which shall be 02% (Two percent) of the contract value.

The Earnest money shall be forfeited:

- a.) if the Bidder modifies or withdraws bid during the period of Bid validity
- b.) if the Bidder does not accept the correction of his Bid price pursuant to Clause 2.4.6 or
- c.) in the case of a successful bidder, if he fails within the specified time limit to: furnish the required Security deposit & Performance Security and sign the Contract Agreement.

Purchaser will not pay any Interest or any other charges whatsoever, on the above EMD.

2.2.8 Alternative Proposals by Bidders

Bidders shall submit bids which comply with the requirement of the Bidding Documents. Alternative bids will not be considered.

2.2.9 Format and Signing of Bid

The bidder shall prepare 02 (two) copies of the bid clearly marking each 'Original Bid' and 'Copy of Bid' as appropriate. In the event of any discrepancy between them, the Original shall govern.

The original and copy of the bid shall be printed or written in indelible ink and shall be signed by the bidder or persons duly authorized to sign the bid and the contract. The letter of authorization shall be authenticated by written power of attorney accompanying the bid.

All pages of the bid, except for un-amended printed literature, shall be initialed by the person or persons signing the bid.

The bid shall contain no interlineations, erasures or overwriting except as necessary to correct errors made by the bidder, in which case such corrections shall be initialed by the person or persons signing the bid.

All qualification documents shall be numbered and submitted as a package with the signed Bid Forms.

The Bidder shall sign on the cover page of the documents, to confirm that he has read and accepted all the contents and conditions contained therein, and shall affix his signature on all pages of Bid documents

2.3 SUBMISSION OF BIDS

2.3.1 Sealing and Marking of Bids

Bids shall be submitted in two Parts. Part I shall contain two envelopes marked Part I-A and Part I-B. Part II shall contain Price Bid.

Part I-A should contain Earnest Money Deposit.

Part I-B should contain the Schedules A to L (formats given in **Annex 1**):

Part-I B should also be accompanied with Forms 1 to 12(formats given in **Annex 2**):

Part-I B should also be accompanied with Technical bid, Technical Schedules 1 and 2 (formats given at **Annex 4**) and Statements S1 to S4 for civil works (formats available at **Annex 3**).

Bid Part I-A and Part I-B shall be enclosed in an outer envelope Marked as (a) **“DO NOT OPEN BEFORE 15:30 HRS on_____”**, (b) Project name **“..... SHP”**, (c) **“Pre-Qualifications & Technical Bid”** and shall be addressed to the Purchaser at the following address :

The outer & inner envelopes shall also indicate the name and address of the bidder.

If the outer envelope is not properly sealed and marked the purchaser will assume no responsibility for the bid’s misplacement or premature opening.

Bid PART II should contain the following:

Only the prices and price bid schedules from 1 to 17 (formats given at **Annex 5**) duly filled in with amount in **words and figures both**.

Bid Part II (Financial/ Price Part) of only those tenderers shall be opened who are found Qualified as per their Bid Part I

2.3.2 Late Bids

Any bid received by the purchaser after the deadline for submission of bids prescribed by the Purchaser, will be rejected.

2.3.3 Modification and Withdrawal of Bids

The Bidder may modify or withdraw its bid after the bid's submission, providing that written notice of the modification or withdrawal is received by the Purchaser prior to the deadline prescribed for submission of Bids.

The bidder's modification or withdrawal notice shall be prepared, sealed marked and dispatched in accordance with the provisions of this NIT. A withdrawal notice may also be sent by fax to reach the Purchaser not later than the deadline for submission of bids but followed by a signed confirmation copy by post.

No bid will be modified subsequent to the deadline for submission of bids.

No bid will be withdrawn in the interval between the deadline for submission of bids and the expiration of period of bid validity specified by bidder. Withdrawal of a bid during this interval will result in the Bidder's forfeiture of its Earnest Money, pursuant to Clause 2.2.7.5 .

2.4 OPENING AND EVALUATION OF TECHNICAL PROPOSALS

2.4.1 Opening of Pre-Qualification-Cum-Technical Bid Document

Bid Part I containing Bid Part I-A and Bid Part I-B shall be opened in the presence of intending bidders or their representatives, if they choose to be present. Part I-A shall be opened first and after verification of acceptance of EMD, Part I-B shall be opened. If EMD document of a Bidder is not acceptable to the Purchaser, Part I-B of that Bidder shall not be opened. After assessment of eligibility of the Bidders by the competent authority on the basis of documents submitted by the Bidders in Part I-B the pre-qualified bidders will be short listed. The bidder who does not pre-qualify as per the prescribed norms, his Bid Part II (price bid) will not be opened. The Pre-qualified bidders only will be intimated of the final date and time of opening of Bid Part II' (Price Bid).

To assist in the examination, evaluation and comparison of bids, the Purchaser may, at its discretion ask the Bidder for a clarification of its bid. The request for clarification and the response shall be in writing and no change in the price or substance of the bid shall be sought, offered or permitted.

2.4.2 Examination of Bids and Determination of Responsiveness

The Employer will evaluate whether each Bidder is satisfying the eligibility and qualifying criteria prescribed in the pre-qualification document and declare names of the qualified Bidders.

Prior to the details evaluation, the Purchaser will determine the substantial responsiveness of each bid to the bidding documents. For purposes of these clauses, a

substantially responsive bid is one which conforms to all the terms and conditions of the bidding documents without material deviations. The Purchaser's determination of a bid's responsiveness is to be based on the contents of the bid itself without recourse to extrinsic evidence.

Assessment: The detailed assessment for pre-qualification shall be based on the following information submitted by the Bidder:

1. Data submitted in prescribed format given in Annex 1 to 4
2. Bidder's techno-commercial proposals for carrying out the entire works in accordance with the specifications in this document.

The techno-commercial submissions must principally demonstrate the adequacy of bidders' appreciation of the:

- The project
- Design and detail engineering
- The methods proposed for mobilization and establishment of site installation and for the timely completion, testing and commissioning of all works and O&M of the project.
- The arrangements for the logistic support for completion, testing and commissioning of all works of the project.
- Requirements of the Purchaser

Bidders are advised to note that the evaluation of techno-commercial bids will be based on the detailed examination of the submittals and would be carried out mainly on the basis of the following principal aspects of the techno-commercial bids.

- Bidders' appreciation of the Project
- Proposed organizational set up
- Design and detailed engineering of
 - Civil/ works
 - Hydro-mechanical works
 - Electro-mechanical works
 - Management of Design and Engineering Services
 - Deployment of key personnel and supervisory personnel's for design, execution, testing and commissioning
 - Construction methodology
 - Availability and deployment of construction equipment
 - Quality and safety procedures
 - Proposed construction schedule

To facilitate completion of the techno-commercial comparison in the limited time available, bidders are strongly recommended.

- To submit their method statement and all other data in the form and order indicated in the data sheets and/or as instructed above, and to ensure that all specific points on which information has to be submitted, as detailed in the bid documents, are fully covered.

- To ensure that all material submitted is complete in all respects but also concise, and to avoid including material of marginal relevance or importance.
- To avoid submission of confusing statements in the bid. Any statement / information found to be confusing in a bid shall not be considered for evaluation purpose.

2.4.2.1 Deviations from bid document/ additional clauses

All bidders shall note that the bids containing any deviation whatsoever from the basic parameters in respect of General and Special Terms and Conditions and Technical Specifications shall be judged by the Purchaser. The Purchaser shall be sole judge for assessment of acceptability / non acceptability of deviations / additional clauses. The decision of the Purchaser in this respect shall be final. The evaluation of deviation & additional clauses shall be carried out during the evaluation of financial bid for assessment of cost impact thereof. However, commercial deviation shall lead to disqualification of the bidder.

2.4.3 Price Bid Opening

The time and date for Bid opening of the Price Bids will be intimated to all qualifying Bidders in writing or by fax by the Purchaser

At the specified date and time, the Price Bids of all the qualified bidders will be opened in the presence of the bidders or his authorized representatives who may chose to be present. In the event of the specified date of opening of price proposal (**Bid Part II**) being declared a holiday for the Department, the price proposals shall be opened at the same time and place on the next working day.

2.4.4 Evaluation and Comparison of Price Bids

Purchaser will evaluate and compare the price bids of all the qualified Bidders to determine whether the documents are complete, properly signed, all the Schedule of Works have been provided as per the formats given in the bid documents and whether the financial bids are generally in order, as stated below:

Bids determined to be techno-commercially acceptable will be checked by the Purchaser/Purchaser's authorized representative for any arithmetical errors. Errors will be corrected by Purchaser/Purchaser's authorized representative as follows:

- a) Where there is a discrepancy between the amount in figures and words, the amount in words shall prevail
- b) Loading for technical deviation, if any.
- c) When the amount of an item is not worked out by the bidder or it does not correspond with the rate written either in figures or in words, then the rates quoted by the bidder in words shall be taken as correct
- d) When the rate quoted by the bidder in figures and in words tallies but the amount is not worked out correctly, the rate quoted by the bidder shall be taken as correct and the amount shall be corrected

- e) Where there is a discrepancy between the total bid amount and sum of total costs, the sum of total costs will govern. The amount stated in the form of bid will be adjusted in accordance to above procedure.

The amount stated in the Bid Proposal will be adjusted by the Purchaser/Purchaser's authorised representative in accordance with the above procedure for the correction of errors and shall be communicated to the bidder in writing for his acceptance in writing within 14 (Fourteen) days from the date of issue of such communication. Such corrections, however, shall be binding upon the bidder. If the bidder does not accept the corrected amount of bid, his bid will be rejected, and the bid guarantee/ earnest money shall be forfeited in accordance with Clause 2.2.7.5.

The Financial Bids shall then be evaluated considering the following factors

- a) Total Quoted Price for the entire scope
- b) Loading for Deviation from technical specification if any
- c) Loading for Deviation from instruction to tenderers
- d) Loading for Deviation from General Requirement of Specification

Determination of Commercial loading

- a) The acceptable deviation to the Tender Clauses shall only be evaluated. The related cost due to the acceptable deviation provided by the bidder shall be considered. The Purchaser may also determine the related cost due to acceptable deviations if required. While determining the cost due to deviations, the Purchaser shall use the parameters consistent with those specified in the bid documents and / or other information / data as necessary and available and / or collected by the Purchaser. Where information contained in the financial bid is to be used for determining the value of any commercial loading such determination will be made only after the opening of the financial bids.
- b) Conditional/unconditional discounts/rebates will not be allowed.
- c) The estimated effect of the price adjustment provisions of the conditions of contract applied over the period of execution of the contract shall not be taken into account in bid evaluation.
- d) If the bid is seriously unbalanced in relation to the Purchaser's estimate of the cost of work to be performed under the Contract, the Purchaser may require the Bidder to produce detailed price analysis for any or all items of the work, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed.

2.4.5 Final Evaluation

Final evaluation will be done in light of the financial evaluation of the bids. Tie breaker among those bidders who submit the lowest evaluated & equally quoted Bid will be in the following order:

- a) The Bidder with higher average annual turnover.
- b) The bidder with higher Net Worth.

2.4.6 Discrepancy in Contract Price Quoted

In case of any discrepancy between the overall Contract price quoted in words and figures, then whichever is lower shall prevail.

2.4.7 Process to be Confidential

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

If the Bidder wishes to bring additional information to the notice of the Purchaser during evaluation process he should do so in writing with the condition that such information shall in no way be detrimental to the quoted Price BID.

Before recommending / accepting the Bid, the Bid recommending / accepting authority shall verify the correctness of certificates submitted to meet the eligibility criteria and specified experience.

2.4.7.1 Policy for Bids under Consideration

Bids shall be deemed to be under consideration immediately, after they are opened and until such time official intimation of award / rejection of bid is communicated by the Purchaser. While the bids are under consideration, Bidders and / or their representatives or other interested parties are advised to refrain from contacting by any means, the Purchaser and /or his employees/representatives/ consultants on matters related to the bids under consideration. To assist in the examination, evaluation and comparison of bids, the Purchaser's authorized representative may, at his discretion, ask any or all bidders for clarification of his/their bids, including breakups of prices, technical information, documents and materials after opening of the bid. The request for clarification and the response shall be in writing but no change in the price or substance of the bid will be sought, offered or permitted. The bidders shall submit all clarifications / additional documents in original and two copies.

The Bidders whose bid is not accepted shall not be entitled to claim any costs, charges and expenses of and incidental to or incurred by him through or in connection with his submission of bid, even though the PURCHASER may elect to modify / withdraw the invitation to bids.

2.5 AWARD OF CONTRACT

2.5.1 Contract Award Criteria

The Employer will award the contract to the Bidder who is found qualified as per the Bid conditions and whose price bid is lowest.

The Purchaser reserves the right to accept or reject any bid or all Bids and to cancel the Bidding process, at any time prior to the award of Contract, and shall not bear any

liability for such decision and shall not have any obligation to inform the affected Bidder or Bidders of the reasons thereof.

2.5.2 Notification of Award of Contract

Prior to expiration of the period of Bid validity prescribed in tender document, the Purchaser or his nominee will notify the successful Bidder by registered letter, that his Bid has been accepted. This letter (hereinafter and in the Conditions of Contract called the "Letter of Award") shall notify the sum which the Purchaser will pay to the Contractor in consideration of the execution, completion of the Project by the Contractor as prescribed by the Contract (hereinafter and in the Conditions of Contract called "the Contract Amount").

The notification of award will constitute the formation of the Contract.

2.5.3 Signing of Contract Agreement

Bidder whose bid has been accepted (hereinafter referred to as Contractor) will execute the agreement with the Purchaser in the prescribed form (Form-12 of Annex 2), within **30** days from the date of issue of letter of award or any such date extended by the competent authority in writing. Failure to do so, will result in the Earnest Money being forfeited and award being withdrawn

2.5.4 Security Deposit

Within **21 (Twenty one)** days of receipt of the Letter of Award from the Purchaser, the successful Bidder shall furnish a Security Deposit in the form of Bank Guarantee amounting to 02% (Two percent) of the Contract Price in accordance with the Conditions of Contract. The Security Deposit shall be provided in **Form9 of Annex 2** given in Bid Forms.

2.5.5 Performance Guarantee Deposit

The contractor has to submit Performance Guarantee Deposit in the form of Bank Guarantee amounting to 10 % (Ten percent) of the Contract Price at the time of Agreement. The guarantee shall be valid up to 60 days beyond the defect liability period.

2.5.6 Fraudulent Practice

“Fraudulent Practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Purchaser and includes collusive practice among Bidders (prior to and after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive the Purchaser of the benefits of free and open competition.

The Purchaser will reject a proposal for award if it determines that the Bidder recommended for award has engaged in fraudulent practices in competing for the contract in question.

The Purchaser will declare the bidder ineligible, either indefinitely or for a stated period of time, if at any time it determines that the firm has engaged in fraudulent practices in competing for, or in executing the contract.

Failure of successful bidder to comply with requirements of Clause 2.5.3, 2.5.4 and 2.5.5 shall constitute sufficient grounds for the annulment of award and forfeiture of Earnest Money.

3.0 GENERAL CONDITIONS OF CONTRACT (Form A)

3.1 GENERAL

3.1.1 Definitions

In the Contract (as defined below) the words and expressions defined below shall have the meanings assigned to them, except where the context requires otherwise:

Contract shall mean and include contract agreement, bid documents including filled bid forms as per bid documents, technical schedules, drawings, tender documents and other information provided by the contractor.

Tender means the Contractor's priced offer to the Purchaser for the Works, as accepted by the Letter of Acceptance

Contractor's Proposal means the proposal submitted with the Tender, as included in the Contract.

Schedules means the information and data submitted with the Tender, as included in the Contract.

Letter of Acceptance means the formal acceptance by the Purchaser of the Tender

Purchaser is

Engineer/Engineers is the technical representative/s of Purchaser which may be an individual or firm or company.

Engineer in Charge is an officer duly authorized by the Nigam for the purpose of the execution of the contract

Contractor means the person whose Tender has been accepted by the Purchaser.

Purchaser's Representative means the person appointed by the Purchaser to act as Purchaser's Representative for the purposes of the Contract or other person appointed from time to time by the Purchaser and notified as such to the Contractor.

Contractor's Representative means the person (if any) named as such in the Technical Schedule or other person appointed from time to time by the Contractor.

Sub-Contractor means any person named in the Contract as a sub-contractor, manufacturer or supplier for a part of the Works or any person to whom a part of the Works has been sub-contracted and the legal successors in title to such person, but not any assignee of such person.

Notice to Proceed is the notice issued by the Purchaser to the Contractor to proceed with the Works. Whenever possible, the Notice to Proceed will be issued by the Purchaser immediately upon signing of the Contract, or as soon thereafter as is feasible considering the availability of the Site and other relevant factors.

Start Date is the date of Issuance of the Notice to Proceed, or such other Start Date as may be specified in the Notice to Proceed.

Site is that area which is required for proper completion of the Works, as illustrated on the Drawings. Unless otherwise indicated on the Drawings, the Contractor will be responsible for making his own arrangements for providing any other space for site offices, materials testing laboratory, storage of materials and equipment, disposal of excess spoil and waste, etc., as may be required for proper execution of the Works.

Site Possession Date is the date upon which the Purchaser shall give possession of all parts of the Site to the Contractor, or of such parts of the Site sufficient for the Contractor to commence and undertake the Works in accordance with the agreed Work Program.

Work Program is the program submitted by the Contractor and approved by the Purchaser which shows the general methods, arrangements, order and timing for all the activities in the Works and according to which the Contractor shall perform and complete the Works by the Intended Completion Date. In case the whole of the Site is not available upon the Start Date, the Contractor and Purchaser shall mutually agree on a Work Program that takes into consideration the date of availability of the different parts of the Site and enables the Contractor to complete the Works within the intended Completion Date.

Effective Date means the date on which the Contract entered into legal force and effect (Date of signing of the Contract).

Intended Completion Date is the date upon which the Works are to be completed in its entirety. The Intended Completion Date will be stipulated by the Purchaser in the Notice to Proceed.

Defect Liability Period is 18 (Eighteen) months from the date of issuance of the Certificate of Completion.

Defects Correction Period is immediately or within reasonable time by the Contractor of the Purchaser's notice to correct any Defects in the Works.

Contractor's Bid is the completed bidding document submitted by the Contractor to the Purchaser.

Contract Price is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract and payable.

Retention Money means the accumulated retention money retained by the Purchaser

Days are calendar days; **Weeks** are calendar weeks; **Months** are calendar months.

Defect is any part of the Works not completed in accordance with the Contract.

Defect Notice Period is the period stated in the Contract Clause within which the Purchaser's Representative may notify the Contractor of a Defect.

Equipment means the Contractors machinery, equipment and vehicle either owned by him, hired, leased or otherwise brought to site

Temporary Works are works designed, constructed, installed, and removed by the Contractor which are needed for construction or installation of the Works.

Services means services ancillary to the supply of the Civil, Electro & Hydro-mechanical works, such as transportation and insurance and any other incidental services such as installation, commissioning, provision of technical assistance, training and other such obligation of the Contractor covered under the Contract.

Consignee means the Contractor, who will receive the Civil, Electro & Hydro-mechanical works or services at the destination & hand it over to the Purchaser after erecting, testing, commissioning and performance run.

3.1.2 Interpretation

In this General Conditions of Contract, unless the context requires otherwise

- (i) Words shall have their normal meaning under the language of the Agreement unless specifically denied.
- (ii) The title of the Agreement and descriptive headings of Sections are used solely for convenience of reference and are not intended as complete or accurate descriptions of the content thereof and shall not be used to interpret the provisions of this Agreement.
- (iii) Any reference to any law shall be deemed to include a reference to such law as is re-enacted, modified or amended from time to time.
- (iv) Unless the context otherwise requires, (a) words importing the masculine gender shall also include the feminine gender and vice versa; and (b) the use of the singular shall include the plural and vice-versa.

3.1.3 Contract Agreement

Simultaneous with the communication of the Letter of Award and within the period specified therefore under the Letter of Award, Parties shall enter into the Agreement incorporating all agreements between Purchaser and the Contractor relating to the execution of the Works by the Contractor. It is agreed that the Contractor who has been awarded the Letter of award shall be party to and be primarily responsible for performance of the obligations under the Agreement.

3.1.4 Priority of Documents

The documents forming the Contract are to be taken as mutually explanatory of one another. If there is an ambiguity or discrepancy in the documents, the Purchaser's Representative shall issue any necessary clarification or instruction to the Contractor, and the priority of the documents shall be as follows:

- a) The Form of Contract Agreement
- b) The Letter of Award and Acceptance
- c) Addendum/Corrigendum, if any, sought and approved by the Purchaser.
- d) The Special Conditions of the Contract
- e) The General Conditions of the Contract
- f) The Technical Specifications and Drawings
- g) The Bid documents.

3.1.5 Documents on Site

The Contractor shall keep on the Site one complete set of the documents forming the Contract, the Construction Documents, other communications given or issued and the documents mentioned in Sub-Clause (Technical Standards and Regulations). The Purchaser and Purchaser's Representative and assistants shall have the right to use such documents at all reasonable times.

3.1.6 Communications

Wherever provision is made for the giving or issue of any notice, instruction, consent, approval, certificate or determination by any person, unless otherwise specified such communication shall be in writing and shall not be unreasonably withheld or delayed.

Wherever provision is made for a communication to be "written" or "in writing", this means any hand-written, type-written or printed communication, including the agreed systems of electronic transmission.

All certificates, notices or written orders to be given to the Contractor by the Purchaser or following Purchaser's Representative, and all notices to be given to the Purchaser or to the Purchaser's Representative by the Contractor, shall either be delivered by hand against written acknowledgement of receipt, or be sent by registered post or one of the agreed systems of electronic transmission to the Purchaser.

3.1.7 Provision of Construction Documents

The Construction Documents shall be in the custody and care of the Contractor. The Contractor shall provide four copies of the construction document for the use of the Purchaser's Representative and assistants.

3.1.8 Contractor's Use of Purchaser's Documents

The documents issued by the Purchaser or the Purchaser's Representative to the Contractor shall (as between the parties) remain the property of the Purchaser. The Contractor may, at his cost, copy, use and communicate any such documents for the purposes of the Contract. They shall not, without the Purchaser's consent, be used, copied or communicated to a third party by the Contractor, except as necessary for the purposes of the Contract.

3.1.9 Compliance with Statutes, Regulations and Law

The Contractor shall, in all matters arising in the performance of the Contract, comply with, give all notices under, and pay all fees required by, the provisions of any national or

state statute, ordinance or other law, or any regulation of any legally constituted public authority having jurisdiction over the Works. The Contractor shall obtain all permits, licenses or approvals required for any part of the Works, in reasonable time taking account of the times for delivery of the Plant and Materials required for completion of the Works. The Purchaser and the Contractor shall comply with the laws of Government where activities are performed.

3.1.10 Joint and Several Liability

If the Contractor is a consortium of two or more firms/companies, all such firms/companies shall be jointly and severally liable to the Purchaser for the fulfillment of the terms of the Contract. Such persons shall designate one of them to act as leader with authority to bind the Purchaser (or consortium) and each of its members. The composition or the constitution of the consortium shall not be altered.

3.1.11 Language and Law

The language of the Contract is English and the law governing the Contract is Law of India.

3.1.12 Purchaser's Representative's Instructions

Unless it is legally or physically impossible, the Contractor shall comply with instructions given by the Purchaser's Representative in accordance with the Contract.

3.1.13 General Obligations of the Contractor

The Works as completed by the Contractor shall be wholly in accordance with the Contract and fit for the purposes for which they are intended, as defined in the Contract. The Works shall include any work which is necessary to satisfy the Contract, Contractor's Proposal and Schedules, or is implied by the Contract, or arises from any obligation of the Contractor, and all works not mentioned in the Contract but which may be inferred to be necessary for stability or completion or the safe, reliable and efficient operation of the Works.

The Contractor shall carry out detailed engineering design (to the extent as per scope of work), execute and complete the Works, providing Construction Documents, within the Time for Completion, and shall remedy any defects within the Contract and Defect Liability Period. The Contractor shall provide all superintendence, labour, Materials, Contractor's Equipment, Temporary Works and all other things, whether of a temporary or permanent nature, required in and for such design, execution, completion and remedying of defects.

Before commencing design, the Contractor shall satisfy himself regarding the design criteria and Parameters. The Contractor shall bring to notice of the Purchaser's Representative of any error, fault or other defect in the design criteria and Parameter.

The Contractor shall carry out, and be responsible for, the design of the Works. Design shall be prepared by qualified designers who are Purchaser's or other professionals who comply with the criteria (if any) stated in the technical schedules.

The Contractor holds himself, his designers and design Sub Contractors as having the experience and capability necessary for the design. The Contractor undertakes that the designers shall be available to attend discussions with the Purchaser's Representative at all reasonable times during the Contract Period.

The Contractor shall take full responsibility for the adequacy, stability and safety of all Site operations, of all methods of construction and of all the Works, irrespective of any approval or consent by the Purchaser's Representative.

3.1.14 Construction Documents

Construction Documents means all designs, drawings, calculations, methodology and any other related data provided by the Contractor to the Purchaser's Representative under the Contract including all samples, patterns, models, operation and maintenance manuals and other technical information of alike nature submitted by the Contractor and approved by the Purchaser's Representative. However such approval will not relieve the Contractor of any of his obligations, responsibilities under the Contract.

The Contractor shall prepare Construction Documents in sufficient detail to satisfy all regulatory approvals, to provide suppliers and construction personnel sufficient instruction to execute the Works, and to describe the operation of the completed Works. The Purchaser's Representative shall have the right to review and inspect the Construction Documents.

Each of the Construction Documents shall be submitted to the Purchaser's Representative for review. If the Purchaser's Representative, notifies the Contractor that such Construction Document fails (to the extent stated) to comply with the Purchaser's Requirements, it shall be rectified, resubmitted and reviewed in accordance with this Sub-Clause, at the Contractor's cost.

For each part of the Works, and except to the extent that the prior consent of the Purchaser's Representative shall have been obtained:

- (a) construction shall not commence prior to the approval of Construction Document which are relevant to the design and construction of such part;
- (b) construction shall be in accordance with such Construction Documents; and
- (c) if the Contractor wishes to modify any design or document which has previously been submitted, the Contractor shall immediately notify the Purchaser's Representative, and shall subsequently submit revised documents to the Purchaser's Representative for approval.

If the Purchaser's Representative instructs that further Construction Documents are necessary for carrying out the Works, the Contractor shall prepare such Construction Documents.

Errors, omissions, ambiguities, inconsistencies, inadequacies and other defects shall be rectified by the Contractor at his cost.

3.1.15 Contractor's Undertaking

The Contractor undertakes that, if legally and physically possible, the design, the Construction Documents, the execution and the completed Works will be in accordance with the following, in order of priority:

- (a) the law in the Country, and
- (b) the documents forming the Contract, as altered or modified.

3.1.16 Technical Standards and Regulations

The design, the Construction Documents, the execution and the completed Works shall comply with the Indian Standard specifications, technical standards, construction and environmental regulations, and the standards specified, I.R.C. Publications, and circulars issued by the related Department time to time.

The Contractor will refer to ‘Standards/Manuals/Guidelines for Small Hydro Development’ – Small Hydro Power Definition and Glossary of Terms, List and Scope of Different Indian & International Standards/Guidelines/Manual under final publication by AHEC Roorkee.

3.1.17 Sub Contracting

The Contractor may sub-contract part of the construction work under intimation to the Purchaser in writing, but will not assign the whole Contract. Any such intimation shall not relieve the Contractor from any liability or obligations under the Contract and he shall be responsible for the acts, defaults and neglects of any of his Sub-Contractors, his agents or workmen as fully as if they were the acts, defaults or neglects of the Contractor, his agents and workmen.

3.1.18 Security Deposit

The Contractor shall submit a Security Deposit for faithful execution of the contract, in the amount and currencies specified under Clause 2.5.4 above, and deliver it to the Purchaser within 21 days after the receipt of Letter of Acceptance. The Security Deposit shall be in any one of the following:

- i) A Bank Guarantee Bonds of any Nationalized Bank or State Bank of India or any Scheduled Bank of India (provided such Scheduled Bank certifies that the guarantees given are within the limit prescribed by Reserve Bank of India) and in the form as acceptable to the Purchaser.
- ii) A Bank Demand Draft drawn in favour of Purchaser.
- iii) Fixed Deposit Receipts with any Scheduled or Nationalized Bank in India pledged to the Purchaser

In case a Fixed Deposit Receipt of any Bank is furnished by the Contractor to the Purchaser as part of the Security Deposit and the Bank goes into liquidation, or for any other reason is unable to make payment against the said Fixed Deposit Receipt, the loss caused thereby shall be borne by the Contractor and the Contractor shall forthwith or on demand furnish additional security to the Purchaser to make good the deficit in the manner acceptable to Purchaser.

