***Office of the Superintending Engineer, Damodar Irrigation Circle,***

***I & WD, Burdawan-713101***

**Telephones: 0342-2540165**

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**NATIONAL COMPETITIVE BIDDING**

|  |  |  |
| --- | --- | --- |
| “Supply, installation, testing, commissioning, training and maintenance of Automatic Operation of Durgapur Barrage along with collection, storage and dissemination of data” | | |
| **TENDER REFERENCE** | **:** | ***WBIW/SE/DIC /NIT-01(e)/2016-17*** |
| **DATE OF TENDER DOCUMENTS DOWNLOAD** | **:** | 01.09.2016 |
| **LAST DATE OF DOWNLOADING THE TENDER DOCUMENTS** | **:** | 22.09.2016 upto 15.30 hrs |
| **LAST DATE AND TIME FOR BID SUBMISSION** | **:** | 22.09.2016 upto 15.30 hrs |
| **TIME AND DATE OF OPENING OF BIDS** | **:** | 28.09.2016 at 15.30 hrs |
| **PLACE OF OPENING OF BIDS** | **:** | Office of the Superintending Engineer, DAMODAR IRRIGATION CIRCLE,I&WD,  Kanainutsal, Burdwan-713101. |
| **ADDRESS FOR COMMUNICATION** | **:** | Office of the Superintending Engineer, Damodar Irrigation Circle, I &WD,  Kanainutsal Campus, Burdawan,713101.  Fax: 0342-2540165  Email: [sediciwdwb@gmail.com](mailto:gwcchn@gmail.com) |

**SECTION I:**

**INVITATION FOR BIDS (IFB)**

**NATIONAL COMPETITIVE BIDDING FOR THE**

“Supply, installation, testing, commissioning, training and maintenance of Automatic Barrage Operation of Durgapur Barrage”

**SECTION I. INVITATION FOR BIDS (IFB)**

Date : 01-09-2016

Loan No. : WORLD BANK Loan

IFB No. : *WBIW/SE/DIC /NIT-01(e)/2016-17*

1. The Government of India has received a loan from the World bank and in various currencies towards the cost of National *Hydrology Project* and it is intended that part of the proceeds of this Loan will be applied to eligible payments under the Contracts for which this Invitation for Bids is issued.
2. The Superintending Engineer, Damodar Irrigation Circle,I&WD Kanainutsal Campus, Burdawan-713101 (Purchaser) now invites Bids from eligible Bidders for **the “Supply, installation, testing, commissioning, training and maintenance of Automatic Gate Operation of Durgapur Barrage”**
3. Interested eligible Bidders may obtain further information from the office of *the Superintending Engineer,* Damodar Irrigation Circle, I&WD Kanainutsal Campus, Burdawan-713101*.*
4. A complete Bid Documents may be downloaded by any interested eligible bidder from the official website for e-procurement of the Govt. of West Bengal viz. *https://wbtenders.gov.in.*
5. The provisions in the Instructions to Bidders and in the General Conditions of contract are based on the provisions of the World Bank Standard Bidding Document - Procurement of Goods.
6. The Bid Document may be obtained from *the official website* [***https://wbtenders.gov.in***](https://wbtenders.gov.in)

**CRITICAL DATES:**

|  |  |  |
| --- | --- | --- |
| **SL NO** | **DESCRIPTION** | **DATE & TIME** |
| **1** | **Date of Publishing of Tender Online** | **01.09.2016** |
| **2** | **Date of Downloading the Tender Documents** | **01.09.2016 Onwards** |
| **3** | **Date of Pre Bid Meeting: Damodar Irrigation Circle, I&WD Kanainutsal Campus, Burdawan-713101.** | **09-09-2016 at 11.00 hrs.** |
| **4** | **Document Download End Date** | **22.09.2016 up to 15.30 hrs** |
| **5** | **Bid Submission Start Date online** | **11.09.2016 from 10.00 hrs.** |
| **6** | **Bid Submission End Date online** | **22.09.2016 up to 15.30 hrs** |
| **7** | **Technical Bid Opening Date** | **28.09.2016 at 15.30 hrs** |
| **8** | **Technical Evaluation Summary Upload Date** | **To be Notified Later** |
| **9** | **Financial Bid Opening Date** | **To be Notified Later** |

8. All Bids must be accompanied by an EMD as specified in the bid document and must be uploaded in the specified place. The Purchaser is not responsible for any cancellation of the bid for non submission of EMD.