The Security Deposit shall be valid up to 60 (sixty) days beyond the defect liability period.

The proceeds of the Security Deposit shall be payable to the Purchaser as compensation for any loss resulting from the Contractors failure to complete its obligations under the Contract.

The Security Deposit will be discharged by the Purchaser and returned to the Contractor within 30 days following the date of completion of the Contractor's performance obligations including any warranty & maintenance obligations under the Contract. No interest will be payable by the Purchaser on this Security Deposit.

3.1.19 Performance Guarantee Deposit

The Contractor shall submit a Performance Guarantee Deposit in the amount and currencies specified under 2.5.5, and deliver it to the Purchaser at the time of Agreement. The Performance Guarantee Deposit shall be in in the form of A Bank Guarantee Bonds of any Nationalized Bank or State Bank of India or any Scheduled Bank of India (provided such Scheduled Bank certifies that the guarantees given are within the limit prescribed by Reserve Bank of India) and in the form as acceptable to the Purchaser

Performance Guarantee Deposit shall be valid up to 60 (sixty) days beyond the defect liability period.

The proceeds of the Performance Guarantee Deposit shall be payable to the Purchaser as compensation for any loss resulting from the Contractors failure to complete its obligations under the Contract.

The Performance Guarantee Deposit will be discharged by the Purchaser and returned to the Contractor within 30 days following the date of completion of the Contractor's performance obligations including any warranty & maintenance obligations under the Contract. No interest will be payable by the Purchaser on this Security Deposit.

3.1.20 Indemnity Bond

Within 15 days of receipt of award letter, the Contractor shall furnish the following Indemnity Bond

Name of work:.....

I _____ Contractor S/o. _____ aged _____ Resident of _____ do hereby bind myself to pay all the claims may come (a) under Workmen's Compensation Act. 1933 with any statutory modification thereof and rules there under or otherwise for or in respect of any damage or compensation payable in connection with any accident or injury sustained (b) under Minimum wages Act 1948 (c) under payment of wages Act.1936 (d) under the Contractor labour (Regulation and Abolition) Act. 1970 by workmen engaged for the performance of the business relating to the above Contract i.e., failing such payment of claims of workmen engaged in the above work, I abide in accepting for the recovery of such claims, effected from any of my assets with the departments.

3.1.21 Co-ordination of the Works

The Contractor shall be responsible for the co-ordination and proper execution of the Works. The Contractor shall, as specified elsewhere in the document afford all reasonable opportunities for carrying out their work to:

- i. the workmen and Purchaser's Representatives, and
- ii. the workmen of any legally constituted public authorities who may be employed in the execution on or near the Site of any work not included in the Contract, which the Purchaser may require.

The Contractor shall obtain, co-ordinate and submit to the Purchaser's Representative for his information all details (including details of work to be carried out off the Site) from Subcontractors. The Contractor shall ensure that there is no conflict with the work of other Subcontractors, the Contractor or other Contractors.

3.1.22 Setting Out

The Contractor(s) shall set out the whole of the work in conjunction with an officer to be deputed by the Purchaser /Purchaser and during the progress of the work to amend on the requisition of the Purchaser /Purchaser any errors, which may arise therein and provide all the necessary labour materials and equipment for so doing. The Contractor is to provide all tools, machinery, labour and materials, which may be necessary and required for the work. All materials and workmanship shall conform to the relevant specifications mentioned in the tender documents.

The Contractor shall carry out the detailed survey as described in the scope of work and elsewhere in the document and prepare the pre-commencement survey map for approval of the Purchaser's representatives. Based on the approved Pre-commencement survey map, the Contractor will prepare the necessary working drawings for the purpose of execution.

3.1.23 Purchaser's Risks

Purchaser's risk shall be for the events stated in Clause 3.1.25.

3.1.24 Contractor's Risks

The Contractor shall be responsible for all risks of loss or damage to physical property and of personal injury and death which arise during and in consequence of its performance of the Contract.

3.1.25 Insurance

Without limiting the Contractors liability pursuant to Clause 3.1.22, the Contractor is to comply with the Insurance act including workmen's Compensation Act and Third Party Insurance and other relevant provisions particularly with reference to the requirements of taking Insurance for storage, civil, structural, architectural work and all plant materials & works from beginning & also during erection, testing and commissioning, operation and maintenance till project is handed over to the department against all loss or damage from any cause. Such insurance shall be for a limit of not less than the full replacement cost (including

profit) and shall also cover the costs of demolition and removal of debris. Such insurance shall be in such a manner that the Purchaser and the Contractor are covered from the date by which the evidence is to be submitted, until the date of issue of the final Taking over Certificate for the Works. The Contractor shall extend such insurance to provide cover until the date of issue of the Performance Certificate, for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the final Taking-Over Certificate, and for loss or damage occasioned by the Contractor or Sub-Contractors in the course of any other operations .

Insurance against Injury to Persons and Damage to Property: The Contractor shall insure against liability to third parties, in the joint names of the Purchaser, the Contractor and Sub-Contractors, for any loss, damage, death or bodily injury which may occur to any physical property or to any person, which may arise out of the performance of the Contract and occurring before the issue of the Performance Certificate.

Insurance for Workers: The Contractor shall effect and maintain insurance against losses and claims arising from the death or injury to any person employed by the Contractor or any Sub-Contractor, in such a manner that the Purchaser and the Purchaser's Representative are indemnified under the policy of insurance. For a Sub-Contractor's employees, such insurance may be affected by the Sub-Contractor, but the Contractor shall be responsible for compliance with this Clause.

3.1.25.1 General requirement for insurance

Each insurance policy shall be consistent with the general terms agreed in writing prior to the Effective Date, and such agreement shall take precedence over the provisions of this Clause.

3.1.25.2 The Contractor shall submit to the purchaser

Evidence that the insurances described in this Clause have been effected and copies of the policies for the insurances.

When each premium has been paid, the Contractor shall submit copy receipts to the Purchaser. The Contractor shall also, when providing such evidence, policies and receipts to the Purchaser, notify the Purchaser's Representative of so doing.

The Contractor shall affect all insurance for which he is responsible with insurers and in terms approved by the Purchaser. Each policy insuring against loss or damage shall provide for payments to be made in the currencies required to rectify such loss or damage. Payments received from insurers shall be used for the rectification of such loss or damage.

The Contractor (and, if appropriate, the Purchaser) shall comply with the conditions stipulated in each of the insurance policies. The Contractor shall make no material alteration to the terms of any insurance without the prior approval of the Purchaser. If an insurer makes (or propose to make) any such alteration, the Contractor shall notify the Purchaser immediately.

If the Contractor fails to effect and keep in force any of the insurances required under the Contract, or fails to provide satisfactory evidence, polices and receipts in accordance with

this Sub-Clause, the Purchaser may, without prejudice to any other right or remedy, effect insurance for the coverage relevant to such default, and pay the premiums due. Such payments shall be recoverable from the Contractor by the Purchaser, and may be deducted by the Purchaser from any monies due, or to become due, to the Contractor.

Nothing in this Clause limits the obligations, liabilities or responsibilities of the Contractor or the Purchaser, under the other terms of the Contract or otherwise. Any amounts not insured or not recovered from the insurers shall be borne by the Contractor and/or the Purchaser accordingly.

3.1.26 Force Majeure

(i) Definition of force majeure

In this Clause, "force majeure" means an event beyond the control of the Purchaser and the Contractor, which makes it impossible or illegal for a party to perform, including but not limited to:

- (a) act of God;
- (b) War, hostilities (whether war be declared or not), invasion, act of foreign enemies.
- (c) rebellion, revolution, insurrection, or military usurped power, or civil war;
- (d) contamination by radio-activity from any nuclear fuel, or from any nuclear waste from the combustion of nuclear fuel, radio-active toxic explosive, or other hazardous properties of any explosive nuclear assembly or nuclear component of such assembly;
- (e) Riot, commotion or disorder, unless solely restricted to employees of the Contractor or of his Sub-Contractors.

(ii) Effect of force majeure event

Neither the Purchaser nor the Contractor shall be considered in default or in Contractual breach to the extent that performance of obligations is prevented by a force majeure event.

(iii) Contractor's responsibility

Upon occurrence of an event considered by the Contractor to constitute force majeure and which may affect performance of his obligations, he shall promptly notify the Purchaser and Purchaser, and shall endeavor to continue to perform his obligations as far as reasonably practicable. The Contractor shall also notify the Purchaser and Purchaser of any proposals, including any reasonable alternative means for performance, but shall not effect such proposals without the consent of the Purchaser and Purchaser .

(iv) Purchaser's responsibility

Upon occurrence of an event considered by the Purchaser to constitute force majeure and which may affect performance of his obligations, he shall promptly notify the Contractor and the Purchaser's Representative, and shall endeavor to continue to perform his obligations as far as reasonably practicable. The Purchaser shall also notify the Purchaser's

Representative and the Contractor of any proposals, with the objectives of completing the Works.

- (v) Notwithstanding the other provisions of clauses of this specification, the Contractor shall not be liable for forfeiture of its performance security, liquidated damages or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of event of Force Majeure.

3.1.27 Forced closure of works by the Government

If at any time after the execution of the Contract Documents the Purchaser shall for any reason whatsoever require the whole or any part of the work as specified in the tender to be stopped for any period or shall not require the whole or part of the work to be carried out at all or to be carried out by the Contractor, he shall give notice in writing of the fact to the Contractor who shall thereupon suspend or stop the work totally or partially as the case may be. In any such case except as provided hereunder the Contractor shall have no claim to any payment or compensation whatsoever on account of any profit or advantage which he might have derived from the execution of the work in full but which he did not so derive in consequence of the full amount of work not having been carried out or on account of any loss that he may be put to on account of materials purchased or agreed to be purchased, or for unemployment of labour recruited by him. He shall not also have any claim for compensation by reason of any alterations having been made in the original specifications, drawings, design and instructions which may involve any curtailment of the work as originally completed. Where, however, materials have already been purchased or agreed to be purchased by the Contractor before receipt by him of the said notice the Contractor shall be paid for such materials at the rates determined by the Purchaser, provided they are not in excess of requirements and are of approved quality and/or shall be compensated for the loss if any, that if he may put to in respect of materials agreed to be purchased by him, the amount of such compensation to be determined by the Purchaser whose decision shall be final. If the Contractor suffers any loss on account of his having to pay labour charges during the period of stoppage of work ordered under this clause, the Contractor shall, on application be entitled to the such compensation on account of labour charges as the Purchaser whose decision shall be final may consider reasonable, provided that the Contractor shall not be entitled to any compensation on account of labour charges, if in the opinion of the Purchaser, the labour could have been employed by the Contractor elsewhere for the whole or part of the period during which the stoppage of the work has been ordered as aforesaid.

3.1.28 Site Inspections

The Contractor should inspect the site and also proposed quarries of choice for materials source of water and quote his bid price including quarrying, conveyance, royalty and all other charges etc.

The responsibility for arranging the land for borrow area rests with the Contractor and no separate payment will be made for procurement or otherwise. The Contractor's quoted bid price will be inclusive of cost of land for Borrow Area.

3.1.29 Contractor to Construct the Works

The Contractor shall conduct surveys, detailed investigation, design, prepare estimates and Payment Schedules for construction, erection and commissioning the Work in accordance with the approved specifications and drawings.

3.1.30 Diversion of Streams / Nallah / Drains

The Contractor shall at all times carry out construction of cross drainage works in a manner creating least interference to the natural flow of water while consistent with the satisfactory execution of work. A temporary diversion and training shall be formed by the Contractor at his cost where necessary. No extra payment shall be made for this work.

No separate payment for bailing out sub-soils, water drainage or locked up rain water for diversion, shoring, foundations, bailing of pumping water either from excavation of soils from foundations or such other incidental will be paid. The bid prices to be quoted by the Contractor are for the finished item of work in situ and including all the incidental charges. The borrow pits are also to be de-watered by the Contractor himself at his expense.

The work of diversion arrangements should be carefully planned and prepared by the Contractor and forwarded to the Purchaser. The proposal should be technically viable and approval shall be obtained for execution.

The Contractor has to arrange for bailing out water, protection to the work in progress and the portion of works already completed and safety measures for men and materials and all necessary arrangements to complete the work.

All the arrangements so required should be carried out and maintained at the cost of the Contractor and no separate or an additional payment is admissible.

3.1.30.1 Cofferdams

Necessary cofferdams and ring bunds have to be constructed at the cost of Contractor and same are to be removed after the completion of the work. The Contractor has to quote his bid price keeping the above in view.

3.1.31 Electricity, Power and Water

The Contractor shall be fully responsible to arrange such electricity, power, water and fuel as may be necessary to complete the works and fulfill his obligation under the Contract. The prices quoted by the Contractor shall include the cost of all electricity, power, water and fuel as may be required.

3.1.32 Supply of construction materials

- i) The Contractor has to make his own arrangements for procurements, supply and use of construction materials.
- ii) All materials so procured should conform to the relevant specifications indicated in the bidding documents.
- iii) The Contractor shall make his own arrangements for adequate storage of the materials.

3.1.33 Temporary Diversions for Roads

The Contractor shall at all times carryout work on the road in a manner creating least interference to the flow of traffic while consistent with the satisfactory execution of the same. For all works involving improvements to the existing road, the Contractor shall in accordance with the due consent of concerned authority like National Highway, State PWD etc. and directions of the Purchaser provide and maintain during the execution of the work a passage for traffic, either along a part of the existing carriage way under improvement or along a temporary diversion constructed close to the road.

If in the opinion of the Purchaser, it is not possible to pass the traffic on part width of the carriage-way for any reason, a temporary diversion close to the road shall be constructed as directed. It shall be paved with the materials such as hard moorum, gravel and stone, metal, asphalt etc. to the specified thickness as specified by concerned authority and as directed by the Purchase. In all cases, the alignment, gradients and surface type of the diversion including its junctions, shall be approved by the Purchaser before the road is closed to traffic.

The Contractor shall take all necessary measures for the safety of traffic during construction and provide erect and maintain such barricades, including signs, markings, flags lights and information and protection of traffic approaching or passing through the section of the road under improvement. Before taking up any construction, an agreed phased programme for the diversion of traffic on the road shall be drawn up in consultation with the Purchaser and concerned authorities.

The barricades erected on either side of the carriage way portion of the carriage way closed to traffic, shall be of strong design to resist violation and painted with alternative black and white stripe. Red lanterns or warnings lights of similar type shall be mounted on the barricades at night and kept lit throughout from sunset to sunrise.

3.1.34 Monsoon Damages

Damages due to rain or flood either in cutting or in banks shall have to be made good by the Contractor till the work is handed over to the Department. The responsibility of de-silting and making good the damages due to rain or flood rests with the Contractor. No extra payment is payable for such operations and the Contractor shall therefore, has to take all necessary precautions to protect the work done during the construction and defect liability period.

3.1.35 The works to be Completed by the Intended Completion Date

The Contractor may commence execution of the Works immediately after receipt of work order and shall carry out the Works in accordance with the program submitted by the Contractor, as updated with the approval of the Purchaser , and complete the work by the Intended Completion Date.

3.1.36 Discoveries

Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Purchaser. The Contractor shall promptly notify

the Purchaser of such discoveries and carry out the Purchaser's instructions for dealing with them.

3.1.37 Use and care of project site

The Contractor shall be permitted to use the Project Site for the execution of the Works, under the control of Purchaser, subject to such conditions as are detailed herein. The Contractor shall not commence any operation on the Project Site except with the prior approval of Purchaser.

With the permission of Purchaser the Contractor may at his expense erect temporary structures for storage sheds, office, workshops, residences for officials, colonies for labour engaged in execution of the work for project etc., for noncommercial use on the Project Site handed over to him. At the completion of the Works these structures should be dismantled by the Contractor and the Project Site cleared and handed over to Purchaser.

The Contractor shall make his own arrangements for land required for providing facilities, including those for staff and labour, to the labour employed on the Works in the event that the land provided by Purchaser is not sufficient. The Contractor shall also provide and maintain at his own expense such temporary fences, guards, bridges and roads as may be necessary for the execution of his preliminary, enabling and ancillary Works or for safeguarding the public.

The Contractor shall make good to the satisfaction of the Purchaser any damage to areas, which he has to return or to other property or land handed over to him for purpose of this work. Temporary structures may be erected by the Contractor for storage sheds, offices, residences etc., for non-commercial use, with the permission of the Purchaser on the land handed over to him at his own cost. At the completion of the work these structures shall be dismantled site cleared and handed over to the Purchaser.

3.1.38 Possession of the Site

The Purchaser's Representative shall give possession of the whole Site or such parts of the Site as are sufficient to enable the Contractor to commence and proceed with the execution of the Works in accordance with the approved Work Program. The Purchaser's Representative shall, from time to time, as the work proceeds, give to the Contractor possession of such further portions of the Site as may be required to enable the Contractor to proceed with the execution of the Works with due diligence in accordance with the agreed programme or proposals, as the case may be.

If the Purchaser's Representative fails to give possession of the whole or part of the Site to work, the Contractor in accordance with the proposal of work program the Purchaser shall consider extension of time, due to delayed start of relevant activities.

3.1.39 Access to the Site

The Contractor shall allow the Purchaser and his representative and any person authorized by the Purchaser access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.

3.1.40 Approach Roads and roads in work area

In addition to existing public roads and roads Constructed by Government, if any, in work area all additional approach roads inside work area and camp required by the Contractor shall be constructed and maintained by him at his own cost. The layout design, construction and maintenance etc. of the roads shall be subject to the approval of the Purchaser. The Contractor shall permit the use of these roads by the Government free of charge.

It is possible that work at, or in the vicinity of the work site will be performed by the Government or by other Contractors engaged in work for the Government during the Contract period. The Contractor shall without charge permit the government and such other Contractor and other workmen to use the access facilities including roads and other facilities, constructed and acquired by the Contractor for use in the performance of the works.

The Contractor's heavy construction traffic or tracked equipment shall not traverse any public roads or bridges unless the Contractor has made arrangement with the authority concerned. In case Contractor's heavy construction traffic or tracked equipment is not allowed to traverse any public roads or bridges and the Contractor is required to make some alternative arrangements, no claim on this account shall be entertained.

3.1.41 Site Data

The Contractor shall be deemed to have inspected and examined the Site, its surroundings, the data and other available information, and to have satisfied himself before submitting the Tender, as to:

- (a) the form and nature of the Site, including the sub-surface conditions,
- (b) the hydrological and climatic conditions,
- (c) the extent and nature of the work and Materials necessary for the execution and completion of the Works, and the remedying of any defects, and
- (d) the means of access to the Site and the accommodation he may require.

The Contractor shall be deemed to have obtained all necessary information as to risks, contingencies and all other circumstances which may influence or affect the Tender.

3.1.42 Access Route

The Contractor shall be deemed to have satisfied himself as to the suitability and availability of the access routes he chooses to use. The Contractor shall be responsible for the maintenance of access routes. The Contractor shall provide any signs or directions which he may consider necessary for the guidance of his staff, labour and others. The Contractor shall obtain any permission that may be required from the relevant authorities for the use of such routes, signs and directions.

The Purchaser will not be responsible for any claims which may arise from the use or otherwise of any access route. The Purchaser does not guarantee the suitability or availability of any particular access route, and will not entertain any claim for any non-suitability **or non-availability for continuous use during construction of any such route.**

3.1.43 Rights of Way and Facilities

The Contractor shall bear all costs and charges for special or temporary rights-of-way required by him for access to the Site. The Contractor shall also provide, at his own cost, any additional facilities outside the Site required by him for the purposes of the Works.

3.1.44 Contractor's Equipment

The Contractor shall provide all Contractor's Equipment necessary to complete the Works. All Contractor's Equipment shall, when brought on to the Site, be deemed to be exclusively intended for the execution of the Works. The Contractor shall not remove from the Site any such Contractor's Equipment without the consent of the Purchaser.

3.1.45 Safety Precautions

The Contractor shall comply with all applicable safety regulations in his design, access arrangements and operations on Site. The Contractor shall, from the commencement of work on Site until taking-over by the Purchaser, provide:

- (a) fencing, lighting, guarding and watching of the Works; and
- (b) temporary roadways, footways, guards and fences which may be necessary for the accommodation and protection of owners and occupiers of adjacent land, the public and others.

3.1.46 Protection of the Environment

The Contractor shall take all reasonable steps to protect the environment (both on and off the Site) and to limit damage and nuisance to people and property resulting from pollution, noise and other results of his operations. The Contractor shall ensure that air emissions, surface discharges and effluent from the Site during the Contract Period shall not exceed the values prescribed by law.

3.1.47 Clearance of Site

During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction. The Contractor shall clear away and remove from the Site any wreckage, rubbish or Temporary Works no longer required.

Upon the issue of any Taking-Over Certificate, the Contractor shall clear away and remove, from that part of the Site and Works to which such Taking-Over Certificate refers, all Contractor's Equipment, surplus material, wreckage, rubbish and Temporary Works. The Contractor shall leave such part of the Site and the Works in a clean and safe condition to the satisfaction of the Purchaser. Except that, the Contractor shall be entitled to retain on Site, until the expiry of the Contract Period, such Contractor's Equipment, Materials and Temporary Works as required by him for the purpose of fulfilling his obligations under the Contract.

If the Contractor fails to remove, by 30 days after the issue of the Performance Certificate, any remaining Contractor's Equipment, surplus material, wreckage, rubbish and

Temporary Works, the Purchaser may sell or otherwise dispose of such items at Contractor's risk and cost.

3.1.48 Security of the Site

The Contractor shall be responsible for keeping unauthorized persons off the Site and authorized persons shall be limited to the employees of the Contractor, employees of his sub-contractors and persons authorized by the Purchaser's Representative / Purchaser.

3.1.49 Contractor's Operations on Site

The Contractor shall confine his operations to the Site, and to any additional areas which may be provided by the Contractor and agreed by the Purchaser's Representative as working areas. The Contractor shall take all necessary precautions to keep his personnel and equipment within the Site and such additional areas, and to keep and prohibit them from encroaching on adjacent land.

3.1.50 Shifting of HT/LT towers/poles/lines

During construction, Wherever the works require shifting of H.T./L.T. power lines, towers, Electrical poles etc., either permanently or temporarily the Contractor shall arrange for such shifting of power lines towers, electrical poles etc., through concerned authorities of concerned Power Corporation at his cost. The Purchaser will process the proposals submitted by the Contractor to the authorities of concerned Power Corporation. The price bid quoted by the Contractor is deemed to be inclusive of such cost and no claims for separate payment will be entertained.

3.1.51 Permission for Crossing NH/SH/Roads

If any work related with this contract have crossing for National Highway, State Highway, other Roads, oil pipelines, gas pipelines water pipelines etc., and as such necessary letter to grant the permission for crossing those premises shall be issued to the respective authorities by the Purchaser. However the Contractors will have to keep the follow-up and obtain timely clearance from the concerned authorities Costs of those crossing are included in the Bid.

3.1.52 Engagement of Staff and Labour

The Contractor shall make his own arrangements for the engagement of all staff and labour, local or otherwise, and for their payment, housing, feeding and transport.

3.1.53 Rates of Wages and Conditions of Labour

The Contractor shall pay not less than the fair wages to labour engaged by him on the works in accordance with relevant Govt. laws in this respect.

3.1.54 Labour Laws

The Contractor shall comply with all relevant labour laws applying to his employees,

and shall duly pay and afford to them all their legal rights. The Contractor shall require all such employees to obey all applicable laws and regulations concerning safety at work.

The Contractor shall comply with the Provisions of all the Acts, Laws, any Regulation or Bye Laws of any Local or other Statutory Authority applicable in relation to the execution of the Works, such as:

- (i) Payment of Wages Act, 1936 (Amended).
- (ii) Minimum Wages Act, 1948 (Amended)
- (iii) The Agreement Labour (Regulation & Abolition) Act, 1970 with Rules framed there under as amended.
- (iv) Workmen Compensation Act, 1923, as amended by Amendment Act No.65 of 1976.
- (v) Employer's Liability Act, 1938 (Amended).
- (vi) Maternity Benefit Act, 1961 (Amended).
- (vii) The Industrial Employment (Standing Orders) Act, 1946 (Amended).
- (viii) The Industrial Disputes Act, 1947 (Amended).
- (ix) Payment of Bonus Act, 1965 and Amendment Act No.43 or 1977 and No.48 of 1978 and any amendments thereof.
- (x) The Personal Injuries (Compensation Insurance) Act, 1963 and any modifications thereof and rules made there under from time to time. The Contractor shall take into account all the above said financial liabilities in his quoted rates and nothing extra, whatsoever, shall be payable to his on account.
- (xi) Employees' Provident Funds and Miscellaneous Provisions Act, 1952
- (xii) Employees' State Insurance Act, 1948.
- (xiii) Equal Remuneration Act, 1976.
- (xiv) Payment of Bonus Act, 1965.
- (xv) Trade Unions Act, 1926.
- (xvi) Child Labour (Prohibition & Regulation) Act, 1986.
- (xvii) Inter-State Migrant Workmen's Act, 1979.
- (xviii) The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.
- (xix) Factories Act 1948

All statutory registers and records maintained and returns filed by the Contractor and under the aforesaid legislations shall be provided for inspection by 'PURCHASER' upon notice. Further, the Contractor shall, within a period of 7 days of receipt thereof, furnish to 'Purchaser', copies of all notices, communications or correspondences received from or issued by any statutory or governmental authorities including authorities constituted or functioning under the aforesaid legislations together with such other supporting documents or information in respect thereof as may be required by 'Purchaser'.

3.1.55 Working Hours

No work shall be carried out on the Site outside the normal working hours, or on the locally recognized days of rest, unless:

- (a) the work is unavoidable, or necessary for the saving of life or property or for the safety of the Works, in which case the Contractor shall immediately advise the Purchaser , or
- (b) the Purchaser gives his consent.

3.1.56 Work during night or on Sundays and Holidays

The works can be allowed to be carried out during night, Sundays or authorised holidays in order to enable him to meet the schedule targets and the work shall require almost round the clock working keeping in view:

- (i) The provisions of relevant labour laws being adhered to:
- (ii) Adequate lighting, supervision and safety measures are established to the satisfaction of the Purchaser and
- (iii) The construction programme given by the Contractor and agreed upon by the Purchaser envisages such night working or working during Sundays or authorised holidays.

3.1.57 Facilities for Staff and Labour

The Contractor shall provide and maintain all necessary accommodation and welfare facilities for his (and his Sub-Contractor's) staff and labour. The Contractor shall not permit any of his employees to maintain any temporary or permanent living quarters within the structures forming part of the Works.

3.1.58 Payment for Camp Construction

No payment will be made to the Contractor for construction, operation and maintenance of camp and other camp facilities and the entire cost of such work shall be deemed to have been included in the Bided Price.

3.1.59 Transportation of Labour

The Contractor shall make his own arrangement for the daily transportation of the labour and staff from labour camps colonies to the work spot. No extra payment will be made to the Contractor for the transportation of the labour.

The Contractor will at all times duly observe the provisions of employment of children Act XXVI of 1938 and any enactment or modification of the same and will not employ or permit any person to do any work for the purpose under the provisions of this agreement in contravention of said Act. The Contractor here by agrees to indemnify the department from and against all claims, penalties which may be suffered by the department or any person employed by the department by any default on the part of the Contractor in the observance and performance of the provisions of the employment of children Act. XXVI of 1938 or any enactment or modification of the same.

The Contractor shall obtain the insurance at his own cost to cover the risk on the works to labour engaged by him during period of execution against fire and other usual risks.

Contractor shall follow the provisions contained in model rules relating to labour, water supply and sanitation in labour camps as applicable under statutory rules and regulations.

3.1.60 Health and Safety

- a. Precautions shall be taken by the Contractor to ensure the health and safety of his staff and labour. The Contractor shall, in collaboration with and to the requirements of the local health authorities, ensure that medical staff, first aid facilities, sick bay and ambulance service are available at the accommodation and on the Site at all times, and that suitable arrangements are made for all necessary welfare and hygiene requirements and for the prevention of epidemics. The Contractor shall maintain records and make reports concerning health, safety and welfare of persons, and damage to property, as the Purchaser's Representative may reasonably require.
- b. The Contractor shall appoint a member of his staff at the Site to be responsible for maintaining the safety, and protection against accidents, of personnel on the Site. This person shall be qualified for his work and shall have the authority to issue instructions and take protective measures to prevent accidents. The Contractor shall send, to the Purchaser's Representative, details of any accident as soon as possible after its occurrence.

3.1.61 Measures against Insect & Pest Nuisance

The Contractor shall at all times take the necessary precautions to protect all staff and labour employed on the Site from insect and pest nuisance, and to reduce the dangers to health and the general nuisance occasioned by the same. The Contractor shall provide its staff and labor with suitable prophylactics for the prevention of malaria and take steps to prevent the formation of stagnant pools of water. The Contractor shall comply with all the regulations of the local health authorities and shall arrange to spray thoroughly with approved insecticide all buildings erected on the Site. Such treatment shall be carried out at least once a year or as instructed by such authorities.

3.1.62 Contractor's Superintendence

The Contractor shall provide all necessary superintendence during the design and execution of the Works, and as long thereafter as the Purchaser's Representative may consider necessary for the proper fulfilling of the Contractor's obligations under the Contract. Such superintendence shall be given by sufficient persons having adequate knowledge of the operations to be carried out (including the methods and techniques required, the hazards likely to be encountered and methods of preventing accidents) for the satisfactory and safe execution of the Works.

3.1.63 Contractor's Personnel

The Contractor shall employ (or cause to be employed) only persons who are careful and appropriately qualified, skilled and experienced in their respective trades or occupations. The Purchaser's Representative may require the Contractor to remove (or cause to be removed) any person employed on the Site or Works, including the Contractor's Representative, who in the opinion of the Purchaser's Representative:

- (a) persists in any misconduct,
- (b) is incompetent or negligent in the performance of his duties,
- (c) fails to conform with any provisions of the Contract, or

- (d) Persists in any conduct which is prejudicial to safety, health, or the protection of the environment.

If appropriate, the Contractor shall then appoint (or cause to be appointed) a suitable replacement person.

3.1.64 Disorderly Conduct

The Contractor shall at all times take reasonable precautions to prevent any unlawful, riotous or disorderly conduct by or amongst his employees and for the preservation of peace and protection of persons and property in the neighbourhood of the Works against the same. "Disorderly conduct" shall include but not be limited to harvesting of natural resources such as firewood or fish by the Contractor's labour when this is done to the detriment of pre-existing local interests.

3.1.65 Commencement of Works

The Contractor shall commence the work(s) within 30 (thirty) days after the issue of Letter of Award or within such period as specified in the Letter of Award and shall proceed with the same expeditiously and without delay as may be expressly sanctioned or ordered by 'Purchaser'. If the Contractor commits default in the commencement of the work as aforesaid, 'PURCHASER' shall without prejudice to any other right or remedy as may be available under the Agreement or law, be at liberty to cancel the Agreement and forfeit the Earnest Money Deposit.

Contractor shall have to strictly adhere to such an agreed planning & scheduling. Progress of Works In case, the Contractor fails to achieve monthly progress as per the agreed schedule, then 'Purchaser' would take any of the following steps:

- (a) Reduce the scope of work of the Contractor and award the same to any other Contractor at the risk and cost of the Contractor.
- (b) Take any other action as stipulated in other clauses of the Contract.

3.1.66 Time for Completion and extension

The whole of the Works, and each Section (if any), shall be completed and shall have passed the Tests on Completion within the Time for Completion for the Works or such Section (as the case may be).

Time allowed for execution of the work as specified in Clause 5 of Section 2 or the extended time, if any, in accordance with these conditions shall be essence of the Agreement.

'Purchaser' will provide suitable extension of time, if the work is delayed on account of:

- (a) Increase in the quantity of work to be done under the Agreement ;or
- (b) "Force Majeure"; or
- (c) Any other reason which in the opinion of Purchaser is beyond the Contractor's control.

3.1.67 Delays Caused by Authorities

If the following conditions apply, namely:

- (a) the Contractor has diligently followed the procedures laid down by Government,
- (b) such authorities delay, impede or prevent the Contractor, and then such delay will be considered as a cause of delay giving an entitlement to extension of time under Clause 3.1.66.

3.1.68 Progress of works

- a. If, at any time, the Contractor's actual progress falls behind the programme approved by Purchaser, or it becomes apparent that it will so fall behind, the Contractor shall submit to the Purchaser's Representative and Purchaser a revised programme taking into account the prevailing circumstances. The Contractor shall, at the same time, notify the Purchaser and his representative of the steps being taken to expedite progress, so as to achieve completion within the Time for Completion.
- b. If any steps taken by the Contractor in meeting his obligations under this Sub-Clause cause the Purchaser to incur additional costs, such costs shall be recoverable from the Contractor by the Purchaser, and may be deducted by the Purchaser from any money due, or to become due, to the Contractor.

3.2 QUALITY CONTROL

3.2.1 Identifying Defects

The Purchaser's Representative shall check the Contractor's work and notify the Contractor of any Defects which are found. Such checking does not affect the Contractor's responsibilities. The Purchaser may instruct the Contractor to search for a defect and to uncover and test any part of the Works, which the Purchaser considers may have a Defect.

3.2.2 Quality Assurance

Unless otherwise indicated elsewhere in the Contract, the Quality Assurance and Quality Control (QA/QC) documents for each element of work/equipment shall be prepared by the Contractor along with its Engineering documents and three copies of the same shall be supplied to Purchaser for his approval. Purchaser's hold point shall be clearly marked against critical check points for witnessing test/inspection by Purchaser's representative. The Purchaser shall mark his comments or give his approval on one copy and return the same to Contractor. The Contractor shall implement the comments and send three copies of revised documents again to the Purchaser. After getting Purchaser's approval, six copies of approved QA/QC documents shall be supplied to Purchaser for inspection of works/equipment at site/manufacturer's works.

Within 15 (fifteen days) from the date of commencement of work, the Contractor shall arrange to provide at his own cost a fully furnished and adequately equipped field laboratories at the required locations of site as per specifications and directions of the Purchaser, including maintenance of the same. This shall be removed at the completion of the work.

All dismantled items of field laboratory and all equipment shall be property of the Contractor at the completion of the work.

The calibration of the laboratory equipment and instrument shall at the initial stages be certified by agencies approved by the Purchaser. Laboratory equipment shall be properly maintained and calibrated throughout the period of the Contract by the Contractor at his own expense. The Contractor shall notify the Purchaser in sufficient advance prior to conducting any tests for materials and work. The Purchaser will also inspect the laboratory and the Contractor shall provide adequate facilities to the Purchaser for his independent verification of the accuracy and adequacy of the facilities, equipments required at site are as included in the QA/QC document.

The Contractor shall institute a quality assurance system to demonstrate compliance with the requirements of the Contract. Such system shall be in accordance with the details stated in the Contract. Compliance with the quality assurance system shall not relieve the Contractor of his duties, obligations or responsibilities.

Details of all procedures and compliance documents shall be submitted to the Purchaser's Representative for his information before each design and execution stage is commenced. When any document is issued to the Purchaser's Representative, it shall be accompanied by the signed quality statements for such document, in accordance with the details stated in the Contract. The Purchaser's Representative shall be entitled to audit any aspect of the system and require corrective action to be taken.

Contractor shall allow any authorized persons by Purchaser or Purchaser to inspect and check the test and quality control for the Work.

3.2.3 Tests

If the Purchaser instructs the Contractor to carry out a test not specified in the Specification to check whether any part of the Works has a Defect, and the Contractor shall pay for the test and any samples.

If the remedying of any defect or damage is such that it may affect the performance of the Works, the Purchaser may require that these Tests should be repeated to the extent necessary. The requirement shall be made by notice within 28 days after the defect or damage is remedied.

3.2.4 Correction of Defects

The Purchaser shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion.

Every time notice of a Defect is given, a Defects Correction Period for the notified Defect begins. The Contractor shall correct the notified Defect within the Defects Correction Period at no cost to the Purchaser. The length of the Defects Correction Period is the length specified by the Purchaser's notice.

The Contractor shall correct Defects which he notices himself before the end of the Defects Liability Period.

If the defect or damage is such that it cannot be remedied expeditiously on the Site, the Contractor may, with the consent of the Purchaser's Representative or the Purchaser, remove from the Site for the purposes of repair any part of the Works which is defective or damaged.

The Contract Period shall be extended by a period equal to the sum of any periods, after the Works are taken-over, during which the Works or any Section or item of Plant cannot be used, for the purposes for which they are intended, by reason of a defect or damage.

3.2.5 Uncorrected Defects

The Purchaser may arrange for a third party to correct a Defect if the Contractor has not corrected it within the Defects Correction Period.

The Purchaser shall give the Contractor at least 15 days notice of his intention to use a third party to correct a Defect. If the Contractor does not correct the Defect himself within this period, the Purchaser may have the Defect corrected by the third party. The cost of the correction will be deducted from the Contract Price.

The Purchaser shall introduce O.K. cards and prescribe the formats thereof. O.K. cards shall relate to all major components of the work. The Contractor/ his authorised representative shall be required to initiate and fill in and present the O.K. card to the construction staff who would check the respective items. Any defects pointed out by the Purchaser's Representative and supervision staff of department shall promptly be attended to by the Contractor's and the fact of doing so be duly recorded on the back of O.K. card.

The Purchaser may also introduce checklists, which shall be kept in Bound registers by the construction supervision staff. The Contractor may be required to fill up these lists in the first instance and shall be subsequently checked by the Construction/ Quality Control Purchaser s/Purchaser's Representative.

3.2.6 Notice to Correct

If the Contractor fails to carry out any of his obligations, or if the Contractor is not executing the Works in accordance with the Contract, the Purchaser may give notice to the Contractor requiring him to make good such failure and remedy the same within a specified reasonable time.

3.2.7 Termination by Purchaser

The Purchaser may terminate the Contract if the Contractor causes a breach of the Contract.

3.2.7.1 Breaches of Contract include, but are not limited to:

- (a) The Contractor stops work for 30 days when no stoppage of work is shown on the current program and the stoppage has not been authorised by the Purchaser;
- (b) The Contractor becomes bankrupt or insolvent, goes into liquidation, has a receiving or administration order made against him, compounds with his creditors, or carries on business under a receiver, trustee or manager for the

- benefit of his creditors, or if any act is done or event occurs which (under any applicable law) has a similar effect to any of these acts or events,
- (c) the Purchaser gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Purchaser; and
 - (d) Abandons or repudiates the Contract.
 - (e) The Contractor has delayed the completion of works by the number of days for which the maximum amount of liquidated damages can be paid as defined.
 - (f) If the Contractor, in the judgment of the Department has engaged in fraudulent practices in competing for or in the executing the Contract.
 - (g) assigns the Contract or sub Contracts the Works without the required consent, then the Purchaser may, after having given 15 days' notice to the Contractor, terminate the Contract and expel him from the Site. The Contractor shall then deliver all Construction Documents, and other design documents made by or for him, to the Purchaser. The Contractor shall not be released from any of his obligations or liabilities under the Contract. The rights and authorities conferred on the Purchaser and the Purchaser by the Contract shall not be affected.

3.2.7.3 The Purchaser may upon such termination complete the Works by any other persons or by any other Contractor. The Purchaser or such other Contractor may use for such completion so much of the Construction documents, other design documents made by or on behalf of the Contractor, Contractor's Equipment, Temporary Works, Plant and Materials as he or they may think proper. Upon completion of the Works, or at such earlier date as the Purchaser thinks appropriate, the Purchaser shall give notice to the Contractor to remove or arrange removal of the temporary works or any plant or machinery from such place without delay and at his cost.

3.2.7.2 The Purchaser may rescinded the Contract (of which rescission notice in writing to the Contractor under the hand the Purchaser shall be conclusive evidence) and in which case the security deposit including Performance Guarantee deposit (performance security) of the Contractor shall stand forfeited and be absolutely at the disposal of Govt.

3.2.7.3 If the Contract is terminated the Contractor is to stop work immediately, make the site safe and secure and leave the site as soon as reasonably possible.

3.2.8 Valuation at Date of Termination

The Purchaser's Representative shall, as soon as possible after termination under Clause 3.2.7, determine and advise the Contractor of the value of the Construction Documents and Works and all sums then due to the Contractor as at the date of termination.

3.2.9 Payment after Termination

After termination under Clause 3.2.7, the Purchaser shall not be liable to make any further payments to the Contractor until the cost of design, execution, completion and remedying of any defects, damages for delay in completion (if any), and all other costs incurred by the Purchaser, have been established.

3.2.10 Termination by Contractor

The Contractor shall not be entitled to terminate the Contract for any reasons whatsoever.

3.2.12 Cessation of Work and Removal of Contractor's Equipment

After termination under Clause 3.2.7 the Contractor shall:

- (a) cease all further work, except for such work as may be necessary and instructed by the Purchaser's Representative for the purpose of making safe or protecting those parts of the Works already executed, and any work required to leave the Site in a clean and safe condition,
- (b) hand over all Construction Documents,
- (c) hand over those other parts of the Works executed by the Contractor up to the date of termination, and
- (d) remove all his staff and labour from the Site.

Any such termination shall be without prejudice to any other right of the Purchaser under the Contract.

3.2.12 Action and compensation payable in case of bad work

If at any time before Security deposit is refunded to the Contractor it shall appear to the Purchaser or his Subordinate of the work that any work has been executed with unsound, imperfect of unskilled workmanship or with materials of inferior quality or, that any materials or articles provided by him for the execution of work are unsound or of a quality inferior to that Contracted for, or otherwise not in accordance with Contract, it shall be lawful for the Purchaser to intimate this fact in writing to the Contractor, and then notwithstanding the fact that the work, materials or articles complained of may have been inadvertently passed, certified and paid for, the Contractor shall be bound forthwith to rectify or remove and reconstruct the works specified in whole or in part as the case may require, or if so required shall remove the materials or articles so specified and provide other proper & suitable materials or articles at his own proper charge and cost and in the event of his failing to do so within a period to be specified by the Purchaser in the written intimation aforesaid, the Contractor shall be liable to pay compensation at the rate of One percent on the amount of the estimate for every day not exceeding ten days during which the failure so continues and in the case of any such failure, the Purchaser may rectify or remove and re-execute the work or remove and replace the materials or articles complained or as the case may be at the risk and expense in all respects of the Contractor should the Purchaser consider that any such inferior work or materials as described above may be accepted or made use of, it shall be within his discretion to accept the same at such reduced rates as he may fix therefore.

3.2.13 Inspections and Tests

The Purchaser or its representative shall have the right to inspect and/ or to test the Civil, Electro & Hydro-mechanical works to confirm their conformity to the Contract. The special conditions of Contract, Technical Specifications and approved QA/QC documents shall specify what inspections and tests the Purchaser requires and where they are to be

conducted. The Purchaser shall notify the Contractor in writing of the identity of any representative retained for these purposes.

The inspection and tests may be conducted on the premises of the Contractor or its sub-Contractor(s) at point of delivery and/ or at the Good's final destination. When conducted on the premises of the Contractor or its sub Contractor(s) , all reasonable facilities and assistance including access to drawings and production data –shall be furnished to the inspectors at no charge to the Purchaser.

Should any inspected or tested Civil, Electro & Hydro-mechanical works fail to conform to the specifications, the Purchaser may reject them and the Contractor shall either replace the rejected Civil, Electro & Hydro-mechanical works or make all alterations necessary to meet specifications requirements free of cost to the Purchaser.

The Purchasers right to inspect, test and where necessary reject the Civil, Electro & Hydro-mechanical works after the Civil, Electro & Hydro-mechanical works shall in no way be limited or waived by reason of the Civil, Electro & Hydro-mechanical works having previously been inspected, tested and passed by the Purchaser or his representative prior to the Civil, Electro & Hydro-mechanical works shipment.

Nothing in 3.2.13 shall in anyway release the Contractor from any warranty or other obligations under this Contract.

3.2.14 Packing

The Contractor shall provide such packing of the Civil, Electro & Hydro-mechanical works as is required to prevent their damage or deterioration during transit to their final destination as indicated in the Contract. The packing shall be sufficient to withstand without limitation, rough handling during transit and exposure to extreme temperature, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration where appropriate the remoteness of the Civil, Electro & Hydro-mechanical works final destination and absence of heavy handling facilities at all points in transit.

The packing, marking and documentation within and outside the package shall comply strictly with such special requirements as shall be expressly provided for in the Contract and , subject to any subsequent instructions ordered by the Purchaser.

3.2.15 Delivery and Documents

Delivery of the Civil, Electro & Hydro-mechanical works shall be made by the Contractor in accordance with the terms specified by the Purchaser in its schedule of requirements and the special conditions of Contract. In case spare parts and tools are also ordered with the Civil, Electro & Hydro-mechanical works , bidder will undertake to offer spare parts and tools for delivery along with the main Civil, Electro & Hydro-mechanical works only and not before.

3.2.16 Warranty

The Contractor warrants that the Civil, Electro & Hydro-mechanical works 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 Contractor further warrants that the Civil, Electro & Hydro-mechanical works supplied under this Contract shall have no defect arising from design, materials or workmanship or from any act or omission of the Contractor, that may develop under normal use of the supplied Civil, Electro & Hydro-mechanical goods/works in these conditions obtaining in the country of final destination. The Contractor shall guarantee that the Civil, Electro & Hydro-mechanical works/goods supplied shall perform satisfactorily as per designed rated/installed capacity as provided for in the Contract.

This warranty shall remain valid for 12 months after the plant is commissioned as a whole.

The plant is to be operated & maintained by the Contractor for 12 months from the date of commissioning. It will be the responsibility of the Contractor to address any claims arising under this warranty. The Purchaser shall also be notified about the detail of such claims.

The Contractor shall with all reasonable speed, repair or replace the defective Civil, Electro & Hydro-mechanical works/goods or parts thereof, without costs to the Purchaser and shall furnish further 12 months warranty for this component from the date of replacement.

3.2.17 Plant Performance Guarantee

The Contractor shall state the minimum guaranteed power output and efficiency in response to the guaranteed technical specifications. If the generating plant or any part thereof does not give 100% of the guaranteed power output and efficiency attributable to the Contractor, the Contractor shall pay to the Purchaser an amount of 0.5% of the Contract price for each percent by which the plant fails to meet the specified guaranteed output and efficiency of the machine offered by the bidder. Bidder should supply the curves on graphs of head Vs discharge indicating co-efficiencies, co-output & co-guaranteed for the purpose of Performance Guarantee and shall form the basis for field testing at the time of acceptance of equipment.

The Contractor shall, at its cost, make any necessary adjustments or modifications to the generating plant or any part thereof until the same attains a level of output and efficiency specified in the Contract.

The Purchaser shall promptly notify the Contractor in writing of any claims arising under this warranty.

Upon receipt of such notice, the Contractor shall with all reasonable speed, repair or replace the defective Civil, Electro & Hydro-mechanical works or parts thereof, without cost to the Purchaser.

If the Contractor, having been notified fails to remedy the defects within a reasonable period, the Purchaser may proceed to take such remedial action as may be necessary at the Contractor's risk and expense and without prejudice to any other rights which the Purchaser may have against the Contractor under the Contract.

3.2.18 Payment

The method and conditions of payment to be made to the Contractor under the Contract shall be specified in the Special Conditions of Contract.

The Contractors request(s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing as appropriate, the Civil, Hydro-mechanical & Electro-mechanical works delivered and services performed and by shipping documents submitted and upon fulfillment of other obligations stipulated in the Contract.

Payment shall be made promptly by the Purchaser within thirty (30) days of submission of technically & commercially clear invoices & claim by the Contractor.

All payment shall be made in Indian currency only. Any foreign currency component of the Contract Price shall have to be arranged by the Contractor.

3.2.19 Prices

It is a firm price Contract. Prices charged by the Contractor for Civil, Electro & Hydro-mechanical works delivered and services performed under the Contract, shall not vary from the Contract Prices mentioned in Contract Agreement or mutually agreed revised price due to change in scope or specifications in Contract. The price for the design & Engineering should not exceed 5% of the contract price of the project.

There shall be no provision of price variation due to any increase or decrease in the price index which is declared by the Govt. The tenderer must keep in mind the time of execution or completion of the contract and quote the rates accordingly.

The taxes and duties viz. Sales tax, Excise duty, local taxes and other levies as applicable for supplies and services will be borne by Contractor as per actual.

3.2.20 Change Orders

The Purchaser may at any time, by written order given to the Contractor to make changes within the general scope of the Contract in any one or more of the following.

- a. Drawing, design, or specifications for Civil, Electro & Hydro-mechanical works to be performed and supplies to be made under the Contract.
- b. method of shipment of packing
- c. place of delivery: or
- d. services to be provided by the Contractor.

If any such change caused an increase or decrease in the cost of, or the time required for, the Contractors 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 delivery schedule, or both, and the Contract shall accordingly be amended. Any claims by the Contractor for adjustment under this Clause must be asserted within thirty (30) days from the date of the Contractors receipt of the Purchasers change order along with the basis considered for preparation of claim.

3.2.21 Delays in the Contractor's Performance

The time and the date specified in the Contract for the delivery of the Civil, Electro & Hydro-mechanical works shall be deemed, to be the essence of the Contract:

Delivery of the Civil, Electro & Hydro-mechanical works and performance of services shall be made by the Contractor in accordance with the time schedule specified by the Purchaser in its schedule of requirements.

An unexcused delay by the Contractor in the performance of its delivery obligations shall render the Contractor 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.

If at any time during performance of the Contract, the Contractor or its sub-Contractor(s) should encounter conditions impeding timely delivery of the Civil, Electro & Hydro-mechanical works and performance of services, the Contractor shall promptly notify the Purchaser in writing of the fact of the delay, its likely duration and its cause (s). As soon as practicable after receipt of the Contractors notice the Purchaser shall evaluate the situation and may at its discretion extend the Contractors time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

3.2.22 Liquidated Damages

Subject to clause 3.1.24, if the Contractor fails to deliver any or all of the Civil, Hydro & Electro-mechanical works or perform the services within the time period (s) specified in the Contract or any extension thereof the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract price as liquidated damages:

- a) A sum equivalent to 0.5% of the contract price of the undelivered supplies or/and incomplete or delayed Civil, Hydro & Electro-mechanical works for each week or part thereof.
- b) A sum equivalent of Rs.10,000/- (Ten Thousand) per day will be levied for the delay in commissioning of each machine.
The deduction for a) & b) above is limited up to a maximum of 10% of the Contract price. Once the maximum is reached the Purchaser may consider termination of the Contract.

3.2.23 Communication and notices by contractors:

All communication and or notices pertaining to works and concerning matters, such as passing and approving of foundation, reinforcement, and form work, measurements, mark outs, etc shall not be addressed by the Contractor to an officer not below the rank of Director. All such notices communications, etc shall be addressed in good time so as not to hold up the work.

3.2.24 Regulations and Bye-laws

The Contractor shall conform to the regulation, bye-laws, any other statutory rules made by any local Authorities or by the Purchaser and shall protect and indemnify

Purchaser against any claim or liability arising from or based on the violation of any such laws, ordinance,, regulations, orders, decrees, etc.

3.2.25 Arbitration / resolution of disputes

The Purchaser and Contractor shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between under or in connection with the Contract.

If any question, difference or objection, whatsoever shall arise in any way connected with or arising out of this instrument or the meaning or operation of any part thereof for the rights, duties or liabilities of either party then save in so far as the decision or any such matter is herein before provided and has been decided every such matter including whether its decision has been otherwise provided for and/or whether it has been finally decided accordingly, or whether the Contract should be terminated or has been rightly terminated and as regards the rights and obligations of the parties as the result of such termination shall be referred, for sole arbitration of the nominee of the Corporation, who in case of dispute involving an amount exceeding Rs. 50,000/- shall give a reasoned award and his decision shall be final and binding and where the matter involves a claim for the payment or recovery or deduction of money, only the amount, if any, awarded in such arbitration shall be recoverable in respect of the matter so referred. If the matter is not referred to arbitration- within 180 days of the date of completion of work or payment of the final bill whichever is later all the rights and claims under the Contract shall be deemed to have been forfeited and absolutely barred.

Upon every or any such reference, the cost of and incidental to the reference and award respectively shall be in the discretion of the Sole Arbitrator so appointed who may determine the amount thereof or direct the same to be taxed as between solicitor and client or as between party and party and shall direct by whom and to whom, and in what manner the same is to be borne and paid.

The work under the Contract shall be continued during the arbitration proceedings and no payment due or payable by the Purchaser shall be withheld on account of such proceedings.

The Indian Arbitration Act 1940, the rules there under and any statutory modification or reenactments there of shall apply to the arbitration proceedings

3.2.26 Jurisdiction

Jurisdiction for filing any suit in case of any dispute shall be the court at the Head Quarters of purchaser - the Contract signing authority.

3.2.27 Completion

The Purchaser shall issue a certificate certifying Completion of the Works to the Contractor when he decides that the Works are completed.

3.2.28 Taking Over

Taking-Over Certificates

The Works shall be initially taken over (First taking-over) by the Purchaser when they have been completed in accordance with the Contract have passed the Tests on Completion and a Taking-Over Certificate for the Works has been issued, has deemed to have been issued in accordance with this Sub-Clause.

The Contractor may apply by notice to the Purchaser's Representative for a Taking-Over Certificate not earlier than 14 days before the Works will, in the Contractor's opinion be complete and ready for taking over. The Purchaser's Representative shall, within 28 days after the receipt of the Contractor's application:

- i) Issue the Taking-Over Certificate to the Contractor, stating the date on which the Works were completed in accordance with the Contract (except for minor outstanding work that does not affect the use of the Works for their intended purpose) including passing the Tests on Completion; or
- ii) Reject the application, giving his reasons and specifying the work required to be done by the Contractor to enable the Taking over Certificate to be issued: the Contractor shall then complete such work before issuing a further notice under this Sub-Clause.
- iii) The construction of project shall not be considered to be completed for the purposes of initial taking-over until operation and maintenance manuals (12 sets) have been submitted to the Purchaser's Representative.

If the Purchaser's Representative fails either to issue the Taking Over Certificate or to reject the Contractors application within the period of 28 days from the date of receipt of such application, and if the Works are substantially in accordance with the Contract, the Taking-Over Certificate shall be deemed to have been issued on the last day of that period.

The Contract shall not be considered to be completed until the Performance Certificate has been signed by the Purchaser's Representative and delivered to the Contractor, stating the date on which the Contractor completed his obligations to the Purchaser's Representative's satisfaction. The Performance Certificate shall be given by the Purchaser's Representative as soon after such date as the Contractor has provided all the Construction Documents and completed, tested and commissioned all the Works, including remedying any defects. Only the Performance Certificate shall be deemed to constitute approval of the Works.

3.2.29 Final Account

Application for Final Payment Certificate : Not later than 60 days after the issue of the Performance Certificate, the Contractor shall submit to the Purchaser's Representative three copies and one copy each for Purchaser's Representative of a draft final statement with supporting documents showing in detail, in a form approved by the Purchaser:

- (a) the value of all work done in accordance with the Contract, and
- (b) Any further sums which the Contractor considers to be due to him under the Contract.

If the Purchaser disagrees with or cannot verify any part of the draft final statement, the Contractor shall submit such further information as the Purchaser may reasonably require and shall make such changes in the draft as may be agreed between them. The Contractor shall then prepare and submit to the Purchaser the final statement as agreed (for the purposes of these Conditions referred to as the "Final Statement").

3.2.30 Property

All materials on the Site, Temporary Works and Works are deemed to be the property of the Purchaser and are at the Purchaser's disposal if the Contract is terminated due to breach of Contract by the Contractor.

3.2.31 Joint and Several Liability of consortium Partners

If the Contractor is a Purchaser of two or more persons / firms, all such persons / firms shall be jointly and severally bound to the Purchaser for the fulfillment of the terms of the Contract and shall designate one of such persons/firms to act as a leader with authority to bind the joint venture. The composition or the constitution of the Consortium shall not be altered.