9. Bids will be opened in the presence of Bidders / Bidder’s representatives who choose to attend on the specified date and time of Bid opening.

10. In the event of the date specified for Bid receipt and opening being declared as a closed holiday for Purchaser’s office, the due date for submission of Bids and opening of Bids will be the following Working Day at the same appointed hours.

**Work Details:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **IFB No. Notice No.** | **Name of work** | **Estimate Cost**  **(Rs.)** | **Bid security (EMD)**  **(Rs.)** | **Period of completion of supply** |
| 1 | 2 | 3 | 4 | 6 |
| ***WBIW/SE/DIC /NIT-01(e)/2016-17*** | **“Supply, installation, testing, commissioning, training and maintenance of Automatic Gate Operation of Durgapur Barrage”** | **3,00,00,000** | **6,00,000** | **90 days following the date of signing the Contract.** |

**SECTION II:**

**INSTRUCTIONS TO BIDDER (ITB)**

Instructions / Guidelines for electronic submission of tenders have been annexed for assisting the contractors to participate in e- tendering.

1. **Registration of Contractor :-** Any contractor willing to take part in the process of e – Tendering will have to be enrolled & registered with the Government e – Procurement system through logging on to **https://wbtenders.gov.in**. The contractor is to click on the link for e – Tendering site as given on the web portal.
2. **Digital Signature Certificate (DSC) :­-** Each contractor is required to obtain a class - II or class – III Digital Signature Certificate (DSC) for submission of tenders from the approved service provider of Govt. of India (cca.gov.in) on payment of requisite amount . DSC is given as a USB e – Token.
3. **Collection of Tender documents :-** The contractor can search & download NIT & Tender documents electronically from computer once he logs on to the website mentioned in Clause 1 using the Digital Signature Certificate. This is the only mode of collection of Tender documents.
4. **Submission of Tenders :-**
5. **General process of submission:-** Tenders are to be submitted through online to the website **https://wbtenders.gov.in**  in two folders at a time for each work, one is Technical bid and other is Financial Bid before the prescribed date and time using the Digital Signature Certificates.
6. **Technical Bid:**- Technical Bid contain scanned copies of the followings further in two cover (folder).

**A-1. Statutory Cover Containing**

1. Demand Draft/Pay Order towards earnest money (EMD) as prescribed in the NIT.
2. NIT and Corrigendum if any (Download the NIT and upload the same by digitally signing).
3. Annexures – XVI
4. Annexures – XV (Form a and B)
5. Annexures – XIV
6. Annexures – XII
7. Annexures - XI

**A-2. NON-STATUTORY/MY DOCUMENTS** containing the following documents:

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl. No.** | **Category** | **Sub Category** | **Sub Category Description** |
| A. | Certificates | A1 Certificates | PAN Card |
| Professional Tax Registration Certificate |
| VAT/CST Registration certificate |
| Service Tax Registration Certificate |
| Income Tax Returns submitted for the Financial year 2013-14  Income Tax Returns submitted for the Financial year 2014-15  Income Tax Returns submitted for the Financial year 2015-16 |
| B. | Company Details | Proprietorship Firm (Trade Licence) .  Partnership Firm including LLP (Partnership Deed, Trade Licence)  LTD Company (Incorporation certificate, Trade Licence)  Society (Society Registration copy, Trade Licence)  Power of attorney | |
| C. | Credential | Manufacturing Licence  Manufacturer’s guarantee  Certificate/Credential for Previous experience of similar nature of work done | |
| D. | Financial Info | P/L Accounts & Balance Sheet | **Audited P/L Account & Balance Sheet 2012-2013** |
| **Audited P/L Account & Balance Sheet 2013-2014** |
| **Audited P/L Account & Balance Sheet 2014-2015** |