3.2.32 As-Built Drawings (as executed drawings)

The Contractor shall prepare, and keep up-to-date, a complete set of "as-built" records of the execution of the works, showing the exact "as-built" locations, sizes and details of the works as executed with cross references to relevant specifications and data sheets. These records shall be kept on the site and shall be used exclusively for the purposes of this Sub-clause. Two copies shall be submitted to the Purchaser prior to the commencement of the test on completion.

In addition, the Contractor shall prepare and submit to the "As-built Drawings" of the works, showing all works as executed. The drawings shall be prepared as the works proceed, and shall be submitted to the Purchaser for his inspection. The Contractor shall obtain the consent of the Purchaser as to their size, the referencing system, and other pertinent details.

Prior to the issue of any taking over certificate, the Contractor shall submit the Purchaser six sets of CDs and six printed copies of the relevant "As-built Drawings", and any further Construction Documents specified in the Contract. The Works shall not be considered to be completed for the purposes of taking-over until such documents have been submitted to the Purchaser.

3.3 OTHER GENERAL CONDITIONS

3.3.1 Site Environmental Plan

The Contractor shall prepare a detailed Site Environmental Plan (SEP) for the work site, base camp, etc., showing arrangements for disposal / dumping of excavated earth etc. and other waste, location of fuel, oil and lubricant depots, sheds for equipment, labour and housing facilities, etc., prior to the construction for approval of the Purchaser.

3.3.2 Safety, Security and Protection of the Environment

The Contractor shall take all necessary precautions against pollution or interference with the supply, or obstruction of the flow of surface or underground water. These precautions shall include but not be limited to physical measures such as earth bunds of adequate capacity around fuel, oil and solvent storage tanks and stores, oil and grease traps in drainage systems from workshops, vehicle and plant washing facilities and service and fuelling areas and kitchens, the establishment of sanitary solid and liquid waste disposal systems, the maintenance in effective condition of these measures, the establishment of emergency response procedures for pollution events, and dust suppression, all in accordance with normal good practice and to the satisfaction of the Purchaser . Should any pollution arise from the Contractor's activities he shall clean up the affected area immediately at his own cost and to the satisfaction of the Purchaser , and shall pay full compensation to any affected parties.

3.3.3 Use of Wood as Fuel

The Contractor shall not use wood as a fuel for the execution of any part of the Works, including but not limited to the heating of bitumen and bitumen mixtures and the manufacture of bricks for use in the Works, and to the extent practicable shall ensure that fuels other than wood are used for cooking, and water heating in all his camps and living accommodations. In case of fuel wood is required for cooking, water heating or any other purpose, Contractor shall have a fuel wood depot with permission and as per rules and regulation of forest department at site and maintain records as directed by officials of forest department.

3.3.4 Hot Mix Plants/ready mix concrete plants (RMC)

The Contractor shall not locate any hot-mix/RMC or similar potentially polluting plant closer than 500 m to any settlement. Any such plant shall be fitted with dust suppression equipment and shall be operated and maintained at all times in conformity with the manufacturer's specifications, instructions and manuals.

3.3.5 Fire Prevention

The Contractor shall take all precautions necessary to ensure that no vegetation along the line of the road outside the area of the permanent works is affected by fires arising from the execution of the Works. The Contractor shall obtain and follow any instructions of the competent authorities with respect to fire hazard. Should a fire occur in the natural vegetation or plantations adjacent to the road for any reason the Contractor shall immediately suppress it. In the event of any other fire emergency in the vicinity of the Works the Contractor shall render assistance to the civil authorities to the best of his ability. Areas of forest, scrub or plantation damaged by fire considered by the Purchaser to have been initiated by the Contractor's staff or labour shall be replanted and otherwise restored to the satisfaction of the Purchaser at the Contractor's expense.

3.3.6 Transport of Contractor's Equipment for Temporary Works

Where the Contractor intends to use a particular route for the haulage of large quantities of materials he shall consult well in advance with any affected communities. The

Purchaser reserves the right to disallow certain haul routes should these in his opinion cause or be likely to cause unreasonable nuisance or hazards to the public. The Purchaser's approval will not remove the Contractor's obligations under this Sub-Clause to prevent and repair damage to roads or his liability for compensation for any accidents caused by his vehicles. The Contractor has to make the temporary roads at his own cost for execution for work as required.

3.3.7 Clearance of Contractor's Facilities

On or before expiry of the Defects Liability Period, the Contractor shall clear away all his temporary facilities including but not limited to offices, camps, storage and holding yards, workshops, crushing and mixing plant, diversion and haul roads so that the land is returned to at least its previous condition and, in the case of agricultural land, potential productivity. Clearance shall include but not be limited to tasks such as the removal of unwanted structures, removal of metallic and concrete debris, removal and disposal of any soil contaminated by diesel, bitumen or other polluting material, ripping to relieve compaction, grading, replacement of topsoil, and turfing and grassing, as appropriate. Where improvements have been made such as land filling or installation of boreholes or construction of boat landings these may be retained subject to the agreement of the landowner. The Purchaser or his representative reserves the right to inspect the site of any facilities established or used by the Contractor in connection with the Works and to undertake any corrective measures necessary to restore the land, and to recover the cost from money due or to become due **to the Contractor.**

3.3.8 Safety and Accident Prevention Officer

Due precautions shall be taken by the Contractor, at his own cost, to ensure the safety and protection against accidents of all staff and labour engaged on the Works, local residents in the vicinity of the Works, and the public travelling through the Works. The Contractor shall have on his staff on Site a designated officer qualified to promote and maintain safe working practices. This officer shall have authority to issue instructions and shall take protective measures to prevent accidents, including but not limited to the establishment of safe working practices and the training of staff and labour in their implementation.

3.3.9 First-Aid Services

The Contractor shall, at his own expense, provide first aid equipment at all camps and work sites to the satisfaction of the Purchaser, and shall ensure that at all work sites where 40 or more persons are engaged on the Works there shall at all times be a person qualified in first-aid with access to appropriate first-aid equipment. A first-aid post shall be established at each base camp comprising a suitable room, appropriate medical supplies, and staff on a full-time basis.

3.3.10 Health and Pests

The Contractor shall at his own expense and throughout the period of the Contract ensure that suitable arrangements are made for the prevention of epidemics and for all necessary welfare and hygiene requirements for his staff and labour, and shall comply with all the regulations and requirements of the local health authorities with respect to disease prevention and control. He shall warn his staff and labour of the dangers of communicable

diseases including those transmitted by insects, water, faecal/oral contact and sexual activity. The Contractor shall take the precautions necessary to protect all staff and labour employed on the Site from insect nuisance, rats and other pests and minimise the dangers to health and the general nuisance caused by the same. Should malaria or other insect-borne diseases be prevalent in the area, he shall provide his staff and labour with suitable prophylactics, equip living accommodation with screens and bed-nets, and carry out spraying with approved insecticides, as appropriate.

3.3.11 Supply of drinking water, sanitation

The Contractor shall so far as is reasonable, having regard to local conditions, provide on the Site and at his expense an adequate supply of drinking water for the use of Contractor's staff and work people, together with sanitary facilities.

3.3.12 Festivals and religious customs

The Contractor shall in all dealings with labour in his employment have due regard to all recognised festivals, days of rest and religious or other customs.

3.3.13 Epidemics

In the event of any outbreak of illness of an epidemic nature, the Contractor shall comply with and carry out such regulations, orders and requirements as may be made by the Government or the local medical or sanitary authorities, for the purpose of dealing and overcoming the same.

3.3.14 Alcoholic liquors or drugs

The Contractor shall not, otherwise than in accordance with the statutes, ordinances and government regulations orders for the time being in force, import, sell, give barter or otherwise dispose of any alcoholic liquor or drugs, or permit or suffer any such importation, sale, gift, barter or disposal by his Sub-Contractors, agents, staff or labour.

3.3.15 Records of labour and accidents

The Contractor shall maintain full records of numbers, working hours and wages of labour, safety, health and welfare of persons, accidents, and damage to property such record has to be produced to Purchaser on his demand.

3.3.16 Site office for Purchaser representatives and other Supervisory Staff

The Contractor shall provide site office facilities for the Purchaser and his Supervisory Staff including Purchaser's Representative within 03 (three) months from the date of award of Contract as per scope of work.

3.3.17 Site Order Book

The Contractor shall maintain standard Site Order Books at the Site at all times during the execution of the Works for the use of the Purchaser and the Contractor. All instructions issued by the Purchaser to the Contractor shall be recorded in duplicate in the Site Order

Book and shall be signed by the issuer and countersigned by the Contractor. After compliance with the instruction the Contractor shall record the same in the Site Order Book duly signed and countersigned by the Purchaser . Acceptance of any part of the Works executed by the Contractor shall be subject to verification with respect to compliance of respective instructions of the Purchaser through the Site Order Book. The Purchaser shall retain the original copy of the site orders, while the Contractor shall retain the duplicate ones.

3.3.18 Display Panels in the site office

The Contractor shall provide such charts and drawings as deemed appropriate to Contract and index map, vicinity map, L-sections for all channels, drawings for the structures, important levels and BMs and facilities provided under the Contract. Such charts and drawings shall be mounted on a panel, protected with a glass cover, and affixed on to the wall(s) of the site office.

3.3.19 Supply of Colored Record Photographs

The Contractor shall, at his won cost, arrange to take digital colour photographs of size 4” x 6” at various stages / facets of the work including interesting and novel features of the work as directed by the Purchaser’s Representative and supply two copies of colour record photographs mounted in the albums including 2 sets of CDs with specification and these shall be kept preserved by Purchaser.

3.3.20 Supply of Video Cassettes

The Contractor shall, at his own cost, arrange for video recording of site before commencement and taking video film of important activities of the work as directed by the Purchaser during the execution of the project and editing them to a video film of playing time not less than 30 minutes and upto 60 minutes as directed by the Purchaser and these shall be kept by the Purchaser.

3.3.21 Public Awareness / Information Display

The Contractor shall, at his own cost, arrange and provide, erect and maintain necessary display boards / banners etc. at selected points of project site giving such information as considered necessary for public awareness / information / safety as directed by the Purchaser.

3.3.22 Services

- a. Underground and overhead utility services met with during construction are to be protected against damage by the Contractor at his own cost.
- b. The Contractor shall be required to carry out removal / shifting of existing utilities at his own cost. The Contractor work program shall include any such activity. The work shall be carried out under supervision of concerned department. The Contractor shall pay the supervision charges of the line agencies.

3.3.23 Explosive and Fuel Storage Tanks

No explosive shall be stored within ½ (half) KM of the limit of the camp sites. The storage of gasoline and other fuel oils or of Butane, Propane and other liquified petroleum gases, shall conform to the regulations of Concerned State Government and Government of India. The tanks, above ground and having capacity in excess of 2000 liters, shall not be located within the camp area, nor within 200m, of any building.

3.3.24 Layout of materials stacks

The Contractor shall deposit materials for the purpose of the work on such parts only of the ground as may be approved by the Purchaser before starting work. A detailed survey, clearly indicating position and areas where materials shall be stacked and sheds built is to be conducted by the Contractor at his own cost and only after obtaining necessary approval of the plan for use of sites by the Purchaser, the Contractor can use the sites accordingly.

3.3.25 Use of blasting materials

Procurement of blasting materials, if required, and its storage is the responsibility of the Contractor. The Contractor shall engage licensed blaster for blasting operation. The Contractor is to act in accordance with Indian Explosive Act and other rules prevailing, during the execution of work. It is the responsibility of the Contractor to see, that works by other agencies in the vicinity are not hampered, in such cases if any claim is made by other agencies that should be borne by the Contractor. Carriage of blasting materials, from the magazine to the work site, is the responsibility of the Contractor.

3.3.26 Plants and Equipment

- a. The Contractor shall have sufficient plant, equipment and labor and shall work such hours and shifts as may be necessary to maintain the progress on the work as per the approval progress schedule.
- b. It is to expressly and clearly understood that Contractor shall make his own arrangements to equip himself with all machinery and special tools and plant for the speedy and proper execution of the work and the department does not undertake responsibility towards their supply.
- c. The department shall supply such of the machinery that may be available on hire basis but their supply cannot be demanded as matter of right and no delay in progress can be attributed to such non-supply of the plant by the department and the department cannot be made liable for any damage to the Contractor. The Contractor shall be responsible for safe custody of the departmental machinery supplied to him (which will be delivered to Contractor at the machinery yard at site of work) and he has to make good all damages and losses if any and bring it to the conditions that existed at the time of issue to the Contractor before handing over the same to the department. The hire charges for the machinery handed over to the Contractor will be recovered. The acceptance of departmental machinery on hire is optional to the Contractor.

3.3.27 Steel forms

Steel forms should be used for all items involving use of centering and shuttering. They shall be such that the concrete surface obtained after removal of centering and shuttering shall be single plane without any dents and undulations and honeycombing.

3.3.28 Inconvenience to public

The Contractor shall not deposit materials at any site, which will cause inconvenience to public. The Purchaser may direct the Contractor to remove such materials or may undertake the job at the cost of the Contractor.

3.3.29 Possession prior to completion

The Purchaser shall have the right to take possession of or use any completed part of work or works or any part thereof under construction either temporarily or permanently. Such possession or use shall not be deemed as an acceptance of any work either completed or not completed.

3.3.30 Drawing to be kept at site

One copy of the drawings furnished shall be kept by the Contractor on the site and the same shall at all reasonable time be available for inspection and use by the Purchaser and the Purchaser's representative and by any other persons authorized by the Purchaser.

3.3.31 BSI (ISI) codes/books and QA/QC Manual to be kept at site

A complete set of Indian Standard Codes and IRC codes referred to in "Technical Specifications" and QAQC manual shall be kept at site for reference. In addition to the foregoing any other IS Codes, IRC codes, Technical Books, Technical Manuals, Technical Literatures, Codes of foreign countries requested by the Purchaser – in – Charge shall be procured by the Contractor and kept at site office for reference. All the foregoing shall also be supplied in 3 sets to the Purchaser.

3.3.32 Care and diversion of river/stream:

The Contractor shall submit details regarding the diversion and care of river or stream during construction of the work along with a separate print-out of the time table showing earliest and latest start and finish dates of various activities. He should submit a detailed layout plan with drawings for the diversion and care of river during construction of work. The above arrangements shall be at Contractor's cost.

3.3.33 Latrines and urinals

a. Latrines and Urinals shall be provided within the premises of every work place, latrines and urinal in an accessible place and the accommodation separately for each of them shall be on the following scale.

	Seats
1. Where the number of persons employed does not exceed 50	2

- | | | |
|----|---|---|
| 2. | Where the numbers of persons employed exceed 50 but less than 100 | 3 |
| 3. | For every additional 100 | 3 |
- b. If women are employed, separate latrines and urinals, screened from those for men shall be provided on the same scale. Except in work places provided with water flushed latrines connected with a water borne sewage system, all latrines shall be cleaned at least four times daily. The excreta from the latrines shall be disposed off at the Contractor's expenses in out of way pits approved by the local public health authority. The Contractor shall also employ adequate number of scavengers and conserve staff to keep the latrines and urinal in a clean condition which shall be cleaned at least four times daily.
- c. Rest Shelters: At the work site rest shelter shall be provided free of cost. Two suitable sheds one for meals and the other for use of labor shall be provided.
- d. Creches: At every work place at which 50 or more women workers are ordinarily employed there shall be provided two huts of suitable size for the use of children under the age of 6 years belonging to such women one hut shall be used for important games and play and other as their bed rooms. The hut shall not be constructed on a lower standards than the following.
1. Thatched roof.
 2. Mud floors and walls.
 3. Planks spread over the mud floor and covered with matting. The use of the huts shall be restricted to children, their attendants and mothers of the Children.

3.3.34 Canteens

A cooked food canteen on a moderate scale shall be provided for the benefit of workers, if it is considered essential.

3.3.35 Sheds for workmen

The Contractor shall provide at his own expense sheds for housing the workmen. The shed shall be on a standard not less than cheap shelter type to live in which the work people in the locality are accustomed to a floor area of about 2m x 1.5m per two persons shall be provided. The sheds are to be in rows with 12.5m clear space between sheds and 19m clear space between rows if conditions permit. The work people's camp shall be laid in units of 400 persons each unit to have a clear space of 12m all round.

Land should be acquired temporarily for storing Contractor's materials or for his staff. The Contractor should make his own arrangements for temporary acquisition of land required for storing his materials and for housing of this staff at his expenses.

4.0 SPECIAL CONDITIONS OF CONTRACT

4.1 GENERAL

The data and information given in the Tender Documents are based on the investigations, planning and designs carried out so far. The data considered for the project planning have been included in the bid documents. The Contractor shall, therefore, satisfy himself about the adequacy and accuracy of the said data/information and interpretation thereof and collect fresh data/additional data/information and carry out/conduct further investigations and studies. The Purchaser shall not be responsible for the accuracy/adequacy of the data/information and interpretation thereof by the Contractor.

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Condition of Contract. These special conditions of Contract shall also be applicable for works & services in addition to Civil, Electro & Hydro-mechanical works.

4.2 SCOPE OF WORK

4.2.1 General

The scope of this contract shall be turnkey execution basis, covering, detailed engineering design and construction drawings, supply and construction/manufacture, erection/testing & commissioning of all parts, accessories, equipment, consumables which may be essential for successful commissioning and operation of the Project works including Operation and Maintenance for 12 Months after successful commissioning of this hydro project as per specifications even though these or any other essential required item specially or individually be not mentioned in the tender document. The entire works is broadly identified as follows:

Design, supply of material, construction of all civil and hydro-mechanical components of the project to suite the E&M equipment specified in these documents.

Design, Supply, storage, Erection, Testing and Commissioning of turbine, generator, transformer, their auxiliaries, station auxiliaries, switchyard and other power evacuation equipment etc at this project as detailed in these specifications.

Any requirements of work whether requested by the Purchaser or otherwise and whether specifically described in the Contract or not but are necessary or required for the proper completion and functioning of the Works in accordance with the Contract including remedying of any gaps and deficiencies in the Works shall not be deemed to be considered as any change in the Scope of Work and shall not entitle the Contractor for any extra payment.

Running ,Operation and Maintenance of Complete Plant & Machinery for a period of.....year after successful commissioning of the Project

No extra payment will be made to the bidder if there is any change in type of structure, specifications, variation in quantities as per actual site conditions.

Section-wise scope of works is described in Technical Specifications

4.3 SUFFICIENCY OF BID

The Contractor shall be deemed to have visited and carefully examined the Project Site and its surrounding to have satisfied himself to the nature and conditions of the means of transport and communications, whether by land or air, as available at present and as to possible interruptions thereto including the access and regress conditions for the Site. The Contractor is also deemed to have made enquiries, examined and satisfied himself as to the sites source for obtaining sand, stones, bricks and other materials, the sites for disposal of surplus materials and accommodation for depots, colonies, workshops and other infrastructure facilities as may be necessary for executing and completing the Works, as also the sub-soil water and variations thereof, storms, prevailing winds, climatic conditions and all other similar matters affecting the works including law & order.

Any neglect or omission or failure on the part of the Contractor in obtaining necessary and reliable information upon the foregoing or any other matter affecting the Contract shall not relieve him from any risks or liabilities or the entire responsibility for the completion of the Works in accordance with the Contract.

No verbal agreement or inference from conversation with any officer or employee of the Purchaser either before or after the signing of the Contract shall in any way affect or modify any of the terms or obligations herein contained. The Contractor shall also be deemed to have inspected and examined the Site and to have satisfied himself, before submitting his Bid, as to the form and nature thereof including the sub-surface conditions and other local conditions, the hydrological, geological and climatic conditions, the extent and nature of work and materials necessary for the completion of the Works, the means of access to the Site and the land for accommodation etc. he may require and, in general, shall be deemed to have obtained all necessary information, as to risks, contingencies and all other circumstances which may influence or affect his Bid.

4.4 CONTRACT DOCUMENTS

The term Contract Documents shall mean and include the following which shall be deemed to form an integral part of the contract:

- i. Instruction to Bidders, General conditions of Contract, special conditions of contract and all related documents.
- ii. Specifications of the equipment to be supplied and erected under the contract as brought out in the accompanying Technical Specifications.
- iii. Contractor's Tender proposal including the letters of clarifications there to between the Contractor and the Purchaser prior to the Award of Contract.
- iv. All the materials literature data and information of any sort given by the Contractor alongwith his tender subject to the Approval of the Purchaser/Engineer.
- v. Any agreed variations to the conditions of the documents and specifications and special terms and conditions of Contract if any.

In the event of any conflict between the above mentioned documents the matter shall be referred to Engineer whose decision shall be final and binding upon the parties.

4.5 CHANGE IN CONSTITUTION OF FIRM AND ADDRESS

Any change in the constitution and addresses of the Bidding Firm and its Partners shall be forthwith notified by the Contractor to the Purchaser for its information.

4.6 COMPLETION PERIOD

The execution of Project Works including Civil construction, Supply, Erection, Testing & Commissioning works shall be completed within **24 (Twenty Four) calendar** months from the date of signing of Contract Agreement.

4.7 WORK SCHEDULE / RE-SCHEDULING & PROGRESS OF WORK

The Contractor shall submit a detailed BAR CHART and PERT network within 15 days of award of contract. The PERT network shall consist of adequate number of activities covering various key phases of the Works such as design, procurement, manufacturing, shipment, installation of equipment, assembly and commissioning of units. This network shall also clearly indicate the interlinking/interdependencies of relative activities of Civil Works, Hydro-Mechanical Works and E&M works. The Contractor shall also make the PERT network in computer aided project management software to generate Bar Chart based on network technique. Contractor shall discuss the network so submitted with the Engineer and the agreed network shall form part of the Contract to be signed within 30 (thirty) days from the date of receipt of Letter of Award of Contract

Supply of Electro-mechanical equipment at power house shall be planned to ensure their availability about one month in advance of the scheduled dates of installation and matching with the progress. No extra cost, whatsoever, on account of such rescheduling shall be payable to the Contractor. Sequencing of works is to be planned to suit the said requirement.

It will be preferred that Supply of Material and Equipment shall be delivered in a phased manner commensurate with its actual requirement of its installation/ erection to avoid its longer storage at site and to ensure adequate insurance and guarantee of the material and equipment. Accordingly schedule of supply of equipment shall be got approved by the contractor from competent authority.

The Works shall be executed and performed in accordance with the agreed Master Control Network. The Programme shall be reviewed jointly by the Engineer and the Contractor, at least once in a month where-in the hold ups/delays, if any, in the progress of Works, with reference to the agreed Schedule shall be given Special Attention. Necessary modifications (updating / Revisions) of the Programme, within the overall Time for Completion, shall be carried out by mutual agreement between the Purchaser/ Engineer and the Contractor.

Supply at Site of the Hydro-Mechanical Plant & Machinery, embedded parts and Spares etc., shall be made available 2 months in advance of the scheduled dates of Installation / erection matching with the progress and availability of Civil Works to take care of any eventualities of hold ups/delays during transit.

If for any reason, any parts of the Works of the Project are delayed, then the total programme may be re-scheduled by mutual agreement between the Engineer and the

Contractor, if necessary, keeping the overall completion schedule of the project unaltered. No extra cost whatsoever, on account of such re-scheduling shall be payable to the Contractor.

4.7.1 Progress Report: Monthly progress reports for execution of the Project shall be prepared by the Contractor and submitted to the Engineer in four copies. The first report shall cover the period up to the end of the calendar month, in which the Commencement Date occurred. Reports shall be submitted monthly thereafter, within 5 days of the following month. Reports shall continue until the Contractor has completed all work, which is known to be outstanding at the completion date, stated in the Taking-Over Certificate for the Works. Each report shall include:

- a) Photographs and detailed descriptions of progress, including each stage of design, procurement, manufacture, delivery to Site, construction, erection, testing and commissioning;
- b) Charts showing the status of Construction Documents, purchase orders, manufacture and construction;
- c) For the manufacture of each main item of Plant and Materials, the name of manufacturer, manufacture's location, percentage progress, and the actual or expected dates of commencement of manufacture,

4.8 CONSTRUCTION DRAWINGS

All engineering designs drawings and computation shall be prepared by the Contractor and got them approved by Owner. Within 30 days from the effective date of this contract, the Contractor shall send a list of all drawings with their respective titles and the dates on which these shall be supplied to the Engineer. The list shall be amended or extended by the Contractor in consultation with the Engineer as and when necessary during the progress of work. All titles notes and inscriptions on the drawing shall be in English.

The Contractor shall send the general layout and control drawing, single line schemes for electrical/mechanical items along with relevant specifications within a reasonable time after the receipt of the contract.

Any manufacturing work in connection with the equipment prior to the approval of drawings shall be changed in design which are necessary to make the equipment conform to the provision and intent of the contract without additional costs to the Owner. Approval of the Contractor's drawings shall not be held to relieve the Contractor of any part of Contractor's obligation to meet all the requirements of the contract of the responsibility for the correctness of the Contractor's drawings.

Upon approval by the Engineer, the drawings shall become the contract drawings and the Contractor shall not depart from them anyway whatsoever, except by the written permission of the Engineer.

4.9 ARBITRATION FOR RESOLUTION OF DISPUTES

4.9.1 If any dispute or difference of any kind whatsoever shall arise between the Owner and the Contractor arising out of the contract for the performance of the contract whether during the progress of the contract or after its completion or whether before or after

the termination, abandonment or breach of the contract, it shall, in the first place, be settled mutually by the Parties within a period of thirty (30) days

- 4.9.2** In the event the Purchaser and the Contractor fail to resolve the dispute by mutual agreement within thirty (30) days, either party may require that the matters in dispute be referred to arbitration as hereinafter provided.
- 4.9.3** The matter shall be referred to the sole arbitration of an officer appointed to be the arbitrator by the Nigam. It will be no objection that the arbitrator is a Government Servant, that he had to deal with the matters to which the contract relates or that in the course of his duties as a Government Servant, he has expressed views on all or any of the matters in dispute or difference. The award of the arbitrator shall be final and binding on the parties to this contract.
- 4.9.4** In the event of the arbitrator defying, neglecting or refusing to act, or resigning or being incapable of acting or unable to act for any reason it shall be within the power of the Nigam to appoint another arbitrator in place of the out-going arbitrator, in the manner aforesaid.
- 4.9.5** 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.
- 4.9.6** Work under the contract shall if reasonably possible, continue during the arbitration proceedings and due if any, payable by the Owner 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.
- 4.9.7** The proceedings, if any, in relation to the arbitration referred to above, shall be held by the arbitrator aforesaid at-----, and all legal proceeding, if any, arising, out of and in connection with the said clause shall be in the court of competent jurisdiction.

4.10 REPLACEMENT OF DEFECTIVE PLANT MATERIALS

If during the progress of manufacture or supply of the plant the Engineer decides and notify in writing to the Contractor that the Contractor has manufactured any plant or part of plant unsound or imperfect or has supplied any plant inferior in quality, the Contractor, on receiving details of such defect or deficiency, shall alter, reconstruct or remove such plant or part of plant or supply fresh materials up to the standard of the specifications at his own expenses. In case the Contractor fails to do so, the Owner may on giving the Contractor 7 (seven) days notice in writing of his intention to do so, proceed to alter, reconstruct or remove such plant or part or supply all such material at the Contractor's cost provided that nothing in this clause shall, be deemed to deprive the Owner or affect any rights of the Contractor which he may otherwise have in respect of such defects or deficiencies and provided that such replacement shall be carried out by the Owner within a reasonable time and at a reasonable price and when reasonable possibly to the same specifications and under competitive conditions.

4.11 SUB - CONTRACTING

The Contractor shall not sub-contract the whole or any major part of the Works without the prior written consent of the Engineer and such consent if given shall not relieve the Contractor from any liability or obligation under the Contract and shall be responsible for the acts, defaults and neglect of any of his agents, personal or workmen as fully as if they were the acts defaults or neglects of the Contractor. The Contractor shall not further sub-contract the works to such agents, personal or workmen under above provision.

4.12 AFTER SALES SERVICES

The equipment supplied against this specification shall be attended to by the contractor when referred to by the Owner at contractors price within guarantee period and at Owners price beyond that immediately so that the equipment does not remain idle on account of Contractors service.

Necessary spare parts shall be made available till the life of the equipment. Before going out of the production of the spare parts, the contractor shall give advance notice to the Owner so that the Owner may procure his requirements then. Necessary drawings and materials specification of such spare in such circumstances shall be made available by the contractor to the Owner enabling him to fabricate the same or procure from elsewhere.

4.13 ENFORCEMENT OF TERMS

The failure of either party to enforce at any time of the provisions of this Contract or any rights in respect thereto or to experience any option herein provided, shall in no way be construed to be a waiver of such provisions, rights or options or in any way to affect the validity of the Contract. The exercise by the either party of any of its rights herein shall not preclude or prejudice either party from exercising the same or any other right it may have hereunder.

4.14 ENGINEER-IN-CHARGE DECISION

4.14.1 In respect of all matters which are left to the decision of the Engineer in Charge including take granting or withholding of the certificates, the Engineer in Charge shall, if required to do so by the Contract given in writing a decision thereon.

4.14.2 If in the opinion of the Contractor, a decision made by the Engineer in Charge is not in accordance with the meaning and intent of the Contract, the Contractor may file with the Engineer in Charge within fifteen (15) 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 in Charge decision and the decision shall become final and binding.

4.14.3 The Engineer in Charge decision and the filing 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 in Charge as rendered shall be promptly observed.

4.15 INDEMNITY

In the event of any claim or demand being made or action being brought against the Owner for infringement or alleged infringement of letters patent in respect of any machine, plant, work or thing used or supplied by the Contractor under this Contract or in respect of any method of using or working by the Owner of such machine, plant, work or thing the Contractor will indemnify the Owner against such machine, plant, work or thing the Contractor will indemnify the Owner against such claim or demand and all costs and expenses arising from or incurred by reasons of such claim or demand PROVIDED THAT the Owner shall notify the Contractor within reasonable time any claim is made and that the Contractor shall be at liberty if he so desires with the assistance of the Owner if required but the Contractor's own expenses, to conduct all negotiations for the settlement of the same or any litigation that may arise there from and PROVIDED THAT no such machine, plant, work or things shall be used by the Owner for any purpose or in any manner other than that for which they have been supplied by the Contractor and specified under this Contract.

4.16 DEATH OR BANKRUPTCY ETC.

If the Contractor shall die or dissolve or commit any act of bankruptcy or being a corporation commence to be wound up except for reconstruction purposes or dairy on its business under a receiver, the executors, successors or other representatives in law of the state of the Contractor or any such receiver, liquidate or any persons in writing to the Owner and shall for one (1) month, during which he shall take all reasonable steps to prevent stoppage of the work, have the option of carrying out the Contract subject to his or there providing such guarantee as may be required by the Owner but not exceeding the value of the work for the time being remaining unexecuted. Provided that nothing above said shall be deemed to relieve the Contractor or his successors of his or their obligations under the Contract under any circumstances. In the event of stoppage of the work the period of the option under this clause shall be fourteen (14) days only provided that should the above option be not exercised the Contract may be terminated by the Owner by notice in writing to the contractor and the same power and provision reserved to the Owner as specified in the event of taking the work out of the Contractor's hand shall immediately become operative.

4.17 WORKS TO BE EXECUTED IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS, AND ORDERS ETC.

The Contractor shall execute the whole and every part of the work in the most substantial and workmen like manner and both as regards materials and otherwise in every respect in strict accordance with specifications. The Contractor shall also confirm exactly, fully and faithfully to the designs, drawings and instructions in writing relating to the work signed by the Purchaser and lodged in his office, and to which the Contractor shall be entitled to have access at such office or on the site of the work for the purpose of inspection during office hours, and the Contractor shall if he so requires, be entitled at his own expense to make or cause to be made copies of specifications and of all such designs, drawings and instructions as aforesaid.

4.18 NEGLIGENCE

4.18.1 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 works or shall contravene the provisions of the Contract, the Owner may give notice in writing to the Contractor calling upon him to make good the failure, neglect or contravention complained of.

4.18.2 Should the Contractor fail to comply with such notice within a period considered reasonable by the Owner 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 Owner reasonable necessary for making it good, then and in such case of Owner shall have the option and be at liberty to take the work wholly, or in part, out of the Contractors hand 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.

4.18.3 In such event the Owner 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 material, 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 Owner 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.

4.18.4 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 Owner 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 plat 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 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.

4.19 PLANT PERFORMANCE GUARANTEE

4.19.1 All machines/equipment/works shall be guaranteed 18 (Eighteen) months from the date of commissioning. Such guarantee period shall also cover the period of extension agreed upon.

4.19.2 Whether or not the equipment has been installed under his supervision, the Contractor shall give the following guarantees in respect of the equipment to be furnished.

- i. All equipment shall be free from any defect due to faulty design materials and/or workmanship.

- ii. The equipment shall operate satisfactorily and reliably and the performance and efficiencies of all equipment shall not be less than guaranteed

4.19.3 The above guarantee shall be valid for the above mentioned period commencing immediately on the satisfactory completion of the final tests at site and taking over the machines for commercial generation. During this period the Contractors liability shall be limited to the replacement of any defective parts that may develop in plant of his own manufacture or those of his sub-Contractors under the conditions provided for by the Contractor under proper use and arising solely from faulty design, materials or workmanship provided always that such defective parts are not repairable at site, and are not essential in the meantime for commercial use of the plant. These parts/equipment shall be promptly returned to the Contractors work at the expense of the Contractor unless otherwise arranged.

4.19.4 All such replacement of defective parts mentioned above shall be made free of cost at site by the Contractor and the return of the defective parts to the Contractor's works shall be the Contractors responsibility and shall be made at his expense. The Owner will however render such assistance in this matter as will expedite the same. In the case of defective special parts not repairable at site but essential in the mean time for the commercial use of the plant, the Contractor shall replace at site free of cost to the Owner the said defective parts before the defective parts are removed to his works. The Contractor shall bear reasonable cost of minor repairs of the defective parts carried out by owner on his behalf at site.

4.19.5 If the service of the Contractor personnel are requisitioned for rectification or replacement of any part or equipment due to defective materials, manufacture or design, within the guarantee period, these services shall be made available free of any cost to the Owner.

4.19.6 If it becomes necessary for the Contractor to replace or renew any defective parts of the plant under this clause, the provisions of this clause shall apply to the parts of the plant so replaced or renewed until the expiration of six (6) months from the date of such replacement or renewal or until the end of the above mentioned period of 18 (Eighteen) months whichever may be later, If any defects be not remedied within a reasonable time, the Owner may proceed to do the work at the Contractor risk and expense, but without prejudice to any other rights which the Owner may have against the Contractor in respect of such defect.

4.19.7 If the replacements or renewals are of such nature as may effect the efficiency of the plant, the Owner shall have the right to give to the Contractor within one (1) month of such replacement or renewal, notice in writing that "Test on Completion" be made, in which case such tests shall be carried out as provided in the specifications. The cost of the tests shall be borne by the Contractor.

4.19.8 Until the final certificate has been issued, the Contractor shall have the right of entry, at his own risk and expense, by himself or his duly authorized representatives, at all reasonable working hours upon all necessary parts of the works for the purpose of inspecting the working and the records of the plant and taking notes there of and, if he desires, at his own expense making any test, subject to the approval of the Engineer, that will not be unreasonably withheld.

4.20 ALTERATIONS IN SPECIFICATIONS AND DESIGNS

Purchaser shall have power to make any alterations in, or omissions from, addition to, or substitutions for the original specifications and approved drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work and the Contractor shall be bound to carry out the work in accordance with any instruction which may be given to him in writing signed by the Purchaser and such alterations omissions, additions or substitutions shall not invalidate the contract and any altered, additional or substituted work which the Contractor may be directed to do in the manner above specified as part of the work, shall be carried out by the Contractor on the same conditions, in all respects on which he agreed to do the main work.

The Purchaser shall make any variation of the form, quality or quantity of the works or any part thereof that may, in his opinion, be necessary and for that purpose, or if for any other reason it shall, in his opinion be desirable, he shall have power to order the Contractor to do and the Contractor shall do any of the following:

- i. Increase or decrease the quantity of any work included in the contract.
- ii. Omit any such work,
- iii. Change the character or quality or kind of any such work.
- iv. Change the levels, lines, position and dimensions of any part of the works, and
- v. Execute additional work of any kind necessary for the completion of the works and no such variation shall in any way vitiate or invalidate the contract, but the value, if any, of all such variations shall be taken into account in ascertaining the amount of the contract price.

No such variations shall be made by the Contractor without an order in writing of the purchaser. Provided that no order in writing shall be required for increase or decrease in the quantity of any work where such increase or decrease is not the result of the quantities exceeding or being less than those stated in the Contract/ Bill of Quantities. Provided further that if the Contractor shall within seven days confirm in writing to the purchaser and such confirmation shall not be contradicted in writing by the purchaser within 14 days, it shall be deemed to be an order in writing by the purchaser.

All extra or additional work done or work omitted by order of the Purchaser shall be valued at the rates and prices set out in the contract if in the opinion of the Purchaser, the same shall be applicable. If the contract does not contain any rates or prices applicable to the extra or additional work, then suitable rates or prices shall be agreed upon between the Purchaser and the Contractor. In the event of disagreement the Purchaser shall fix such rates or prices as shall, in his opinion, be reasonable and proper and these will be binding on Contractor.

Provided that if the nature or amount of any omission or addition relative to the nature or amount of the whole of the works or to any part thereof shall be such that, in the opinion of the purchaser, the rate or price contained in the contract for any item of the works is, by reason of such omission or addition, rendered unreasonable or inapplicable, then a suitable rate or price shall be agreed upon between the purchaser and the Contractor. In case of disagreement, Purchaser shall fix such other rate or price as shall in his opinion, be reasonable and proper having regard to the circumstances and will be binding on the Contractor.

Provided also that no increase or decrease in work or variation of rate or price under the above clause shall be made unless, as soon after the date of the order as is practicable and, in the case of extra or additional work, before the commencement of the work or as soon thereafter as is practicable, notice shall have been given in writing:

- i. by the Contractor to the purchaser of his intention to claim extra payment or a varied rate or price,
- or
- ii. by the Purchaser to the Contractor of his intention to vary a rate or price.

If, on certified completion of the whole of the associated civil works, it shall be found that a reduction or increase greater than 15 percent of the sum named in the Letter of Acceptance results from the aggregate effect of all variation orders but not from any other cause, the amount of the contract price shall be adjusted by such sum as may be agreed between the Contractor and the purchaser or, failing agreement, fixed by the purchaser having regard to all material and relevant factors, including the Contractor's site and general overhead costs of the contract.

The Contractor shall send to the purchaser's representative once in every month an account giving particulars, as full and detailed as possible of all claims for any additional payment to which the Contractor may consider himself entitled and of all extra or additional work ordered by the purchaser which he has executed during the preceding month.

No final or interim claim for payment for any such work or expense will be considered which has not been included in such particulars. Provided always that the purchaser shall be entitled to authorise payment to be made for any such work or expense, notwithstanding the Contractor's failure to comply with this condition, if the Contractor has, at the earliest practicable opportunity, notified the purchaser in writing that he intends to make a claim for such work.

4.21 TESTS AND QUALITY CONTROL

The Contractor shall be required to carry out all tests in accordance with relevant clauses of the conditions of contract and the Technical Specifications. Purchaser's authorized representative shall have at all reasonable times access to the site and shall have the power to inspect and examine the materials and workmanship of the works during execution.

Purchaser's authorized representative and/or an outside inspection agency acting on behalf of the Purchaser shall have access to the manufacturing works, sub-Contractor's works, site and shall have the power to inspect and examine all works, the materials and workmanship of the project works during execution. The Contractor shall provide necessary labours tools, scaffolding or any other assistance as desired by the Purchaser's authorised representative without any extra payment.

Where the field quality assurance plan provided for witnessing tests/inspection on behalf of the Engineer, the Contractor shall give the Purchaser adequate written notice of any inspections/tests.

Where the Engineer or his Representative attends the tests as provided above and has any objection to any works or workmanship which in his opinion is not in accordance with

the Contract he shall advise the Contractor of his objection during tests/inspections. The Contractor shall give due consideration to such objections and shall make modifications that may be necessary to meet the said objective.

If, as a result of inspection, examination or testing, the Purchaser's Representative decides that any Plant, Materials, design or workmanship is defective or otherwise not in accordance with the Contract, the Purchaser's Representative may reject such Plant, Materials, design or workmanship and shall notify the Contractor promptly, stating his reasons. The Contractor shall then promptly make good the defect to the satisfaction of the Purchaser's Representative and to ensure that the rejected item complies with the Contract.

If the Purchaser's Representative requires such Plant, Materials, design or workmanship to be retested, the tests shall be repeated under the same terms and conditions. If such rejection and retesting cause the Purchaser to incur additional costs, such costs shall be recoverable from the Contractor by the Purchaser, and may be deducted by the Purchaser from any monies due, or to become due, to the Contractor.

The inspection/tests by Engineer/ Engineer's Representative/Agency and/or his countersigning inspection/test certificate(s) thereon shall in no way limit the liabilities and responsibilities, of the Contractor as stipulated in the Contract.

The Contractor shall maintain and record all measurements and test results and submit the same to the Purchaser after completion of such inspection/tests.

4.22 QUALITY CONTROL RECORDS

The Contractor shall produce results of quality control tests carried out on the works by his staff and the quality audit conducted by the Engineer on these works. If the test result do not fulfill the stipulated criteria laid down in specifications the payment will be limited as per the provisions in the specification(s) and if number of results fail beyond the limit of acceptance, then the Contractor shall not be paid unless he rectified all such imperfect work(s). The decision of the Engineer in respect of the matters pertaining to the quality control shall be final and binding on the Contractor.

4.23 RECOVERY OF DUES FROM THE CONTRACTOR

Whenever any claim, against the Contractor for the payment of a sum of money arises out of or under the Contract, Purchaser shall be entitled to recover such sum by appropriating, in part or whole, the Security deposit and performance Guarantee deposit of the Contractor, forming the whole or part of such security. In the event of the security being insufficient, then the balance or the total sum recoverable, as the case may be, shall be deducted from any sum then due or which at any time thereafter may become due to the Contractor under this or any other contract with Government. Should this sum be not sufficient to cover the full amount recoverable from the Contractor then it shall be recovered from him as arrears of land revenue.

4.24 DESIGNS AND DRAWINGS

The Contractor shall formulate proposals for submission and approval of design and drawings. Contractor shall supply to the Purchaser 4 (four) copies and each of the design

calculations and drawings for approval. The Purchaser shall give his comments/approval on one copy and return it to the Contractor. The Contractor shall incorporate all necessary comments of the Purchaser in the above design and drawings, if any, and shall re-submit further 4 (four) copies each of the revised design and drawings within 10 (ten) days for final approval. After approval from the Purchaser, the Contractor shall thereafter submit 10 (Ten) copies each of the approved drawings together with two soft copies on CD to Purchaser. Further design calculations and drawings shall be submitted in sequence as per a schedule to be drawn and agreed upon mutually.

The documents and drawings shall be in sufficient detail for review. The drawings shall be of standardized sizes and as instructed by the Purchaser. The drawings shall contain the following basic information in the nameplate:

- a) Project name
- b) Name and number of the Contract
- c) Contractor's name
- d) Number and title of the drawing
- e) Date and scale
- f) Draftsman's name and signature
- g) Name of the designer responsible and signature
- h) Revision Number (R0 for drawing submitted initially and R1, R2, etc., for drawings submitted subsequently).
- i) Name and designation of checking official and space for signature.
- j) Approving authorities name and designation as specified by the Purchaser and space for the signature.

A blank space 90 x 50 mm shall be provided immediately above the title block for the approval stamp. If required, the detailed design and the execution drawings shall be submitted only after verification by the Consultant(s) approved by the Engineer

The Contractor shall be responsible for preparation of working drawings and the construction documents for works, as specified in the Contract. Tentative list of drawings required Purchaser's approval are given in particular technical specifications of each equipment.

For Civil works, the Contractor shall carry out alignment studies including cost economics by examining all possible alternative to prepare detailed layout, designs and drawings of all components stated in scope of civil works. The Contractor will have to submit detailed drawings of each component with appropriate scales, measurements, RL's full dimensions, index map locations of components such as godown, dumping area, internal roads, etc. for infrastructure work.

All the studies layouts, drawings, design notes, which have been submitted to the Purchaser, shall become the absolute property of Purchaser under the copy right act and the Contractor shall not use the same in whole or part thereof elsewhere for any purpose without explicit written permission from the Purchaser.

4.25 Default by the contractor and termination of contract in full or in part

4.25.1 The contract can be terminated if the Contractor

- (i) Commits default in complying with or commits breach of any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it immediately and not later than 10 days in any case after a notice in writing is given to him in that behalf by the Engineer or
- (ii) Fails to complete the work (s) or any item of work (s) within the time specified or any extended time under the contract and does not complete the works or any item of works within the period specified in notice given in writing in that behalf by the Engineer or
- (iii) Shall offer or give or agree to give to any person in Purchaser services or to any other person on his behalf any gift or consideration of any kind as an inducement of reward of doing or forbearing to do or for having done or forborne to do any act in; relation to obtaining or execution of this or any other contract for Purchaser or
- (iv) Shall enter into contract with Purchaser in connection with which commission has been paid or agreed to be paid by him or to his knowledge unless the particulars of any such commission and the terms of payment thereof having been disclosed in writing to the Engineer or
- (v) Being a company shall pass a resolution or the Court shall make an order for the liquidation of its affairs or a receiver or manager on behalf of the debenture holder shall be appointed or circumstances shall arise which entitle the court or debenture holders to appoint a receiver or manager or
- (vi) Assigns, transfers, sublets (engagement of labour on a piece-work basis shall not be a deemed to be subletting) or attempts to assign, transfer or sub-let the entire works or any portion thereof without the prior written approval of the Engineer.

4.25.2 The Engineer, shall on such termination of the contract, have powers (i) to take possession of the site of work under the contract as well as the land/premises allotted to the contractor and (ii) also any materials, constructional plant, equipment, implements, stores structures etc. thereon. The Engineer shall also have powers to carry out the incomplete work by any means or through any other agency or by himself.

4.25.3 On termination of the contract in full or in part, the Engineer may direct that a part or whole of such plant equipment and materials, structures be removed from the site of the work as well as from the land/premises allotted to the contractor for his preliminary, enabling and ancillary works, within a stipulated period. If the Contractor fails to do so within in period specific in a notice in writing by the Engineer, the Engineer may cause them to be sold, holding the net proceeds of such sale to be credit of the contractor, which shall be released after completion of works and settlement of amounts under the contract.

4.25.4 If the expenses incurred or to be incurred by Purchaser for carrying out and completing the incomplete work a part of the same as certified by the Engineer-in-Charge, are in excess of the value of the work credited/to the credited to the contractor, the difference shall be paid by the contractor to Purchaser. If the contractor fails to pay such an amount, as aforesaid, within thirty days of receipt of notice in writing from the Engineer, the Engineer shall be empower to recover such amount from any sums due to contractor or any account under this or any other contract or from his security deposit or otherwise.

4.25.5 Also, the Engineer shall have the right to sell any or all of the contractor's unused materials, constructional plant, equipment, implements, temporary buildings / structures etc., and apply the proceeds of sale thereof towards the satisfaction of any sums due from the contractor under the contract and if the after there may be any balance outstanding from the contractor, the Engineer shall have powers to recover the same in accordance with provision of the contract.

4.26 DAMAGE TO WORKS

The works whether fully completed or incomplete, all the works materials, machinery, plants, tools, temporary buildings and other things connected there with shall remain at the risk and in the sole charge of the Contractor until whole of the completed work under the Contract has been delivered to the Purchaser. Until such delivery of the entire completed work, the Contractor shall at his own cost take all precautions reasonably to keep all the aforesaid works, materials, machinery, plants, temporary buildings and other things connected there with free from any loss or damage and in the event of the same or any part thereof being lost or damaged, he shall forthwith reinstate and make good such loss or damage at his own cost.

4.27 SPECIAL CONDITIONS FOR CIVIL WORKS

4.27.1 Materials to be Supplied by the Owner

No material shall be supplied by the Owner. All materials including cement, steel and explosives etc. shall be arranged by the Contractor. The rates for various items to be submitted by the bidder for lump sum Contract should include all cost of material.

4.27.2 Quarries, Crushing and Grading Plant

Coarse and fine aggregate for manufacture of concrete are available in the near by area of the Project site. However, some quantity of useful aggregate can also be recovered from the excavation of Power House and other structures.

The Contractor will have to install a crushing/screening plant at Project site to process the material obtained from quarries as well as stone obtained from excavation of the power house and appurtenant works.

4.27.3 Measurements and Progress Payments

- (i) Every measurement for intermediate payment on account of work, material or other things shall be regarded as only provisional and approximate and all payments made on such measurements shall be regarded as being advance payments and shall respectively be subject to revision and settlement by the Engineer-in-charge and in the event of his deciding that under any circumstances the measurement of the work executed or estimate of value previously made, did not truly represent the quantity and quality of works executed and material provided and used, the Engineer-in-charge shall have the power, from time to time and at any time upto the time of the refund of security deposit to correct the total results by recording measurements afresh or by such other means as after communication with contractor or his duly authorized agent,

the Engineer-in-Charge may deem to be just and such correction shall be binding on the contractor.

- (ii) The Engineer-in-Charge shall except as otherwise stated ascertain and determine by measurement the value of work done in accordance with the contract.
- (iii) Notwithstanding any provision in relevant standard method of measurements or any general or local custom, measurement of work done under the contract shall be taken in accordance with the procedure set forth in the Technical Specifications, measurements shall be taken in accordance with the relevant standard methods of measurements laid down by the Bureau of Indian Standards
- (iv) All items having a financial value shall be entered in measurement book, level book etc. prescribed by Purchaser so that a complete record is maintained of all work performed under the contract.
- (v) Measurement shall be taken jointly by the Engineer-in-Charge or his authorized representative and by the Contractor or his authorized representative. All records shall be made in two copies, one copy shall be kept by the Engineer-in-Charge and the other copy by the Contractor.
- (vi) Before taking measurements of any works, the Engineer-in-Charge or representative deputed by him for the purpose, shall give a reasonable notice to the Contractor. If the Contractor fails to attend or send an authorized representative for measurement after such a notice or fails to countersign or to record the objection within a week from the date of taking of measurements, then in that event the measurement taken by the Engineer-in-Charge or his authorized representative shall be taken to be correct and final measurements of such work.
- (vii) The Contractor shall, without extra charge, provide assistance with every appliances, labour and other things necessary for measurement.
- (viii) Measurements shall be signed and dated by both parties each day on the site on completion of measurements. If the Contractor objects to any of the measurements recorded by the representative of the Engineer-in-charge a note to the effect shall be made in the measurement book against the item objected to and such note shall be signed and dated by both parties engaged in taking the measurement.
The decision of the Engineer-in-charge on any such dispute or difference or interpretation shall be final and binding on the contractor in respect of all items executed for completion of turnkey execution of the project.

4.27.4 Examination and tests on Completion

On the completion of the work the Purchaser shall make such examination and tests of the work as may then seem to him possible, necessary or desirable, and the Contractor shall furnish free of cost any materials and labour which may be necessary thereof, and shall facilitate in every way all operations required by the Purchaser, in making examination and tests.

4.27.5 Layout of Construction of Roads

The Contractor shall have to submit detailed plan to the Purchaser showing the layout of the work site, roads and approach roads proposed by him, before he starts the actual work. Such a road layout road plan will be scrutinized by the Purchaser and any modifications suggested by him shall be binding on the Contractor. If it is decided by the Purchaser to have some of the roads proposed by the Contractor as common road for common use of Purchaser and other Contractors or convenient and for compact and planned layout of work site, the

Contractor will be bound to construct them and allow them to be used simultaneously by other Contractors and Purchaser s. In case of disputes, the decision of the Purchaser shall be final and the binding on the Contractor.

4.27.6 Soil testing for foundations

During soil exploration by drilling boreholes for foundations, the Contractor shall take required no. of Un-disturbed Samples and normal samples and obtain soil classification soil properties and bearing capacity by getting them tested in the soil testing laboratories of Purchaser Labs/Engineering Colleges or other reputed institutes. The Contractor shall provide certain U.D. Samples and normal samples to the Purchaser also so as to get them tested parallelly at any other lab to be selected by the Purchaser, if required. The cost of such testing shall be borne by the Contractor.

4.27.7 Passing of foundation, centering, reinforcement etc.,

After the completion of the work of excavation, the same will be checked and passed by the competent authority. No masonry or concrete or back filling shall be laid unless the foundations are so passed. No concreting shall commence, unless the centering and the reinforcement is checked and passed by the Purchaser.

4.27.8 Signing field books, longitudinal sections, cross-sections and measurement books

Before starting the work, and at the end before the work is covered, levels for plotting the longitudinal sections (along the axis as decided by Purchaser or his authorised representative) and cross section of the portion of the work shall be taken by authorised Engineer of the Contractor in the presence of the Purchaser or his authorised representative and the same shall have to be got attested from the Purchaser or his authorised representative in token of acceptance.

If the Contractor fails to take measurements and sign them, then the measurements recorded by the Purchaser, or his authorized representative in the authorised books shall be final and binding on the Contractor. For this purpose, suitable date or dates shall be fixed by the Purchaser and intimated to the Contractor. If the Contractor, or his duly – authorised agent fails to attend on the appointed date or dates, the levels and measurements shall be taken in his absence and such levels and measurements and longitudinal sections and cross sections based there on shall be final and binding on the Contractor. The levels will be taken on such alignments and cross sections as will be useful for reference permanently. The point of the locations for the levels will depend upon the roughness of the area and will also be at least in conformity with the requirement of specifications for “Excavation” as far as possible.

The similar procedure for record measurements shall hold good for all other items and activities involved in execution of the work. All the levels/measurements shall be recorded by the Purchaser or his authorised representatives in the authorised level / measurement books.

4.27.9 Cleaning up

- a) The Contractor shall at all time keep the construction areas and his colony and storage free from accumulation of waste or rejected materials.
- b) Prior to the completion of the work, the Contractor shall remove all rubbish from

and around the premises and all tools, scaffolding equipment and material which are not part of permanent structures executed or otherwise asked for or as provided under any other Clauses of this contract, the premises will be left in a manner fully satisfactory to the Purchaser.

4.27.10 Works to be opened for inspection

All works, under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection and supervision of the Purchaser and the Contractor shall at all times during the usual working hours and at all other times at which reasonable notice of the intention of Purchaser to visit the work shall have been given to the Contractor either he himself be present to receive orders and instructions, or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the Contractor himself.

4.27.11 Notice before covering work

The Contractor shall give not less than fifteen days notice in writing to the Purchaser before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be verified/checked and correct dimensions thereof be taken before the same is so covered up or placed beyond the reach of verification/checking of any work without the consent in writing of the Purchaser's authorised representative or Purchaser of the work, and if any work shall be covered up or placed beyond the reach of verification/checking without such notice having been given or consent obtained, the same shall be uncovered at the Contractor's expense or in default thereof, no payment or allowance shall be made for such work or materials with which the same was executed.

4.28 SPECIAL CONDITIONS FOR E&M WORKS

4.28.1 Delivery of Plant at Site

The plant or material shall not be forwarded until dispatch instructions have been given to the Contractor. Based on dispatch instruction, Contractor's normal commercial practice and availability of wagons, goods will be dispatched in separate consignment from time to time. All such dispatches will be reckoned as separate transactions under this contract through for convenience of billing as per terms of payment quoted by the Contract.

4.28.2 Extension in Delivery Period

The time given to the Contractor for dispatch or delivery shall be reckoned from the date of signing of Contract Agreement.

In all cases in which progress shall be delayed by strikes, lockouts, fires, accidents, hostilities, delays in approval of drawings or any case whatsoever beyond the reasonable control of the Contractor and whether such delays or impediments shall occur before or after the time or extended time for dispatch or delivery extension of time shall be granted by the Owner on application by the Contractor produced before the Owner prior to expiry date.

4.28.3 Inspection and Tests

Except as otherwise provided, all materials and workmanship, if not otherwise designated by the specifications, shall be subject to inspection, examination and test by the Purchaser's authorised representative at any and all times during manufacture and/or construction and at any/all places where such manufacture or construction are carried on. The Purchaser's authorised representative shall have the right to reject defective material and workmanship or require its corrections. Rejected workmanship shall be satisfactorily replaced with proper material without charge thereof and the Contractor shall properly segregate and remove the rejected material from the premises, if the Contractor fails to proceed at once with the replacement of the rejected material and/or the construction of defective workmanship, the Purchaser may replace such material and/or correct such workmanship and charge the cost thereof to the Contractor.