**Note: Failure of submission of any of the above mentioned statutory & non statutory cover**

**documents (as stated in A-1 & A-2 ) will render the bidder liable to summarily be rejected.**

1. **Financial Bid:-**
2. The financial bid should contain the following documents in one cover (folder) i.e. Bill of Quantities (BOQ). The contractor is to quote online the rate in the space marked for quoting rate in the BOQ.
3. Only downloaded copies of the above documents are to be uploaded, virus scanned & digitally Signed by the contractor.
4. **Opening & Evaluation of Tender:-**

**Opening of Technical Bid:**

1. Technical bid will be opened by the Superintending Engineer, Damodar Irrigation Circle, I&WD Kanainutsal Campus, Burdawan-713101 Officials. Intending tenderer may remain present if they so desire. Statutory Cover (folder) should be opened first & if found in order and correct, Non Statutory Cover (folder) will be opened. If there is any deficiency in the Statutory & Non statutory documents, the bidder will summarily be rejected.
2. Decrypted (transformed in to readable formats) documents of the non statutory cover is to be downloaded & to be handed over to the evaluation committee.
3. List of technically qualified tenderers would be uploaded.

***NB: While evaluation, the committee may invite the tenderers & seek clarification/ information or additional documents or original hard copy of any of the documents already submitted & if they are not produced within the stipulated time frame, their bid will be liable for rejection.***

**Opening and evaluation of Financial Bid:**

1. Financial bid of tenderers declared technically eligible by the Committee will be opened electronically from the web portal on the prescribed date and time that will be intimated by the system thorough auto generated mail.
2. **Penalty for suppression / distortion of facts:**

Submission of false document by tenderer is strictly prohibited and will be liable for rejection of the bid.

**A. Introduction**

**1. Source of Funds**

1.1 The Government of India has received Loan from the World Bank for National Hydrology Project (hereinafter called Bank) in various currencies equivalent to US Dollars million towards the cost of the National Hydrology Project and intends to apply part of the proceeds of this Loan to eligible payments under the Contract(s) for which this Invitation for Bid is issued.

1.2 Payment by the Bank will be made only at the request of the Borrower and upon approval by the Bank in accordance with the terms and conditions of the Loan Agreement, and will be subject in all respects to the terms and conditions of that agreement. The Loan Agreement prohibits a withdrawal from the Loan account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. No party other than the Borrower shall derive any rights from the Loan Agreement or have any claim to the Loan proceeds.

**2. Eligible Bidders**

2.1 This Invitation for Bids is open to all suppliers from eligible source countries as defined in *Guidelines: Procurement under WORLD BANK Loans*, hereinafter referred as the *WORLD BANK Guidelines for Procurement*, except as provided hereinafter.

2.2 Bidders should not be associated, or have been associated in the past, directly or indirectly, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under this Invitation of Bids.

2.3 Government-owned enterprises in the Purchaser’s country may participate only if they are legally and financially autonomous, if they operate under commercial law, and if they are not a dependent agency of the Purchaser.

2.4 Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices issued by the Bank in accordance with ITB Clause 36.1.

**3. Eligible Goods and Services**

3.1 All goods and ancillary services to be supplied under the Contract shall have their origin in eligible source countries, defined in the WORLD BANK Guidelines for Procurement and all expenditures made under the Contract will be limited to such goods and services.

3.2 For purposes of this clause, "origin" means the place where the goods are mined, grown, or produced or from which the ancillary services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized product results that is substantially different in basic characteristics or in purpose or utility from its components.

3.3 The origin of goods and services is distinct from the nationality of the Bidder.

**4. Cost of Bidding**

4.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and *The Superintending Engineer,* Damodar Irrigation Circle,I&WD Kanainutsal Campus, Burdawan-713101 *India*, hereinafter referred to as "the Purchaser", will in no case be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.