The Contractor shall be liable for replacement of defective work up to the time in accordance with the conditions of contract of all work to be done under the contract.

The Contractor shall furnish promptly without additional charge all facilities, labour and material necessary for the safe and convenient inspection and tests that may be required by the Purchaser.

All inspections and tests by the Purchaser shall be performed in such a manner as not to unnecessarily delay the work. Special full size and performance test shall be charged with any additional cost of inspection when the Contractor does not make materials and workmanship ready at the time of inspection.

4.28.4 Trial Run and Commissioning

On the completion of work, the whole system shall be tested and commissioned as envisaged in Technical Specification.

All the tests as specified in technical specification part should be completed. The unit shall be put to 72 hrs continuous run after completing 100 % load throw off test. After completing 72 hours test run, machine will be declared suitable for commercial operation. This shall be done separately for each unit.

The plant will start generating from the time when first unit is synchronized with grid.

4.28.5 Commissioning Report

The Owner and Contractor shall properly maintain in the agreed format their respective records of all observations and measurement taken in respect of all tests and operations. Joint protocol shall be signed on completion of each and every test/check till the commissioning. During commissioning all readings shall be jointly maintained and signed. On successful completion of commissioning, a report shall be jointly prepared and signed indicating results of all the tests/checks.

4.28.6 Training of purchaser's personnel

The Contractor shall arrange for training of Purchaser's personnel in operation and maintenance of the power plant. The Contractor shall provide a detailed training plan for all

operation and maintenance procedures along with the bid documents which shall, after approval by the Purchaser, form the basis of training programme.

4.29 TERMS OF PAYMENT

Payment for construction of civil and hydro-mechanical works shall be as below.

4.29.1 Advance Payment

Mobilisation advance of 10% of the cost of civil works and 10% of the hydro-mechanical equipment including penstocks shall be paid to the contractor against bank guarantee of equal amount issued by nationalized bank in favour of Purchaser. Bank Guarantee will be submitted in the prescribed format of the Purchaser.

4.29.2 Progressive Payment

- (i) In the first week of each month, the contractor shall submit a bill in triplicate in proforma prescribed by Engineer-in-charge for all works executed by him during the preceding calendar month. If the contractor does not submit his bill within the time as fixed, the Engineer-in-charge may after giving the contractor three days notice in writing depute his representative to draw up a bill based on measurements and any bill so drawn shall be binding on the contractor.
- (ii) Contractor shall on submitting the monthly bill be entitled to receive monthly progressive payments provided that every alternative bill is complete duly supported by details in every respect and are for the actual quantity of the work measured and approved by the Engineer-in-charge. A deduction at the rate mentioned under clause of the total value of the bill will be made from each intermediate bill towards recovery of advance payment made to the contractor. In case any item of work is not in order in any respect, the item will be deleted from the bill or the intermediate payments made at the reduced rate, if in the judgment of the Engineer-in-charge sufficient justification exist for doing so, the decision of the Engineer-in-charge in this respect will be final and binding on the contractor. This however, does not preclude the inclusion of the item by the contractor in his next bill or bills, if the item is subsequently made to order to the satisfaction of the Engineer-in-charge.
- (iii) Intermediate payment/ progressive payment against bills will only be made as advance to be credited to Purchaser in the final settlement of account with contractor and not as payment for the works completed and passed and the making of any such payments shall not preclude the Engineer-in-charge from requiring the contractor to remove or reconstruction or re-erect any work on the ground that such work is faulty, unsound, imperfect or unskilled or prevent the Purchaser from enforcing any claim against the contractor on account of any default by him or conclude, determine or affect in any way the powers of the Engineer-in-charge under these conditions or any of them as to the final settlement and adjustment of the accounts.
- (iv) Deduction will be made towards income tax at source by the Purchaser as per income tax rules applicable from time to time. No deduction towards income tax shall be made from the contractor's bill(s), if the contractor produces a certificate from the income tax department for each financial year stating that the firm is exempted from such deductions.

- (v) Recoveries on account of services such as electric supplies etc and on account of expenditure if any incurred by the Purchaser on contractor's behalf shall be made in full from intermediate payment from the contractor.
- (vi) Deduction of sales tax payable on completed items of works / contract tax / turnover tax etc. at source shall be done as per relevant Sales Tax Act of Govt. of and its applicable amendments or substituted provisions in the Act.
- (vii) The price for turnkey execution of all the components of the Project is lump sum price but the measurements of all items, of work, plants, equipments, machines and other parts etc. are to be taken for record as well as for assessments of the price of the work executed during the month by the engineer-in-charge. The monthly progressive bill on submission by the contractor shall be paid to the contractor subject to deduction herein above and on certification by the Engineer-in-charge regarding the price of the work executed during the period under consideration for payment.

Against – Civil Works

90% (inclusive of 10% mobilization advance) in the form of monthly interim payments based on actual measurements and as assessed and certified by the *Engineer-in-charge*.

Against Planning, Design and Engineering

90% (inclusive of 10% advance) after approval of final drawings, calculations, design memos, all desired reports and documents as per agreed schedule.

Against Supply of Hydro-mechanical Equipment

- (a) The contractor shall be entitled to receive the progress payment up to 75% (inclusive of 10% advance payment) of the contract price against supply of Hydro-mechanical equipment at site, of each partial shipment against presentation of the following documents to the owner:
 - Original copy of the invoice (in triplicate).
 - Copies of packing list in 4 copies
 - Copies of certificate of country of origin in 3 copies
 - Copy of one negotiable and two non-negotiable bill of loading or Airway bill as the case may be. If dispatch is delayed from ports for reasons beyond contractors control, a copy of warehouse receipt.
 - Insurance cover in 3 copies.
 - Inspection certificate by Quality Management Department of Equipment Manufacture countersigned by Owner's Engineer as per agreed Quality Plan in 3 copies.
 - Certificate of applicability of spares in 3 copies.
 - Certificate from Owners Representative for safe receipt of equipment at site stores of contractor.

For the purpose of releasing payments against partial shipments, the contractor shall submit price break-up of the contract price for hydro-mechanical equipment linking up with dispatchable packages (sub item / sub-assemblies wise) as per the master packing list for approval of owner.

- (b) 5% of total supply value after completion of erection.

- (c) 10% of total supply value after successful commissioning and handing over.
- (d) Above payments to be released to the contractor shall be subject to the condition that the physical progress achieved at the site by the Contractor is consistent with that indicated in the progress schedule in respect of these activities. Last installment shall be released to the contractor only after completion of respective item of work.

The Owner may, by any progress certificate/ invoice, make any correction or modification in any previous certificate which shall have been approved by him and shall have authority, if the work is not being carried out in accordance with the Contract, to omit or reduce the value of such work in any progress certificate / invoice. Other payments, if any, due under the provisions of the contract shall be separately invoiced on a monthly basis by the contractor and shall fully be payable within 30 days from the date of submission of the invoice.

Against Storage, Erection, Testing and Commissioning of Hydro-mechanical Equipment

90% (inclusive of 10% advance) in stages on completion of mile stones of work programme and certified by the Engineer-in-charge. The percentage of work completed shall be ascertained on the basis of mile stones set in working programme to be furnished by the Contractor and agreed upon by the Engineer-in-charge.

4.29.3 Final Measurements

Final measurements and adjustment of quantities shall be made on completion of the work only when the Engineer-in-charge has given a certificate of completion of work as per provision of the contract.

4.29.4 Final Payment

Final payment will be made to contractor on the basis of the final measurements taken as per clause 4.29.3 and valuation of the work executed, after issue of final acceptance certificate by the Engineer-in-charge and after adjustment of all outstanding recoveries on account of advance payment made to the contractor, liquidated damages and other recoveries or amounts due from the contractor. Full credit shall also be given to the Purchaser for all intermediate payment to the contractor made in accordance with clause 4.29.2. The amount of security deposit shall be refunded to the contractor, after he has cleared all camp site and has handed over all Purchaser's land as per contract or after the expiry of the defect liability period, whichever is later. If there is a dispute on any item, the payment, against such item shall be withheld and balance payment shall be made to the Contractor.

The contractor shall, before the final payments, obtain and furnish to the Engineer-in-charge satisfactory evidence that work is fully released from the claims, liens and demands from all other concerned Govt. Agencies like district administration, local authorities, & sales tax etc., furnish all documents secure and furnish his written consent and of his sureties to acceptance of final bill hereunder. The acceptance of final payment by the contractor shall release Purchaser from all claims and liabilities to the contractor for all work done and material furnished in the execution of the contractor.

Final payment or any other payment shall, however, not serve to release the contractor or his sureties from their obligations under or in connection with this contract.

Subject to the conditions here in above the last final payment for the components of the work shall be made to the contractor only after.

- (i) Against planning, Design and Engineering submission of “As Built” drawings in 7 sets.
- (ii) Against Civil Works
Commissioning of the project.
- (iii) Against supply of Hydro-mechanical equipment.
Commissioning of each generating unit.
- (iv) Against Transportation, storage, erection, testing and commissioning.
Completion of performance guarantee period.

4.29.5 Payment for supply of E&M equipment

i) Advance Payment Against Supply of E&M Equipment

Mobilization advance equivalent to 10% of the Ex-Works price of the equipment against bank guarantee of equal amount issued by the nationalized bank. Bank Guarantee will be submitted in the prescribed format of the Nigam.

ii) Progress Payment Against Supply of E&M Equipment

- (a) 90% payment of Ex-Works price of equipment dispatched plus 100% taxes and duties, less proportionate advance on receipt of goods at site and presentation of the following documents to the Purchaser:

- Original copy of the invoice (in triplicate).
- Copies of packing list in 4 copies.
- Copy of one negotiable and two non-negotiable bill of loading or Airway bill as the case may be. If dispatch is delayed from ports for reasons beyond Contractors control, a copy of warehouse receipt.
- Insurance cover in 3 copies.
- Inspection Certificate by Quality Management Department of Equipment Manufacturer countersigned by Purchaser’s Engineer as per agreed Quality Plan in 3 copies
- Certificate from Owners Representative for safe receipt of equipment at site stores of Contractor.

For the purpose of releasing payments against partial shipments, the Contractor shall submit price break-up of the Contract Price for E&M works linking up with dispatchable packages (sub-assemblies wise) as per the master packing list for approval of Purchaser.

Payment for non sequential dispatches shall be made only when the Purchaser has given permission for dispatch of the particular equipment.

- (b) 10% payment, less proportionate advance on successful commissioning & field Testing and taking over of all the units after completing the commissioning tests.

4.29.6 Payment for Supply of Spares

100 % payment of item wise price of spare parts shall be paid on receipt of material at site and presentation of following documents:

- Original copy of the invoice (in triplicate).
- Copies of packing list in 4 copies.
- Inspection Certificate by Quality Management Department of Equipment Manufacturer countersigned by Purchaser's Engineer as per agreed Quality Plan in 3 copies
- Certificate from Owners Representative for safe receipt of equipment at site stores of Contractor.
- Certificate from the Contractor that the spares supplied

4.29.7 Payment for Erection, Testing and Commissioning of works

- (a) 10% of the amount for Erection, Testing and Commissioning as advance on submission of a irrevocable bank guarantee of equal amount issued by a nationalized Bank valid for the entire completion period but on start of erection of E&M equipment at site.
- (b) 80% payment less proportionate advance for erection, testing and commissioning charges in monthly installments against pro-rata contract value of the work completed as per the agreed construction schedule and on certification by the Purchaser's Representative
- (c) Balance 10% payment less proportionate advance for erection, testing and commissioning works on successful commissioning, acceptance by Purchaser's Representative and handing over both the units for generation.

4.29.8 Progressive Payments

- (i) All progressive payments made to the Contractor shall be reviewed on quarterly basis and reconciled with the break-up of the Schedule. Over payments/under payments made, if any, shall be adjusted in the next progressive bill.
- (ii) Progress payments to be released to the Contractor shall be subject to the condition that the physical progress achieved at the site by the Contractor is consistent with that indicated in the progress schedule in respect of these activities. Last installment shall be released to the Contractor only after completion of respective item of work
- (iii) The Owner may, by any progress certificate/invoice, make any correction or modification in any previous certificate which shall have been approved by him and shall have authority, if the work is not being carried out in accordance with the Contract, to omit or reduce the value of such work in any progress certificate/invoice.
- (iv) Other payments, if any, due under the provisions of the Contract shall be separately invoiced on a monthly basis by the Contractor and shall fully be payable within 30 days from the date of submission of the invoice.

4.29.9 Recovery of Advance Payment

The amount of advance payment shall be recovered from the Contractor's progress payment pro-rata against the portion of supplies done by the Contractor on presentation of the respective documents. Bank Guarantee against advance payment shall be reduced automatically to the extent of recovery made and shall be returned to the Contractor within 30 days after its reduction to zero.

SCHEDULES FOR BID PART-I B

SCHEDULE 'A'

BIDDER'S AUTHORIZATION FORM

No. _____ Dated _____

To
Chief Engineer,

Dear Sir :

Tender Notice No. _____

We _____ who are established and reputed Contractor for constructing Hydro Electric Projects having registered office at _____ do hereby authorise M/s./Mr./Mrs. _____ (Name and Address for Person) to bid, negotiate and conclude the Contract with you against Tender Notice No. _____ for the turn key execution ofSHP (..... kW).

No company or firm or individual other than M/s./Mr./Mrs. _____ are authorized to bid, negotiate and conclude the Contract in regard to this business against this specific Tender.

We hereby extend our full guarantee and warranty as per Clause 2.14 of General Conditions of Contract for the goods offered for supply against this invitation for bid by the above firm.

Yours faithfully,

(Name)

for and on behalf of M/s. _____

(Name of Contractor)

Note : This letter of authority should be on the letter head of the Contractor and should be signed by a person competent and having the power of attorney to bind the Contractor.

TENDER FORM

(To be submitted on letter head of Bidder or letter head of Lead Member of consortium)

Reference No:

Date:

To

Chief Engineer,

Subject: Implementation ofProject on turnkey basis including Engineering, Procurement, Construction, Erection and commissioning of Power House including but not limited to Turbine, Generator and its auxiliaries, draft tube, tailrace channel, Head Race channel, Diversion works including intake and desilting basin etc

Dear Sir

1. We have read and examined the tender documents relating to the subject cited works (hereinafter referred to as "Works") at '..... SHP'" as issued by you:
2. Having examined the Tender Documents and being duly authorized we, hereby, bid for the execution, and completion of the Works referred to in the Tender Documents upon the terms and conditions contained or referred to therein and in accordance to all respects with the specifications, designs, drawings and other details given therein .
3. Attached to this letter are copies of original documents defining
 - (a) Our legal status;
 - (b) The principal place of business; and
 - (c) The place of incorporation (for bidders that are corporations), or the place of registration and the nationality of the owners (for Bidders that are member ships or individually owned firms).
4. 'PURCHASER' and its authorized representatives are hereby authorized to conduct any inquiries or investigations to verify the statements, documents, and information submitted in connection with this Bid, and to seek clarifications from our bankers and employers regarding any financial and technical aspects. This Bid shall also serve as authorization to any individual or authorized representative of any institution referred to in the supporting information to provide such information deemed necessary and as requested by you to verify statements and information provided in this application, such as the resources, experience, and competence of the Bidder.
5. We agree to keep this Bid open for acceptance for 180 days, or such other extended period as may be required by you and agreed by us, from the date of opening of the Bid, and also agree not to make any modifications in its terms and conditions of our own accord.

6. A sum of Rs - (Rs..... only) is hereby forwarded in form-----
---. as earnest money (hereinafter “Earnest Money Deposit”). We agree if we fail to keep the validity of Bid open, as aforesaid, or we make any modification in the terms and conditions of our Bid of our own accord or after the acceptance of our Bid if we fail to execute an Agreement as prescribed in the Tender Documents or commence the execution of the works as provided in the Tender Documents, we shall become liable for forfeiture of the Earnest Money Deposit. In such an event you shall, without prejudice to any other right or remedy, be at liberty to forfeit the said Earnest Money Deposit absolutely.
7. We certify that the Bid submitted by us is strictly in accordance with the terms, conditions, specifications etc. as contained in the Tender Documents, and it is further certified that it does not contain any deviations to the aforesaid documents and that deviations or variations if any are duly disclosed by us in the Compliance Statement.
8. The bid is made with the full understanding that:-
 - a) Bids by qualified bidders will be subject to verification of all information submitted for qualification at the time of bidding
 - b) PURCHASER reserves the right to:
 - (i) Amend the scope and value of any work bid under this tender.
 - (ii) Reject or accept any application, cancel the tender process and reject all bidders by giving a written notice.
 - c) PURCHASER shall not be liable for any actions taken under (b) I and ii above.
9. We confirm that the bid as well as any resulting agreement, will be signed so as to legally bind all partners, jointly and severally.
10. We undertake, if our bid is accepted, to commence the Works within 30 Days of receipt of the Letter of Award and to complete and deliver the whole of works comprised in the contract within the period stated and in compliance with the tender documents.
11. If our bid is accepted, we will furnish Security Deposit and Performance Guarantee Deposit as per General Conditions of the Contract which will be jointly and severely bound by us.
12. We confirm our agreement to treat the Tender Documents, Bid document, drawings and other records connected with the Works as secret and confidential documents and shall not communicate information contained therein to any other person other than the person authorized by ‘PURCHASER’ or use such information in any manner prejudicial to the safety and integrity of the Works. Subject to the terms of the Agreement as may be executed, this Bid, together with your Letter of Award, shall constitute a binding Contract between us, but without prejudice to your right to withdraw such award.

13. We understand that you are not bound to accept the lowest or any bid you may receive.
14. The undersigned declare that the statements made and the information provided in the Bid including the completed applications and formats are complete, true, and correct in all aspects.

“We have gone through carefully all the Bid conditions and solemnly declare that we will abide by any penal action such as disqualification or black listing or termination of contract or any other action deemed fit, taken by, the Department against us, if it is found that the statements, documents, certificates produced by us are false / fabricated.”

We hereby submit the following certificates in support of our suitability, technical knowledge capability for having successfully completed the following works:

S. No.	Description of Work	Client/Owner
1.		
2.		
3.		
4.		
5.		

We hereby declare that I/We are eligible in term of Clause 2.1.3.

List of Enclosures:

Date of Submission:

(Signature of the Bidder)
(Seal)

In case of group of firm/companies bidding in consortium, signature & seal of all the members are required.

PRE QUALIFICATION DETAIL OF THE OFFER

FORM 1

TURNOVER RECORD IN ALL CLASS OF
ENGINEERING WORKS ONLY

Name of Bidder or Lead member of a Consortium :

Annual turnover data for past five years (in all class of engineering works only)					
Sr. No.	Year	Turnover (Rs.)	Weightage	Weighted Turnover (Rs.)	Ref. to Page No. Bidders Documents
1	2	3	4	5 = 3 x 4	6
1.	20-20		1.4		
2.	20-20		1.3		
3.	20-20		1.2		
4.	20-20		1.1		
5.	20-20		1.0		
6.	Total	-			-

Signature with seal of bidder/
Member of Consortium

Note:

1. All individual bidders and all member of a consortium must complete the information in this form.
2. Use a separate sheet for each member in a consortium
3. The information provided shall be certified by Chartered Accountant and supported by Audited Balance Sheets.

DECLARATION

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

Tender invited by

.....
.....

Tender for

.....

Name of Tenderer

.....
.....

Specification No. and date of opening

.....

In Consideration of the Purchaser., having treated the Tenderer to be an eligible person whose tender may be considered, the Tenderer hereby agree to the condition that the proposal in response to the above invitation shall not be withdrawn within six months (or any extension thereof) from the date of opening of the tender, also to the condition that if thereafter the Tenderer does withdraw his proposal within the said period, the Earnest Money deposited by him may be forfeited to the Purchaser and at the discretion of the Purchaser, the purchaser may debar the tenderer from tendering for minimum period of one year reckoned from the date of opening of the tender.

Signed this.....day of.....200-

Place.....Signed

by.....

Witness

Tenderer

- | | |
|----|---------------------|
| 1. | Full Signature..... |
| 2. | Name..... |
| 3. | Designation..... |

SCHEDULE 'E'

PROFORMA FOR JOINT DEED AGREEMENT AMONG THE BIDDING CONSORTIUM MEMBERS

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution. Foreign entities submitting bids are required to follow the applicable law in their country)

FORM OF JOINT DEED AGREEMENT BETWEEN

M/S....., M/S.....,
M/S..... AND M/S.....
FOR (-----
Tender Notice NO. (-----)

THIS Joint Deed Agreement executed on this..... day of Two thousand..... between M/s..... a company incorporated under the laws ofand having its Registered Office at (hereinafter called the "Partner-1", which expression shall include its successors, executors and permitted assigns) and M/s..... a Company incorporated under the laws of and having its Registered Office at (hereinafter called the "Partner-2", which expression shall include its successors, executors and permitted assigns), M/s..... a Company incorporated under the laws of and having its Registered Office at (hereinafter called the "Partner-3", which expression shall include its successors, executors and permitted assigns, (The Bidder Consortium should list the details of all the Consortium Members) for the purpose of making a Bid and entering into the Agreement(in case of award) to be hereinafter referred to as the Contracts, against Tender Notice No. (-----) for (-----) of Purchaser .

NOW THEREFORE, THIS INDENTURE WITNESSTH AS UNDER:

In consideration of the above premises and agreements all the partners in this Consortium do hereby mutually agree as follows:

1. In consideration of the Award of the Contract(s) by the Purchaser to the Consortium, we the Members of the Consortium and partners to the Joint Deed Agreement do hereby unequivocally agree that partner (1) (M/s.....), shall act as the Lead Member for self and agent for and on behalf of Partner-2, and Partner-3 (the names of the partners to be filled in here)..
2. The Lead Member is hereby authorised by the Members of Consortium and Partners to the Joint Deed Agreement to bind the Consortium and receive instructions for and on their behalf. It is further understood that the entire execution of the Contract including payment shall be done exclusively by the Lead Member.

3. Notwithstanding anything contrary contained in this Agreement, the Lead Member shall always be liable for the equity investment obligations of all the Consortium Members i.e for both its own liability as well as the liability of other Members
4. The Lead Member shall be liable and responsible for ensuring the individual and collective commitment of each of the Members of the Consortium in discharging all their respective equity obligations. Each Consortium Member further undertakes to be individually liable for the performance of its part of the obligations without in any way limiting the scope of collective liability envisaged in this Agreement.
5. Subject to the terms of this Agreement, the share of each Member of the Consortium in the “issued equity share capital of the Project Company” (if such a company is to be established) is/shall be in the following proportion: (if applicable)

Name	Percentage
Partner 1	---
Partner 2	----
Partner 3	----
Partner 4	----
Total	100%

6. The Lead Member shall inter alia undertake full responsibility for liaising with Lenders and mobilising debt resources for the Project, achieving financial closure on behalf of the Bidding Consortium.
7. In case of any breach of any of the equity investment commitment by any of the Consortium Members, the Lead Member shall be liable for the consequences thereof.
8. Except as specified in the Agreement, it is agreed that sharing of responsibilities as aforesaid and equity investment obligations thereto shall not in any way be a limitation of responsibility of the Lead Member under these presents.
9. It is further specifically agreed that the financial liability for equity contribution of Lead Member shall, not be limited in any way so as to restrict or limit its liabilities. The Lead Member shall be liable irrespective of their scope of work or financial commitments.
10. This Joint Deed Agreement shall be construed and interpreted in accordance with the Laws of India and courts at [] alone shall have the exclusive jurisdiction in all matters relating thereto and arising there under.
11. It is hereby agreed that in case of an award of Contract, the partners to this Joint Deed Agreement do hereby agree that they shall furnish the Security Deposit and Performance guarantee Deposit in favour of purchaser, as stipulated in the bidding documents ,jointly, on behalf of the Consortium Members, in favour of the purchaser.
12. It is further expressly agreed that the Joint Deed Agreement shall be irrevocable and shall form an integral part of the Contract and shall remain valid till the term of the Contract unless expressly agreed to the contrary by the purchaser.

13. The Lead Member is authorised and shall be fully responsible for the accuracy and veracity of the representations and information submitted by the Consortium Members respectively from time to time for the purposes of the Project.
1. It is hereby expressly understood between the partners to this Agreement that neither partner may assign or delegate its rights, duties or obligations under the Contract except with prior written consent of purchaser.

This Joint Deed Agreement

- (a) has been duly executed and delivered on behalf of each Partner hereto and constitutes the legal, valid, binding and enforceable obligation of each such Partner,
- (b) sets forth the entire understanding of the Partners hereto with respect to the subject matter hereof;
- (c) may not be amended or modified except in writing signed by each of the Partners and with prior written consent of purchaser:

IN WITNESS WHEREOF, the partners to the joint Deed Agreement have, through their authorised representatives, executed these present and affixed Common Seals of their respective companies on the Day, Month and Year first mentioned above.

For M/s
(Partner 1)

1. Common Seal of M/s.....
.....
have been affixed in my/
our presence pursuant to
Board/Board of Directors Resolution
dated
Signature..... Designation.....
(Signature of the authorised
representative)
Name.....

For M/s
(Partner 2)

2. Common Seal of M/s.....
.....
have been affixed in my/
our presence pursuant to
Board/Board of Directors Resolution
dated
Signature..... Designation.....
(Signature of the authorised
representative)
Name.....

For M/s
(Partner 3)

3. Common Seal of M/s.....

 have been affixed in my/
 our presence pursuant to
 Board/Board of Directors Resolution
 dated
 Signature.....

(Signature of the authorised
 representative)
 Name.....
 Designation.....

1. For M/s
 (Partner 4)
 Common Seal of M/s.....

 have been affixed in my/
 our presence pursuant to
 Board/Board of Directors Resolution
 dated
 Signature.....

(Signature of the authorised
 representative)
 Name.....
 Designation.....

SCHEDULE 'F'**SCHEDULE OF GENERAL PARTICULARS****GENERAL INFORMATION**

1.	Name of Bidder:	
2.	Head office address:	Local office address (if any):
3.	Contact name: Telephone: Mob. No.	Contact name: Telephone: Mobile No.
4.	Fax: E-mail ID:	Fax: E-mail ID:
5.	Place of incorporation/registration:	Year of incorporation/registration:
6.	Main lines of business:	
7 Nationality of Owners		
	Name	Nationality
1.		
2.		
3.		
4.		
5.		

**Signature with seal of bidder/
Member of Consortium**

Note :

-
1. Use a separate sheet for each member of Consortium.

STRUCTURE AND ORGANIZATION

1. The Bidder is
 - a) a proprietary firm
 - b) a firm in member ship
 - c) a Limited Company or Corporation / Government undertaking
 - d) a voluntarily formed consortium by firms/companies(Please give complete information in respect of each member, indicate also the name of lead member)

2. Number of years of experience
 - a) as a Main/Lead Contractor (contractor shouldering major responsibility)
 - (i) in own Country
 - (ii) other Countries (specify Country)
 - b) in a voluntarily formed Consortium by firms/companies
 - (i) in own Country
 - (ii) other Countries (specify Country)
 - c) as sub-contractor (specify main Contractor)
 - (i) in own Country
 - (ii) other Countries (specify Country)

3. For how many years has your Organization been in business of similar work under its present name?

4. What were your fields when your Organization was established?

5. Whether any new fields were added in your Organization? And if so, when?

6. Were you ever required to suspend construction for a period of more than six months continuously after you started? If so, give the name of project(s) and reasons thereof.

7. Have you ever left the work awarded to you incomplete? (If so, give name of project and reasons for not completing work.)

8. Attach an Organization Chart showing the structure of the company/association, including the names of the Directors and position of officers.

**Signature with seal of bidder/
Member of Consortium**

Note : Use a separate sheet for each member of Consortium.

SCHEDULE 'G'

LIST OF DRAWING & LITERATURE ENCLOSED WITH THE TENDER

S. No.	Drawings/Literature No.	Title

Seal of Company

Full Signature.....
Name.....
Designation.....
Date.....