**B. The Bidding Documents**

**5. Content of Bidding Documents**

5.1 The Goods required, bidding procedures and contract terms are prescribed in the Bid Document. In addition to the Invitation for Bids, the bidding documents include:

1. Instruction to Bidders (ITB);
2. General Conditions of Contract (GCC);
3. Special Conditions of Contract (SCC);
4. Schedule of Requirements;
5. Technical Specifications;
6. Qualification Criteria;
7. Bid Form and Price Schedules;
8. Bid Security Form;
9. Contract Form;
10. Performance Security Form;
11. Performance Statement Form;
12. Manufacturer’s Authorization Form;
13. Capability Statement Form;
14. Service Support Details Form;
15. Equipment and Quality Control Form.
16. Map of sites

5.2 The Bidder is expected to examine all instructions, forms, terms, and specifications in the bidding documents. Failure to furnish all information required by the bidding documents or submission of a Bid not substantially responsive to the bidding documents in every respect will be at the Bidder's risk and may result in rejection of its Bid.

**6. Clarification of Bidding Documents**

6.1 A prospective Bidder requiring any clarification of the bidding documents may notify the Purchaser in writing or by fax at the Purchaser's mailing address indicated in the Invitation for Bids. The Purchaser will respond in writing to any request for clarification of the bidding documents which it receives not later than 15 days prior to the original deadline for submission of Bids prescribed by the Purchaser,or 7 days prior to the date of Pre-bid meeting whichever is earlier. This cut-off date for receipt of written clarifications by the Purchaser will not be extended even if the Bid submission date is extended later. Written copies of the Purchaser's response (including an explanation of the query but without identifying the source of inquiry) will be sent to all prospective Bidders who have received the bidding documents. The same will also be published in the address : "https://wbtenders.gov.in”.

6.2     Pre-bid meeting:

 6.2.1  The Bidder or its official representative is invited to attend a pre-bid meeting which will take place in the venue, date and time specified in the Section-I : Invitation For Bids (IFB).

6.2.2  The purpose of the Pre-bid meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

6.2.3  The Bidder is requested to submit any questions in writing to reach the Purchaser not later than one week before the meeting.

6.2.4  Minutes of the Pre-bid meeting, including the text of the questions raised (without identifying the source of enquiry) will be uploaded without delay to the official website along with the Tender Documents. Any modification of the bidding documents listed in Sub-Clause 8.1 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 pursuant to Clause 10 and not through the minutes of the pre-bid meeting.

6.2.5   Non-attendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.

**7. Amendment of Bidding Documents**

7.1 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, modify the bidding documents by amendment/Corrigendum.

7.3 In order to allow prospective Bidders reasonable time in which to take the amendment/Corrigendum into account in preparing their Bids, the Purchaser, at its discretion, may extend the deadline for the submission of Bids.

**C. Preparation of Bids**

**8. Language of Bid**

8.1 The Bid prepared by the Bidder, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Purchaser shall be written in 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.

**9. Documents Constituting the Bid**

9.1 The bid prepared by the Bidder shall comprise the following components:

(a) As per Clause 4, A-1 and A-2, all the statutory and Non Statutory Documents.

(b) Price Bid (BOQ) as per Financial Bid, details is given in Clause 4 Section c.

**10. Bid Form**

10.1 The Bidder shall scan all the necessary Documents given in Clause 4, The Documents must be scanned in Greyscale or Colour (100 to 150 Dpi) resolution.

**11. Bid Prices**

11.1 The Bidder shall quote their rates in the Price Schedule (BOQ) only.

11.2 Prices indicated on the Price Schedule shall be entered separately in the following manner:

(i) the price of the goods, quoted (ex-works, ex-factory, ex-showroom, ex-warehouse, or off-the-shelf, as applicable), including all duties and sales and other taxes already paid or payable:

a. on components and raw material used in the manufacture or assembly of goods quoted ex-works or ex-factory; or

b. on the previously imported goods of foreign origin quoted ex-showroom, ex-warehouse or off-the-shelf.