SCHEDULE 'H'

DEPARTURES FROM "TECHNICAL SPECIFICATIONS" & ITS PRICE INCIDENCE

(All deviations from General requirements, Contract conditions, Technical supply conditions and Equipment Specifications given in Tender Documents shall be filled in by the BIDDER in this schedule. In case the tenderer is required to agree to the standard clauses, then he may indicate the amount by which the tendered price will thereby be increased or decreased)

Section	Specification No.	Clause No. / Requirement	Deviation Offered	Price incidence (Increase/Decrease)

The bidder hereby certifies that the above mentioned are the only deviations and all other clauses of the specification are acceptable.

Signature _____
Designation _____
Company _____
Date _____

Company Seal

SCHEDULE 'T'

DEVIATIONS FROM “INSTRUCTIONS TO TENDERERS”& ITS PRICE INCIDENCE

All deviations from the “Instruction to Tenderers” shall be filled in clause, in this schedule, compliance with the Specifications will be taken as granted if the deviation are not specifically mentioned in this schedule. In case the tenderer is required to agree to the standard clause, then he may indicate the amount by which the tendered price will thereby be increased or decreased). Contract conditions shall be filled in by the BIDDER in this schedule.

Section / Clause	Description of clause	Deviation	Price incidence (Increase/Decrease)

The bidder hereby certifies that the above mentioned are the only deviations and all other clauses of the specification are acceptable.

Signature _____
Designation _____
Company _____
Date _____

Company Seal

SCHEDULE 'J'

DEVIATIONS FROM "GENERAL REQUIREMENTS OF SPECIFICATION" & ITS PRICE INCIDENCE

All deviations from the "General requirements of specification" shall be filled in clause, in this schedule, compliance with the Specifications will be taken as granted if the deviation are not specifically mentioned in this schedule. In case the tenderer is required to agree to the standard clause, then he may indicate the amount by which the tendered price will thereby be increased or decreased). Contract conditions shall be filled in by the BIDDER in this schedule.

Section / Clause	Description of clause	Deviation	Price incidence (Increase/Decrease)

The bidder hereby certifies that the above mentioned are the only deviations and all other clauses of the specification are acceptable.

Signature _____
Designation _____
Company _____
Date _____

Company Seal

SCHEDULE 'K'

DEVIATIONS FROM “GENERAL CONDITIONS OF CONTRACT & ITS PRICE INCIDENCE

All deviations from the “General conditions of the contract” shall be filled in clause, in this schedule, compliance with the Specifications will be taken as granted if the deviation are not specifically mentioned in this schedule. In case the tenderer is required to agree to the standard clause, then he may indicate the amount by which the tendered price will thereby be increased or decreased). Contract conditions shall be filled in by the BIDDER in this schedule

Section / Clause	Description of clause	Deviation	Price incidence (Increase/Decrease)

The bidder hereby certifies that the above mentioned are the only deviations and all other clauses of the specification are acceptable.

Signature _____
Designation _____
Company _____
Date _____

Company Seal

SCHEDULE 'L'

SCHEDULE OF QUOTED GUARANTEED COMPLETION PERIOD

(Guaranteed completion period will be reckoned from the date of issue of letter of intent or detailed order as the case may be)

S. No.	Item/ Work	Completion Period (in days)

Signature _____

Designation

Company

Date

Company Seal

FORMS
FORM 1-A
Consortium Summary

Names of all members of a consortium
1. Lead Member
2. Member
3. Member

Annual turnover data in Rs.... (In all class of engineering works only) – B/F from Form 2							
Member	1 st FY	2 nd FY	3 rd FY	4 th FY	5 th FY	Five Years Average	% of Criteria
1. Lead member							
2. Member							
3. Member							
Total		-	-	-	-		

1. Name and Address of Bankers to the Consortium:

2. Provide details regarding financial responsibility and participation (the share holding of the Lead Member shall not be less than 51%) of each firm in the Consortium. Attach a Agreement of Consortium.

**Signature with seal of bidder/
Member of Consortium**

FINANCIAL CAPABILITY

Name of Bidder or Lead Member of a Consortium

Banker	Name of Banker	
	Address of Banker	
	Telephone	Contact Name and Title
	Fax	Telex E-mail ID

Financial information in Rs.	Actual: Previous five financial years				
	--	--	---	--	--
1. Total assets					
2. Current assets					
3. Total liabilities					
4. Current liabilities					
5. Profits before taxes					
6. Profits after taxes					
7. Net worth (Paid up share capital + reserves & surplus)					
8. Average Net worth for last Five Years					

Signature with seal of bidder/ member of Consortium

1. Bidder/ each member of a consortium must fill in the form.
2. Copies of the Audited Financial Statements, including Balance Sheets (copied that the above statement is true – signature of Chartered Accountant), for the last five years along with certified copy of Income Tax return submitted in the Income Tax Office (for the Bidder or each member of a consortium) are to be attached. Firms owned by individuals or member ships may submit their balance sheets certified by a Chartered Accountant, along with certified copy of income tax return.
3. The statement of Net Worth is to be certified by a Chartered Accountant.
4. Attach certificate from a Chartered Accountant that the bidder or each member of a consortium has not suffered losses for any reasons whatsoever in four of the last 5 years.

**SUMMARY FOR CONSORTIUM
(NET WORTH)**

Names of all member s of a consortium
1. Lead Member
2. Member
3. Member

Net Worth in Rs during the last five years – B/F from Form 2B							
Member	1 st FY	2 nd FY	3 rd FY	4 th FY	5 th FY	Average of Five Years	% of Criteria
1. Lead member							
2. Member							
3. Member							
Total		-	-	-	-		

**Signature with seal of bidder/
Member of Consortium**

SOLVENCY CERTIFICATE

SOLVENCY CERTIFICATE FROM A NATIONALISED OR A SCHEDULED BANK

This is to certify that to the best of our knowledge and information M/S-----, having their registered office at-----, a customer of our bank is a reputed company with a good financial standing and can be treated as solvent to the extent of Rs------. This certificate is issued without any guarantee or risk and responsibility on the Bank or any of its officers.

Signature with date
Senior Bank Manager (Name of Officer issuing the Certificate)
Name, address & Seal of the Bank/Branch

Note: Banker's certificate should be on letter head of the Bank

**SUMMARY FOR CONSORTIUM
(Financial Resources)**

Names of all member s of a consortium
1. Lead Member
2. Member
3. Member

Member	Amount (Rs) – B/F From Form 2D	% of Criteria
1. Lead Member		
2. Member		
3. Member		
Total		

**Signature with seal of bidder/
Member of Consortium**

CURRENT CONTRACT COMMITMENTS
(In the form of Affidavit)

Name of Bidder or Lead Member of a consortium :

Name of Contract and Client	Contract Value (Rs)	% share holding if work being done in Consortium (Rs)	Stipulated date of Completion	Value of outstanding work* (Rs. Schedule)	Estimated completion date
Total Value of Outstanding Contract Commitments					

* The value of outstanding work in hand to be executed during the Contract Period of this project (i.e., 21 months from the last date of submission of bid document).

**Signature with seal of bidder/
Member of Consortium**

Note:

1. Bidders and all the members of the consortium should provide the above information on separate sheets.
2. Details shall be provided for all works which are at various stages of execution, including works for which work orders have been received but work is yet to start, or works approaching completion but for which full completion certificates are yet to be issued, are to be provided.
3. Details as available at the time of issue of this document have to be provided.

**SUMMARY FOR CONSORTIUM
(Current Contract Commitments)**

Names of all member s of a consortium
1. Lead Member
2. Member
3. Member

Member	Value of Outstanding Works (Rs) – B/F from Form 3
1. Lead Member	
2. Member	
3. Member	
Total	

**Signature with seal of bidder/
Member of Consortium**

POWER PROJECTS EXECUTED IN LAST FIVE YEARS
(FROM _____ TO _____)

Name of Bidder / Lead Member or Member of Consortium
--

Sl. No	Name of Work and Name of Client	Contract Value (Rs)	% Share holding if work done in JV (if any)/Consortium	Date of Award	Completion Date/probable completion date	Value of Work done	Copy of Work Certificate at Page No.
Total					Total		

**Signature with seal of bidder/
Member of Consortium**

Note:

- Use a separate sheet for each member in a consortium firm.
1. Provide copies of Completion/ Work Certificates for each project. Payment received in each year, certified by an officer not below the Rank of Executive Engineer or equivalent. Work orders/testimonials may be verified if required for last 5 years.

**PERSONNEL REQUIREMENT FOR
THE PROJECT***

Name of Bidder or Lead Member of Consortium

S. No.	Post	Number of Persons proposed	Proposed		
			Qualification	Total Years of Experience	Years of Relevant Experience
1.	Project Manager/ Resident Engineer				
2.	Structural Engineer				
3.	Construction Engineer (Civil)				
4.	Construction Engineer (Mech.)				
5.	Construction Engineer (Electrical)				
6.	Quality Control Engineer				
7.	Surveyor				
8.	Lab Technician				
9.	Assistant Lab Technician				
10.	Computer Data Operator				
11.	Financial Account Officer				
12.	Labour Officer				
13.	Other Staff 1. Store & Procurement Officer 2. Head Mechanics 3. Mechanics 4. Drivers / Operators 5. Helper				

*** The above Personnel requirement is indicative and can be increased/decreased as per project requirement.**

**Signature with seal of bidder/
Member of Consortium**

1. The C.V. of each personnel mentioned in the above table (Sr. No. 1 to 12) must be provided separately at the time of Agreement.
2. Separate form should be filled by the each member of consortium.

EXPERIENCE CRITERIA

Name of Bidder or Lead Member of Consortium :

(a) Execution of Power Project in a single Contract to the extent of amount specified in the qualification criterion Schedule in the last five financial years

(b) Name of Work: _____

Name of Client: _____

Contract Value: _____

Reference to page no. of Bidders Document: _____

Year	Amount executed (Rs)
Total	

1. Separate forms to be filled by each member of consortium .

**Signature with seal of bidder/
Member of Consortium**

**SUMMARY FOR CONSORTIUM
(EXPERIENCE CRITERIA)**

Names of all member s of a consortium
1. Lead Member
2. Member
3. Member

(a) **Execution of Power Project in a single Contract to the extent of** extent of amount specified in the qualification critrion **in the last five financial years– B/F from Form 8**

Member	Amount executed (Rs.)	% of Criteria
Lead Member		
Member 1		
Member 2		
Total		

Signature with seal of bidder/

**Signature with seal of bidder/
Member of Consortium**

FORM OF BANK GUARANTEE

(For depositing Earnest Money to be on non judicial stamp paper of Rs 100)

To,

.....
.....
.....,

Sir,

WHEREAS, Messersa Company incorporated under the Indian Companies Act having its registered office at a firm registered under the Indian Partnership Act and having its business office at..... Sri.....son of Sri.....resident of Sri.....son of Sri R/o.....Sri.....son of Sri R/o..... and Sri.....son of SriR/o.....partners carrying on business under the firm’s name and style of Messers..... at.....which is registered partnership firm (hereinafter called the ‘Tenderer’) has/have in response to your Tender Notice No..... Datedfor SHP offered to supply and/ or execute the works as contained in the tenderer’s letter No..... dated.....

AND WHEREAS the Tenderer is required to furnish to you a Bank Guarantee for the sum of Rs..... (Rs..... only) as Earnest Money against the Tenderer’s offer as aforesaid.

AND WHEREAS We (Name of the Bank), at request of the Tenderer,agree to give you this guarantee as hereinafter contained.

NOW THEREFORE, in consideration of the promises we, the undersigned, hereby covenant that the aforesaid tender of the tenderer shall remain open for acceptance by you during the period of validity as mentioned in the tender or any extension thereof as you and the tenderer may subsequently agree and if the tenderer shall, for any reason back out, whether expressly or impliedly, from his said tender during the period of its validity or any extension thereof as aforesaid we hereby guarantee to you the payment of the sum of Rs..... (Rs..... only) on demand notwithstanding the existence of any dispute between the Purchaser and the Tenderer in this regard and we hereby further agree as follows :-

- a) That you may without affecting this guarantee grant time or other indulgence to or negotiate further with the tenderer in regard to the conditions contained in the said tender and thereby modify these conditions or add these to any further conditions as may be mutually agreed upon between you and the tenderer.

- b) That the guarantee herein before contained shall not be affected by any change in the constitution of the tenderer.
- c) That this guarantee commences from the date thereof and shall remain in force till the tenderer, if his tender is accepted by you, furnishes the security as required under the said specifications and executes a formal agreement as therein provided or till four months after the period of validity or the extended period of validity, as the case may be, of the tender, whichever is earlier.
- d) That the expressions 'The Tenderer' and 'The Bank' and 'Purchaser' herein used shall, unless such and interpretation is repugnant to the subject or context include their respective successors and assigns.
- e) That any account settled between you and the tenderer shall be conclusive evidence against us of the amount due hereunder and shall not be questioned by us.

Yours faithfully

**Signature of Authored Official of Bank
with seal of Bank**

PROFORMA OF GUARANTEE BOND FOR SECURITY DEPOSIT

(To be used by approved Nationalised/Scheduled Bank on Non-judicial stamp paper of Rs. 100/-)

In consideration of the(hereinafter called “the Purchaser”) having agreed to exempt M/s (hereinafter called “the Contractor”) from the demand, under the terms and condition of Letter of Award dated of the Purchaser in favour of M/s to execute the complete project engineering, planning and monitoring, Civil works, Hydro-mechanical works and E & M works of-----Project, for the Purchaser as provided in the said Contract on Turnkey Execution of Security Deposit for the due fulfillment by the said Contractor(s) of the terms and conditions contained in the said order on production of Bank Guarantee for Rs. (Rupees only), We Bank Ltd. (hereinafter referred as “the Bank”) do hereby undertake to pay to the Purchaser an amount not exceeding Rs. against any loss of or damage caused to or suffered or would be caused to or suffered by the Purchaser by reasons of any branch by the said Contractor(s) of any of the terms of conditions contained in the said order.

2. We, Bank Ltd., do hereby undertake to pay the amounts due and payable under this guarantee without any demur, merely on a demand from the Nigam stating that amount claimed is due by way of loss or damage caused to or would be caused to or suffered by the Purchaser by reason of any branch by the said Contractor of any of the terms or conditions contained in the said order or by reason of the Contractor(s) failure to perform the said order. Any such demand made on the bank shall be conclusive as regard the amount due and payable by the Bank under this guarantee shall be restricted to an amount not exceeding Rs.

3. We, Bank Ltd., further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said order and that it shall continue to be enforceable till all the dues of the Purchaser under or by virtue of the said order have been fully paid and its claims satisfied or discharged or till the Nigam or their only authorized officer certified that the terms and conditions of the said order have been fully and properly carried out by the said Contractor(s) and accordingly discharges the guarantee. Unless a demand or claim under this guarantee is made on us in writing on or before..... we shall be discharged from all liability under this guarantee thereafter.

4. We Bank Ltd. further agree with the Nigam shall have the fullest liberty without affecting in any manner or obligation hereunder to vary any of the terms and conditions of the said order 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 Nigam against the said Contractor(s) and to forbear or enforce any of the terms and conditions relating to the said order and we shall not be relieved from our liability by reason of any such variation, or extension, or extension(s) being granted to the said Contractor(s) or for any forbearance, act or commission on the part of the Nigam or any indulgence by the Nigam 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.
5. We, Bank Ltd. lastly undertake not to revoke the guarantee during its currency except with the previous consent of the Nigam in writing.
6. Notwithstanding anything contained above, the liability of the guarantor hereunder is restricted to the said sum of Rs. and this guarantee shall expire on the day of200 . Unless a claim under the guarantee is filed with the guarantor within six months of such date, all claims shall lapse and the guarantor shall be discharged from the guarantee.

Dated the day of 200 .

For Bank Ltd.

IN WITNESS WHEREOF

For and on behalf of the Guarantor has signed this deed on the day and year first above written.

Witness:

- 1.
- 2.

PROFORMA FOR BANK GUARANTEE AGAINST PERFORMANCE SECURITY

To,

THIS DEED OF GUARANTEE MADE ON THE day of20.... by the (hereinafter called ‘the Guarantor’) of the one PARTIN FAVOUR OF the..... (hereinafter called the Purchaser) of the other part

WHEREAS in accordance with the contract agreement dated theday of.....20.....(hereinafter called ‘the said Contract’) entered in to between the Purchaser and Messers a company within the meaning of the companies act and having its registered office at (hereinafter called ‘the Contractor’) the Contractor agrees to execute the complete project engineering, planning and monitoring, Civil works, Hydro-mechanical works and E & M works offor the Purchaser as provided in the said Contract.

AND WHEREAS, in accordance with the provision of the contract, the Contractor shall furnish to the Purchaser a bank guarantee for the sum specified therein as security for compliance with the Contractor’s performance obligations in accordance with the Contract.

Now This Deed Witnesses as Follows

1. In consideration of the promises the Guarantor hereby undertakes that the Contractor shall duly execute the complete project engineering, planning and monitoring, Civil works, Hydro-mechanical works and E & M works strictly in accordance with the said contract, failing which the Guarantor shall pay to the Purchaser on demand such amount or amounts as the Guarantor may be called upon to pay to the maximum aggregate of Rs.being 10% of the Contract value.
2. The Guarantor shall pay to the Purchaser on demand the sum under clause 1 above without demur and without requiring the Purchaser to invoke any legal remedy that may be available to it to compel the guarantor to pay the same or to compel such performance by the Contractor. Provided that where the Guarantor considers the demand of the Purchaser unjustified, it shall nevertheless pay the same though under protest to the Purchaser and shallot with-hold payment on that account.
3. This guarantee shall come into force the date hereof and shall remain valid for 18 (Eighteen) calendar months from the date of the Commissioning of the last generating unit i.e. up to.....day of If however, the period of the Contract is for any reason extended thereby extending the said date and upon such extension, if the Contractor fails to furnish a fresh or renewed bank guarantee for the extended period, the Guarantor shall pay to the Purchaser the said sum of Rs..... or such lesser sum as the Purchaser may demand.
4. The guarantee herein contained shall not be affected by any change in constitution of the Guarantor or of the Contractor.
5. The Guarantor shall not, during the term of this guarantee or any extension thereof, revoke the same in any manner whatsoever.

6. Any account settled between the Contractor and the Purchaser shall be conclusive evidence against the Guarantor of the amount due and shall not be questioned by the Guarantor.
7. The neglect or forbearance of the Purchaser in enforcement of payment of any moneys the payment whereof is intended to be hereby secured or the giving of time by the Purchaser for the payment thereof shall in no way relieve the Guarantor of its liability under this deed.
8. The Guarantor hereby agrees unequivocally and unconditionally to pay within 48 hours on demand made by Purchaser in that behalf and discharge the liabilities of the Contractor under the said terms and conditions of Contract in case of any act, commission, negligence, default or breach whatsoever on the part of the Contractor and pay such as may be payable by the Contractor to the Purchaser under the said Contract to the extent of the Guarantor's Guarantee namely Rs. (Rupees - -----) only.
9. The Purchaser and the Contractor will be at liberty to carry out any modifications in the said Contract during the time of the said contract and any extension thereof, notice of which modifications to the Guarantor is hereby waived.
10. The expressions 'The Purchaser' and 'The Guarantor' and 'The Contractor' shall unless there be any thing repugnant to the subject or context include their respective successors and assigns.
11. Notwithstanding anything contained above, the liability of the Guarantor hereunder is restricted to the said sum of Rs..... and this guarantee shall expire on the..... day of 20unless a claim under the guarantee is filled with the Guarantor within six months of such date, all claims shall lapse and the Guarantor shall be discharged from the guarantee.
12. This deed shall be deemed to be entered into at Head quarters of Purchase and all disputes and claims, if any, out of or in respect of this Contract are to be settled at or be triable only in any competent court situated at

Signed by
(For and on behalf of Guarantor)

IN WITNESS WHEREOF

For and on behalf of the Guarantor has signed this deed on the day and year first above written.

Witness:
1.

WARRANTY FORM

To,
Managing Director/ Director

Subject: Tenderer’s Warranty against tender no..... dated
.....for the works of construction of
.....

Dear Sir,

.....having invited subject tender for the subject
works to be executed at

We, M/s (herein after referred to as the tenderer) having
its registered office atbeing desirous of
tendering in subject tender and having carefully studied all the tender documents consisting
of Notice inviting Tender, Information and Instructions for Tenderers, General Conditions of
Contract, Special Conditions of Contract. Technical Specifications, Drawings, Times
Schedule, Bill of Quantities, local and site conditions.

We M/shereby submit our tender and under take to keep our tender upto
.....

We hereby further under take that during the said period, we shall not vary / alter or
revoke our tender during the validity period of our tender.

1. We are familiar with and undertake to fulfill earnestly bill of quantities of the tender.
2. We have investigated the site and satisfied our self regarding the character of the work and local conditions that may affect the work of its performance.
3. We are satisfied that the work can be performed and completed as required in the tender documents.
4. We accept all risks directly or indirectly connected with the performance of the contract.
5. We have no collusion with other contractors or with any other person to execute the said works according to the terms and conditions of the said tender.
6. We have not been influenced by any statement or promise of the Employer but only by the tender documents.
7. We are financially solvent.
8. We have experience and competency to perform the contract to the satisfaction of the Employer.
9. The statements submitted by us, are true.
10. We are familiar with all general and special laws, Act, Ordinances, Rules and Regulations of the Municipalities, District, State and Central Government that may affect the work, its performance or personnel employed therein.

Should this tender be accepted, we also agree to abide by and fulfill and comply with all the terms, conditions and provision of the above mentioned tender documents.

Yours faithfully,

Name:

Address:.....

.....

.....

Place:

Dated:

Witnesses:

.....
.....
.....
.....

FORM OF AGREEMENT

This Agreement made this _____ day of _____ between the _____, (Address)----- (hereinafter called the "the employer ") of the One Part and M/s _____ (hereinafter called "The Contractor ") of the Other Part.

Whereas, the employer is desirous that the Contractor should construct for the employer (hereinafter referred to as the "Works")

AND WHEREAS pursuant to the Bid submitted by the Contractor dated _____ (hereinafter referred to as "the Offer"), the employer has by his Letter of Award dated _____ accepted the Offer submitted by the Contractor for the execution and completion of the Works and to remedy any defects therein, on terms and conditions in accordance with the conditions of the Tender Documents in addition to the conditions included hereinafter

AND WHEREAS the Contractor has agreed to undertake, execute and complete the Works and has furnished a Initial Performance Security pursuant to Clause _____ of the GCC

NOW THIS AGREEMENT WITNESSES AS FOLLOWS:

1. In this Agreement Words and Expressions shall have the same meanings as are respectively assigned to them in the Tender Documents.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement: -
 - A. Notice inviting tender
 - B. Tender / Bid
 - C. Letter of award
 - D. Agreement deed
 - E. Schedule of quantities and prices
 - F. Information and instructions to tenderers/ bidders
 - G. Amendments / corrigendum to general and special conditions of contract
 - H. General conditions of contract
 - I. Special conditions of contract
 - J. Technical specifications of contract
 - K. Various schedules
 - L. Drawings
3. The foregoing documents shall be harmoniously construed as complementary and mutually explanatory one with another. In the event of any ambiguity or discrepancy or inconsistency between the provisions of the documents mentioned above, the order of precedence of these documents shall, subject to the Special Conditions of Contract and to the extent of such ambiguity or discrepancy or inconsistency, be as listed above.

4. **Scope of Works**
The contractor shall perform everything required to be performed and shall provide and furnish all the labour, materials, tools and equipment required to perform and complete, in a workman like manner, all the work covered by the contract documents, in strict accordance with the drawings and specifications and conditions of contract, technical provisions (including annexures and list of corrections and amendments to specifications and drawings, conditions of contract and technical provisions), which all are a part of this contract documents and shall do everything required by this contract and other documents constituting a part thereof.

5. In consideration of payments to be made by the employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the employer to perform, execute and complete the Works and remedy any defects therein in conformity in all respects with the provisions of the Contract.

6. The employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying of defects therein the contract price of INR _____ or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

7. It is agreed by the Contractor that the entire Works shall be completed by the Contractor by _____ and that the time for execution and completion of the Works in accordance with the Contract shall be the essence of the Agreement.

IN THE WITNESS WHEREOF THE PARTIES HERETO HAVE CAUSED THIS AGREEMENT TO BE EXECUTED THE DAY AND YEAR FIRST BEFORE WRITTEN.

Signed, Sealed and delivered by _____ signed, sealed and delivered by

Name	Employer
---------------------------------	-------------------------------------

For and on behalf of the contractor Witness:	For and on behalf of the Employer Witness:
---	---

(1) Name: Address:.....	(1) Name: Address:.....
--	--

(2) Name: Address:.....	(2) Name: Address:.....
--	--

VARIOUS STATEMENTS
Statement No. S 1
PLAIN/REINFORCED CEMENT CONCRETE

Name of bidder:.....

Quantity in Cum

<u>NAME OF WORK</u>	Year-----		Year -----		Year -----		Year -----		Year -----		Total
	Quantity Executed	Certificate on Page No.	Quantity Executed	Certificate on Page No.	Quantity Executed	Certificate on Page No.	Quantity Executed	Certificate on Page No.	Quantity Executed	Certificate on Page No.	
1	2	3	4	5	6	7	8	9	10	11	12
Total (Qty in cum)											
Maximum in any one year											

Note: 1.Data to be supported by Clients Certificate by an officer not below the rank of Executive Engineer or equivalent officer.

2.Separate statement should be filled in by each member of Consortium and a consolidated statement for the Consortium .

Statement No. S 2

TECHNICAL CAPABILITY (DETAILS)

Name of bidder:

Bidder (s) should indicate(identify maximum 3 (three) numbers] each of completed and on – going project and furnish details indicated. In each case the bid is submitted by a consortium of companies, projects of any / all members of consortium may be considered.

Sl No	Individual Parameters	Name of Company	Name of Completed Project With Installed Capacity	Name of Company	Name of on-Going Project
1	Brief Details of Project				
2	If the applicant has done the following Activities in Hydro Power Project with installed capacity of kW and above				
A	Design and Engineering of				
	i) Power Project diversion, intake, water conductor, forebay (civil work)				
	ii)Power house(civil work)				
	iii) Draft Tube and hydraulic gates				
	iv) Electro-mechanical work				
	iv) 11kVsub-station				
B	Procurement of steel cement, equipment and generating equipment				
C	Civil Construction and Hydro Mechanical Work				
	i) Power house (civil work)				
	ii) Draft Tube and hydraulic gates				
D	ELECTRICAL				
	i) Erection testing and commissioning of turbines generator control panels power transformers and associated electrical and				

	mechanical equipment etc.				
	ii) Erection testing and commissioning of kV substation				
	iii)...kV Transmission line				
E	OVERALL PROJECT COORDINATION / PROJECT MANAGEMENT (furnish details)				

**Signature with seal of bidder/
member of Consortium**

Statement No. S 3

**PROJECT EXECUTION EXPERIENCE
(PROJECTS UNDER EXECUTION)**

PROJECT DATA SHEET (Separate sheets shall be given for each of the projects)

PROJECT NAME : _____
 LOCATION (City and Country) : _____
 OVERALL CAPACITY (MW) : _____
 TYPE (Hydro/ Thermal/ Others) : _____
 CAPITAL COST : _____

S. NO	Particulars	Name of the company	Remarks
1	WHICH FIRMS PLAYED THESE ROLES ON THE PROJECT INCLUDING BIDDER,S OWN: a. Lead developer b. Consultant c. Contractor (Mention Component) d. Design & Engineering e. Hydro-mechanical contractor f. Equipment Supplier g. Erection & Testing h. O&M Contractor		
2	FINANCIAL EXPERINCE: a. Bid Security provided b. Performance Security provided c. Construction security provided		
3	PERFORMANCE a) Date of Commencement of work b) Original scheduled date of Commissioning of the project c) Expected date of Commissioning of the project as of now d) Scheduled Construction Period (month) (i) Already completed (actual) (ii) Reasons of delay (if any)		
4	TOTAL VALUE OF CONTRACT		
5	NAME, ADDRESS AND CONTACT NUMBERS OF OWNER (for reference)		
Please enclose copy of letter of Award / letter of indent and indicate their reference herein			

**Signature with seal of bidder/
member of Consortium**

Statement No. S 4

**PROJECT EXECUTION EXPERIENCE
(COMPLETED PROJECTS)**

PROJECT DATA SHEET (Separate sheets shall be given for each of the projects)

PROJECT NAME : _____
 LOCATION (City and Country) : _____
 OVERALL CAPACITY (MW) : _____
 TYPE (Hydro/ Thermal/ Others) : _____
 CAPITAL COST : _____

S. NO	Particulars	Name of the company	Remarks
1	WHICH FIRMS PLAYED THESE ROLES ON THE PROJECT INCLUDING BIDDER,S OWN: i. Lead developer j. Consultant k. Contractor (Mention Component) l. Design & Engineering m. Hydro-mechanical contractor n. Equipment Supplier o. Erection & Testing p. O&M Contractor		
2	FINANCIAL EXPERINCE: d. Bid Security provided e. Performance Security provided f. Construction security provided		
3	PERFORMANCE e) Date of Commencement of work f) Original scheduled date of Commissioning of the project g) Expected date of Commissioning of the project as of now h) Scheduled Construction Period (month) (i) Already completed (actual) (ii) Reasons of delay (if any)		
4	TOTAL VALUE OF CONTRACT		
5	NAME, ADDRESS AND CONTACT NUMBERS OF OWNER (for reference)		

Please enclose copy of letter of Award / letter of indent and completion certificate and indicate their reference there in

**Signature with seal of bidder/
member of Consortium**

Designation-----

Company Seal

TECHNICAL SCHEDULES
Technical Schedule 1

Departure from technical specifications

All deviations from General requirements, Contract conditions, Technical supply conditions and Equipment Specifications given in Tender Documents shall be filled in by the BIDDER in this schedule.

Section	Specification No.	Clause No. / Requirement	Deviation Offered

The bidder hereby certifies that the above mentioned are the only deviations and all other clauses of the specification are acceptable.

Signature _____
Designation _____
Company _____
Date _____

Company Seal

Technical Schedule 2

List of manufacturers, places of manufacture and major sub-contractors

S. No	Description Testing	Manufacturer Place of Manufacture and
1.0	Turbine, Governor and Inlet Valves	
2.0	Generators, Bearings and Excitation System	
3.0	Unit Controls, Protection, Metering and Annunciation Panels	
3.1	Protection relays	
3.2	PLC Eqpt.	
4.0	Switchyard and Associated Equipment	
5.0	Auxiliaries	
5.1	EOT Crane	
5.2	DG Set	
6.0	Sub-contractors Name here all Sub-Contractors Who have not been named as Manufacturers above. Include Site works Sub-Contractors.	

VARIOUS SCHEDULES FOR PRICE BID

SCHEDULE 1

Price Bid for Turnkey Execution of SHP – kW

Total Contract Price

S. No.	Description of Works	Price (Indian Rupees)
	CONTRACT PRICE	
1.	Planning, Design & Engineering of all the project Components (Sub Total 1)	
2.	Complete Civil Works (Sub Total 2)	
3.	Supply, Erection testing and commissioning of Hydro-mechanical Works (Sub Total 3)	
4.	Supply, Erection and Commissioning of Electro-mechanical Works (Sub Total 4)	
	Total Contract Price	

Signature of Bidder.....

Name.....

Business address.....

Place:

Date:

SCHEDULE 2

1. Price Break-up for various Services under Planning, Design & Engineering

S. No.	Description of Works / Components	Price (Indian Rupees)
1.1	Carrying out various model studies/ tests/ investigations and submission of report (break up to be provided in separate proforma)	
1.2	Submission of overall planning for execution with PERT chart report	
1.3	Submission of design memos and detailed designs	
1.4	Preparation and submission of Detailed Engineering Design and Construction Drawings for (i) Civil Works (ii) Hydro-mechanical Works (iii) Electro-mechanical Works	
1.5	Completion Report along with as built drawings	
	Sub-Total 1	

Note: The services listed above are only indicative. The bidder may add/modify to give a complete list of services for Planning, Design & engineering Works and further break-up of items.

SCHEDULE 3

2. Price Break-up for main Civil Works (Summary Price)

S. No.	Description of Works / Components	Price (Indian Rupees)
2.1	Construction of Intake, Forebay, Head Race channel/ tunnel, Spillway & Spillway channel (Sub Total – 2.1)	
2.2	Penstock, gates and valves (Sub Total – 2.2)	
2.3	Power House (Sub Total 2.3)	
2.4	Switchyard Works (Sub Total – 2.4)	
2.5	Tail Race Channel (Sub Total – 2.5)	
	Sub-Total – 2	

Note: These formats shall be read in conjunction with corresponding Technical Specifications.

Signature of Bidder.....

Name.....

Business address.....

Place:

Date:

SCHEDULE 4

2.1 CIVIL WORKS OF DIVERSION /STORAGE WORKS, INTAKE, INLET CHANNEL DESILTING TANK, HEAD RACE CHANNEL/PIPES/TUNNELS, FOREBAY, SPILLWAY AND SPILLWAY CHANNEL

S. No.	Items of Works as per Owners Preliminary Design	Units	Qty.	Unit Price (Rs.)	
1.	Open Excavation	Cum.			
2.	Back Filling	Cum.			
3.	Plain cement Concrete	Cum.			
	(i) M-10/A-40				
	(ii) M-15/A-40				
4.	Reinforced Cement Concrete	Cum.			
	(i) M-20/A-40				
	(ii) M-20 / A-20				
	(iii) M-25 / A-20				
5.	Steel Reinforcement	M.T.			
6.	Coursed Rubble Stone Masonry	Cum.			
7.	Random Rubble Stone Masonry	Cum.			
8.	Cement Plaster on Stone Masonry	Sq.m.			
9.	Boulder Pitching	Cum.			
10.	Providing and Placing A.C. pipes in weep holes in abutments, wing walls	R.M.			
11.	All other items which are not covered in the above items but are necessary for completion of the component of the scheme	L.S.			
12.	Miscellaneous Items (Landscaping of the area, including plantation, development of lawns, flower beds, parks, fountains, lighting arrangement in area, Decorative lamp posts, railings, parapets, fencing, gates, cabin and control room, benches, umbrellas for making attractive picnic spot, drainage works, providing water, supply arrangement for raw water as well as for drinking water, supply and fixing G.P. sheet and copper sheet seals, furnishing & placing, PVC/ Rubber water stopes, PVC/rubber joint strips, constructing Asphalt seals, Joint fillers etc.)	L.S.			
	Sub Total				

Note: The bidder is to provide the quantities and rates of the items of work based on his design. The items listed above are only for guidance. The bid is on lumpsum basis subject to the following.

On completion of works, the value of work will be calculated by multiplying as executed quantities with the quoted rates. In case the value of work so calculated works out to be less than the total price quoted by the bidder, the bidder will be paid the amount so calculated and if the amount so calculated works out to be more than the total price quoted by the contractor, the contractor will be entitled only for his quoted price. The intermediate payments shall be made on the basis of quantities and their rates or as assessed by the Engineer-in-charge.

These formats shall be read in conjunction with corresponding technical specifications of bid document and addendum to the technical specification, if any.

Signature of Bidder.....

Name.....

Business address.....

Place:

Date:

SCHEDULE 5

2.2 Civil Works of Power House

S. No.	Items of Works as per Owners Preliminary Design	Units	Qty.	Unit Price (Rs.)	Amount (Rs.)
1.	Open Excavation	Cum.			
2.	Back filling	Cum.			
3.	Plain Cement concrete	Cum.			
	(i) M-10/A-40				
	(ii) M-15/A-40				
4.	Reinforced cement concrete	Cum.			
	(i) M-20/A-40				
	(ii) M-20/A-20				
	(iii) M-25/A-20				
5.	Brick work	Cum.			
6.	Cement Plaster	Sq.m.			
7.	Providing and fixing steel trusses, purlines rafts etc.	M.T.			
8.	Providing and fixing GCI sheets	Sq.m.			
9.	Providing and fixing GP sheets ridge	Sq.m.			
10.	Providing and fixing GP sheet gutter	Sq.m.			
11.	Constructing bonded concrete floor 40 mm thick in machine hall and other locations	Sq.m.			
12.	Furnishing and fixing glazed tile in floors and on walls in control room and elsewhere as directed by Engineer-in-charge	Sq.m.			
13.	Furnishing and laying Kota stone tile in service bay and stairs and other locations	Sq.m.			
14.	Furnishing and laying acid resistant tile floor in battery room and in any other location	Sq.m.			
15.	(i) Furnishing and installing Aluminium doors, windows partition walls without glasses and fixed in wall openings (ii) Supply fixing 5.5 mm glasses in aluminium doors, windows, partition walls and fixed glasses in wall openings	Kg Sq.m.			
16.	Furnishing and installing suspended false ceiling with Aluminium frame and white acoustical tiles	Sq.m.			
17.	Furnishing and installing rolling steel doors including operating device	Sq.m.			
18.	Furnishing and fixing steel plates covers	M.T.			

S. No.	Items of Works as per Owners Preliminary Design	Units	Qty.	Unit Price (Rs.)	Amount (Rs.)
	on cable trenches, racks in cable tunnel, and grating covers on opening etc. embedment of the fixtures etc. for H.M. & E.M. components and steel railing etc.				
19.	Other items which are not covered in the above items but are necessary for completing the component of the scheme	L.S.			
20.	Miscellaneous items (Water stops, metal seals, Asphalt seals, Joint fillers, railings, parapets, water supply and sanitary works, drainage, inside and around power house chain link fabric Fencing around P.H. area and painting where ever required, Approach road, Architect affects, landscaping, development of parks down pipes for drainage rain water etc.)	L.S.			
	Sub Total				

Note: The bidder is to provide the quantities and rates of the items of work based on his design. The items listed above are only for guidance. The bid is on lump sum basis subject to the following.

On completion of works, the value of work will be calculated by multiplying as executed quantities with the quoted rates. In case the value of work so calculated works out to be less than the total price quoted by the bidder, the bidder will be paid the amount so calculated and if the amount so calculated works out to be more than the total price quoted by the contractor, the contractor will be entitled only for his quoted price. The intermediate payments shall be made on the basis of quantities and their rates or as assessed by the Engineer-in-charge.

These formats shall be read in conjunction with corresponding technical specifications of bid document and addendum to the technical specification, if any.

Signature of Bidder.....

Name.....

Business address.....

Place:

Date:

SCHEDULE 6

2.3 Civil Works of Penstocks, Gates, Valve, Air vent Pipe, filling pipe and its valve

S. No.	Items of Works as per Owners Preliminary Design	Units	Qty.	Unit Price (Rs.)	
1.	Open excavation	Cum.			
2.	Back filling	Cum.			
3.	Plain cement concrete	Cum.			
	(i) M-10/A-40				
	(ii) M-15/A-40				
4.	Reinforced cement concrete	Cum.			
	(i) M-20/A-40				
	(ii) M-20/A-20				
5.	Steel Reinforcement	M.T.			
6.	Other items which are not covered in the above items but are necessary for completion of the components of the scheme	L.S.			
	Sub Total				

Note: The bidder is to provide the quantities and rates of the items of work based on his design. The items listed above are only for guidance. The bid is on lump sum basis subject to the following.

On completion of works, the value of work will be calculated by multiplying as executed quantities with the quoted rates. In case the value of work so calculated works out to be less than the total price quoted by the bidder, the bidder will be paid the amount so calculated and if the amount so calculated works out to be more than the total price quoted by the contractor, the contractor will be entitled only for his quoted price. The intermediate payments shall be made on the basis of quantities and their rates or as assessed by the Engineer-in-charge.

These formats shall be read in conjunction with corresponding technical specifications of bid document and addendum to the technical specification, if any.

Signature of Bidder.....

Name.....

Business address.....

Place:

Date:

SCHEDULE 7

2.4 Civil Works of Switchyard

S. No.	Items of Works as per Owners Preliminary Design	Units	Qty.	Unit Price (Rs.)	
1.	Open Excavation	Cum.			
2.	Back Filling	Cum.			
3.	Plain Cement Concrete	Cum.			
	(i) M-10/A-40				
	(ii) M-15/A-40				
4.	Reinforced cement concrete	Cum.			
	(i) M-20/A-40				
	(ii) M-20/A-20				
5.	Steel reinforcement	M.T.			
6.	Embedment of fixtures etc. for E.M. components	kg.			
7.	Brick work 1:4 cement mortar in trenches and drains	Cum.			
8.	Cement plaster 1:4 cement mortar	Sq.m.			
9.	Chain link fabric fencing around switchyard	Sq.m.			
10.	Miscellaneous items like flooring, laying stone ballast in the area, providing main entrance gate, steel racks, trenches, steel plate covers, approach road, Drainage works, fire, fighting arrangements etc.	L.S.			
	Sub Total				

Note: The bidder is to provide the quantities and rates of the items of work based on his design. The items listed above are only for guidance. The bid is on lump sum basis subject to the following.

On completion of works, the value of work will be calculated by multiplying as executed quantities with the quoted rates. In case the value of work so calculated works out to be less than the total price quoted by the bidder, the bidder will be paid the amount so calculated and if the amount so calculated works out to be more than the total price quoted by the contractor, the contractor will be entitled only for his quoted price. The intermediate payments shall be made on the basis of quantities and their rates or as assessed by the Engineer-in-charge.

These formats shall be read in conjunction with corresponding technical specifications of bid document and addendum to the technical specification, if any.

Signature of Bidder.....

Name.....

Business address.....

Place:

Date:

SCHEDULE 8

2.5 Civil Works of Tail Race Channel

S. No.	Items of Works as per Owners Preliminary Design	Units	Qty.	Unit Price (Rs.)	
1.	Open excavation	Cum.			
2.	Back filling	Cum.			
3.	Plain cement concrete	Cum.			
	(i) M-10/A-40				
	(ii) M-15/A-40				
4.	Reinforced cement concrete	Cum.			
	(i) M-20/A-40				
	(ii) M-20/A-20				
5.	Steel Reinforcement	M.T.			
6.	Other Items which are not covered in above items but are necessary for completion of the component of the scheme	L.S.			
7.	Miscellaneous items like landscaping and plantation, lighting arrangements with lamp ports etc, railing and approach roads, supply and fixing metal seals, PVC / Rubber Water stops Asphalt seals, Joints fillers etc.	L.S.			
	Sub Total				

Note: The bidder is to provide the quantities and rates of the items of work based on his design. The items listed above are only for guidance. The bid is on lump sum basis subject to the following.

On completion of works, the value of work will be calculated by multiplying as executed quantities with the quoted rates. In case the value of work so calculated works out to be less than the total price quoted by the bidder, the bidder will be paid the amount so calculated and if the amount so calculated works out to be more than the total price quoted by the contractor, the contractor will be entitled only for his quoted price. The intermediate payments shall be made on the basis of quantities and their rates or as assessed by the Engineer-in-charge.

These formats shall be read in conjunction with corresponding technical specifications of bid document and addendum to the technical specification, if any.

Signature of Bidder.....

Name.....

Business address.....

Place:

Date:

SCHEDULE 9

3. Price Break up of Supply, Erection and Commissioning of Hydro-mechanical Equipment at Site

S. No.	Items of Works as per Owners Preliminary Design	Units	Qty.	Unit Price (Rs.)	
1.	(a) Supply of Trash Rack and Embedded Parts at Intake	M.T.			
	(b) Storage, handling, erection, testing and commissioning	M.T.			
2.	(a) Supply of Intake gate(s) and embedded parts	M.T.			
	(b) Supply of hoisting arrangement of Intake gate(s) complete as per specifications	No.			
	(c) Storage, handling, Erection testing and commissioning of Intake Gate(s)	M.T.			
	(d) Storage, handling, erection, testing and commissioning of hoist arrangements	No.			
3.	(a) Supply of main penstock dia. and Air Vent Pipe of dia	M.T.			
	(b) Storage, handling, erection, Testing and Commissioning	M.T.			
4.	(a) Supply of Draft Tube Gate(s) and Embedded parts	M.T.			
	(b) Supply of hoisting arrangements with moving gantry of suitable capacity with provisions of lifting beam	No.			
	(c) Storage, handling, Erection, Testing and Commissioning of draft tube gate(s)	M.T.			
	(d) Storage, handling, erection, testing and commissioning of hoisting arrangements	No.			
	Sub Total				

Note:(i) The bidder is to provide the quantities and rates of the items of work based on his design. The items listed above are only for guidance. The bid is on lumpsum basis subject to the following.

On completion of works, the value of work will be calculated by multiplying as executed quantities with the quoted rates. In case the value of work so calculated works out to be less than the total price quoted by the bidder, the bidder will be paid the amount so calculated and if the amount so calculated works out to be more than the total price quoted by the contractor, the contractor will be entitled only for his quoted price. The intermediate payments shall be made on the basis of quantities and their rates or as assessed by the Engineer-in-charge.

These formats shall be read in conjunction with corresponding technical specifications of bid document and addendum to the technical specification, if any.

(ii) Price for spare parts (mandatory & Additional) for smooth operation for five years for all the equipment mentioned above in the respective packages are deemed to be included in the above price.

Signature of Bidder.....

Name.....

Business address.....

Place:

Date:

SCHEDULE 10

**4. Price Break-Up for Main Electro Mechanical Works
(Summary Price)**

S. No.	Description of Works/components	Price (Rupees)
4.1	Price for Supply of All Electro Mechanical Equipments. (Sub Total 4.1)	
4.2	Price for Mandatory Spares. (sub total – 4.2.)	
4.3	Price for Erection , Testing ,Commissioning of all equipments. (sub total – 4.3)	
	SUB TOTAL – 4	

NOTE:

- In case of discrepancy between unit price and total price, the unit price shall prevail
- Description of items in price schedule is only indicative. Price shall be given for complete scope as described in Technical Specifications.
- Price for erection & Commissioning shall include price for all activities after receipt of materials at site stores including unloading, receipt and storage etc.
- Any Item which has not been mentioned above but is required for successful execution of the project, the same shall be responsibility of the contractor

Signature of Bidder.....

Name

Business address.....

Place:

Date:

SCHEDULE 11

4.1 Total F.O.R. Site Price for Supply of Main Equipment and Materials:

S. No.	Description of works (As per Owner's Preliminary Design)	Qty	F.O.R. Site Price in Rs.	
			Unit Price	Total Price
1	Turbine, Governing System, Inlet valve & Associated Equipment a). Turbine complete with accessories, gauge panel, safety & measuring devices, etc. b) Governing system with Hydraulic System c) Inlet Valve with Hydraulic System d) Special tools, handling & testing devices	sets sets sets sets		
2	Generator, Excitation System & Associated Equipment a) Synchronous Generator complete with accessories, safety devices and instrumentation b) Excitation system,	sets sets		
3	Transformers a) Generator Transformer.....V/.....kV,kVA b) Station Auxiliary Transformer	No No.		
4	Unit Control, Protection, Metering and Annunciation Panels a) Control, protection, metering and annunciation Panels	sets		
5	415 V Switch Gear Panels Circuit Breakers PTs CTs Neutral grounding and line terminal equipment Battery and Battery charger	Sets Nos. Nos Nos Sets Set		

6	Outdoor Switchyard Eqpt. & Transmission Line <ul style="list-style-type: none"> • ... kV Vacuum Circuit Breaker with CT and PT • Line Isolator • Lightning Arrestor • Double Pole Structure • Transmission Line Poles • Conductor for Transmission Line • Insulators & Hardware • Associated eqpt. At remote end 	No. No. set set Nos km Lot Lot		
7	PH Auxiliaries E.O.T. crane Compressor Unit (If required) Air Conditioners & exhaust fans Fire fighting system Power & Control cables DG Set Lighting System Earthmat, earthing & Lightning Protection	1 Set 1 set 1 set Lot Lot 1 set Lot Lot		
	SUB TOTAL 4.1 (In Words)			

NOTE :

- In case of discrepancy between unit price and total price, the unit price shall prevail
- Description of items in price schedule is only indicative. Price shall be given for complete scope as described in Technical Specifications.
- Any Item which has not been mentioned above but is required for successful execution of the project, the same shall be responsibility of the contractor

Signature of Bidder.....

Name.....

Business address.....

Place:

Date:

SCHEDULE 12

4.2 Total F.O.R. Site Price of Mandatory Spares:

S. No.	Description of Spares	Quantity	F.O.R. Site Price in Rs.	
			Unit Price	Total Price
	SUB TOTAL 4.2 (In Words)			

NOTE :

- In case of discrepancy between unit price and total price, the unit price shall prevail
- Price shall be given for complete scope as described in Technical Specifications.
- Price are including unloading, receipt and storage etc.
- Any Item which has not been mentioned above but is required for successful execution of the project, the same shall be responsibility of the contractor

Signature of Bidder.....

Name.....

Business address.....

Place:

Date:

4.3 Total Price For Erection , Testing and Commissioning

S. No.	Description of Item	Qty		
			Unit Price	Total Price
1	Turbine, Governing System, Inlet Valve and Associated Equipments etc for proper completion of works.	1 Job		
2	Generator and Associated Equipments etc for proper completion of works.	1 Job		
3	Switchyard Items including Fencing, Main Structures, ACSR Conductor, bus bar, PG clamps, Post & Disc insulators, Cable Glands, generator Transformer and Station Auxiliary Transformer etc required for proper completion of works.	1 Job		
4	Unit Control, Protection, Metering & Annunciation Panels including cable glands, lugs terminal blocks, cable laying etc required for proper completion of works ,			
5	415 V Switch Gear Panels etc required for proper completion of works ,	1 job		
6	Cable Racks, Ladders Railings etc required for proper completion of works ,	1 job		
7	Battery System Complete	1 job		
8	Earthing System Complete including making connections with necessary equipments in Switch Yard and Power House etc required for proper completion of works ,	1 job		
9	EOT Crane and Power House Auxiliaries etc required for proper completion of works	1 job		
10	Fire Fighting Equipments	1 job		
	SUB TOTAL 4.3 (In Words)			

NOTE:

- In case of discrepancy between unit price and total price, the unit price shall prevail
- Description of items in price schedule is only indicative. Price shall be given for complete scope as described in Technical Specifications.
- Price for erection & Commissioning shall include price for all activities after receipt of materials at site stores including unloading, receipt and storage etc.
- Any Item which has not been mentioned above but is required for successful execution of the project, the same shall be responsibility of the contractor

Signature of Bidder.....

Name.....

Business address.....

Place:

Date:

SCHEDULE 14

4.4 Price For Recommended Spares (optional) :

S. No.	Description of Spares	Quantity	F.O.R. Site Price in Rs.	
			Unit Price	Total Price
	Recommended Spares			
	SUB TOTAL 4.4 (In Words)			

Rs. (In Words)

Signature of Bidder.....

Name.....

Business address.....

Place:

Date:

NOTE :

- In case of discrepancy between unit price and total price, the unit price shall prevail
- Description of items in price schedule is only indicative. Price shall be given for complete scope as described in Technical Specifications.
- Any Item which has not been mentioned above but is required for successful execution of the project, the same shall be responsibility of the contractor.

SCHEDULE 15

4.2.1 PRICE FOR MANDATORY SPARE PARTS FOR E&M WORKS

Bidder shall include in this Schedule, prices for the mandatory spare parts as listed. This list of spares is only indicative. The Bidder shall recommend additional spares for 5 years satisfactory operation and quote for all items other than mandatory spares separately.

The Purchaser shall not be bound to purchase all or any of the spares set out, but the Contractor shall supply this whole or any item at the prices stated below. The Contractor shall be prepared to supply any number of the spares at the prices stated.

S. No.	Item	Quantity	Unit Price (F.O.R Site) Rs.	Total Price (F.O.R.) site Rs.
A	TURBINE			
1	Runner Rotating Labyrinths	set		
2	Wicket gates	nos		
3	Guide bearing shell (for each bearing)	1		
4	Wicket gate journal bushes	each type		
5	Piston rings for servomotor cylinder	1 set		
6	Shaft seal wearing rings	1 set		
7	Packing and sealing, all type and sizes	1 set		
	Governing System			
8	Speed pick up	1 no		
9	Actuator Transducer / Proportional valve	1 No		
10	Emergency solenoid valve	1 No		
11	Power supply module	1 No.		
12	Oil filter element	2 sets		
13	Indicating Instruments	1-each type		
14	Springs (each type)	2-each		
15	Limit switches (each type)	2 - each		
16	Gaskets, rubber seals, cords etc	1 set		
17	Return motion Gear / LVDT	1 No		
	Oil Hydraulic System			
18	Oil Pump-Motor set	1 set		
19	Unloader Valve	1 no		
20	Safety Valve	1 no		
21	Springs (all types)	1 set		
22	Seals / packing (all types)	1 set		
23	Solenoid valve (if used)	1 no		
	Instrument and Safety Devices			
24	Resistance temperature detector	nos.		

S. No.	Item	Quantity	Unit Price (F.O.R Site) Rs.	Total Price (F.O.R.) site Rs.
25	Dial type thermo-signaling device	nos		
26	Level / float switches (each type)	set		
27	Pressure gauges (each type)	2 – each		
28	Flow relay (each type)	1 – each		
	Inlet Valve			
29	Seal with fasteners	sets		
30	Bushes for Journals	set		
31	Seal of journals	set		
32	Piston rings for servomotor cylinder	set		
33	Limit Switches	2-each type		
34	Solenoid Valve	1-each type		
	Sub Total (a)			
B	GENERATOR			
1.	Complete set of coils for a stator winding to span one coil” pitch, including end connections slot insulation, tape and wedges.	1 set		
2.	Complete field pole and coil assembly including the material’s for installation	1 set		
3.	Wearing surfaces for thrust bearing and sleeve bearing.	1 set		
4	Complete set of split field collector rings complete with insulation.	1 set		
5.	Sets of generator brake pads	...sets		
6.	Recommended spares of excitation systems	1 set		
	Sub Total (b)			
C	GENERATOR TRANSFORMER			
1.	HV Line end bushing complete	1 no		
2.	LV line end bushing	1 no		
3.	HV neutral end bushing			
4.	Complete set of gasket			
5	Buchholz Relay	1 No.		
	Sub Total (c)			
D	Unit control protection and metering panel			
1.	Protection relay of each type	1 Nos		
2.	Auxiliary relays of each type	2 Nos		
3.	Flag relays of each type	2 Nos		
4.	Lamps of each type	10 Nos		
5	Each type of switch offered	3 Nos		
6	Meter of each type	1 Each		
	Sub Total (d)			
E	415 V Switch Gear Panels			
1	Air circuit Breaker, each type	1 No		

S. No.	Item	Quantity	Unit Price (F.O.R Site) Rs.	Total Price (F.O.R.) site Rs.
2	PT each type	1 No		
3	CT each type	1 No		
	Sub Total (e)			
F kV Circuit Breaker			
1.	Closing Coils	1 No		
2.	Tripping Coils	1 Nos		
3.	Fixed arcing contacts	1 set		
4.	Moving arcing contacts	1 set		
	Sub Total (f)			
G	PH Auxiliaries			
	E.O.T. Crane			
1	Recommended Spares	2 sets		
	Sub Total (g)			
	TOTAL			

Signature of Bidder.....

Name.....

Business address.....

Place:

Date:

Note:

- In case of discrepancy between unit price and total price, the unit price shall prevail
- Description of items in price schedule is only indicative. Price shall be given for components for same function

SCHEDULE 16

4.4.1 PRICES AND QUANTITIES FOR RECOMMENDED ADDITIONAL SPARES FOR E&M WORKS

Bidders shall include in the Schedule of prices for the spare parts recommended by the manufacturers which are additional to those listed in Schedule for mandatory spares.

The Owner shall not be bound to purchase all or any of the spares listed, but the Contractor shall supply this whole or any item at the prices stated below. The Contractor shall be prepared to supply any number of the spares at the prices stated unless otherwise stated. Itemized costs of special tools shall be provided.

TURBINE, GOVERNOR & INLET VALVE

S.No.	Item	Description	Qty	Unit Price	Total Price

GENERATOR

S.No.	Item	Description	Qty	Unit Price	Total Price

TRANSFORMER

S.No.	Item	Description	Qty	Unit Price	Total Price

UNIT CONTROL PROTECTION AND METERING

S.No.	Item	Description	Qty	Unit Price	Total Price

415 V SWITCHGEAR PANELS

S.No.	Item	Description	Qty	Unit Price	Total Price

.... kV SWITCHYARD EQPT.

S.No.	Item	Description	Qty	Unit Price	Total Price

AUXILIARY EQUIPMENT

S.No.	Item	Description	Qty	Unit Price	Total Price

Place:
Date :

Signature of Bidder.....
Name
Business address.....