(ii) Any Indian duties, sales and other taxes which will be payable on the goods if this Contract is awarded;

(iii) The price of other incidental services listed of the Special Conditions of Contract including the price of annual maintenance services for 3 years after expiry of 2 years of warranty as of the Special Conditions of Contract.

11.3 The Bidder's separation of the price components given in the BOQ will be solely for the purpose of facilitating the comparison of bids by the Purchaser and will not in any way limit the Purchaser's right to Contract on any of the terms offered.

11.4 Fixed Price: Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account. A Bid submitted with an adjustable price quotation will be treated as non-responsive and rejected.

**12. Bid Currencies**

12.1 Prices shall be quoted in Indian Rupees.

**13. Documents Establishing Bidder's Eligibility and Qualifications**

13.1 The Bidder shall furnish, as part of its Bid, documents establishing the Bidder's eligibility to bid and its qualifications to perform the Contract if its Bid is accepted.

13.2 The documentary evidence of the Bidder's eligibility to bid shall establish to the Purchaser's satisfaction that the Bidder, at the time of submission of its Bid, is from an eligible country as defined under ITB Clause 2.

13.3 The documentary evidence of the Bidder's qualifications to perform the Contract if its Bid is accepted, shall establish to the Purchaser's satisfaction:

(a) that, in the case of a Bidder offering to supply Goods under the contract which the Bidder did not manufacture or otherwise produce, the Bidder has been duly authorized (as per authorization form in Section XII) by the Goods' Manufacturer or producer to supply the Goods in India.

*[Note: Supplies for any particular item in each schedule of the Bid should be from one manufacturer only. Bids from agents offering supplies from different manufacturer's for the same item of the schedule in the Bid will be treated as non-responsive.]*

(b) that the Bidder has the financial, technical, and production capability necessary to perform the Contract and meets the criteria outlined in the Qualification requirements specified in Section VI-A. To this end, all Bids submitted shall include the following information:

(i) The legal status, place of registration and principal place of business of the company or firm or partnership, etc.;

(ii) Details of experience and past performance of the Bidder on equipment offered and on those of similar nature within the past five years and details of current contracts in hand and other commitments (suggested proforma given in Section XI);

**14. Documents Establishing Goods' Eligibility and Conformity to Bidding Documents**

14.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its Bid, documents establishing the eligibility and conformity to the bidding documents of all Goods and Services which the Bidder proposes to supply under the Contract.

14.2 The documentary evidence of the Goods and Services eligibility shall consist of a statement in the Price Schedule on the country of origin of the Goods and services offered which shall be confirmed by a certificate of origin at the time of shipment.

14.3 The documentary evidence of conformity of the Goods and Services to the bidding documents may be in the form of literature, drawings and data, and shall consist of :

1. A detailed description of the essential technical and performance characteristics of the Goods ;
2. a list giving full particulars, including available sources and current prices, of spare parts, special tools, etc., necessary for the proper and continuing functioning of the Goods for a period of six years, following commencement of the use of the Goods by the Purchaser; and
3. an item-by-item commentary on the Purchaser's Technical Specifications demonstrating substantial responsiveness of the Goods and Services to those specifications or a statement of deviations and exceptions to the provisions of the Technical Specifications.
4. a confirmation that, if the Bidder offers system and/or other software manufactured by another company, such software operates effectively on the system offered by the Bidder; and the Bidder is willing to accept responsibility for it’s successful operations; and

e) a confirmation that the Bidder is either the owner of the intellectual Property Rights in the hardware and the software items offered, or that it has proper authorization and/or license from the owner to offer them. Willful misrepresentation of these facts will lead to the cancellation of the Contract without prejudice of other remedies that the Purchaser and/or the World Bank may take.

14.4 For purposes of the commentary to be furnished pursuant to ITB Clause 14.3(c) above, the Bidder shall note that standards for workmanship, material and equipment, and references to brand names or catalogue numbers designated by the Purchaser in its Technical Specifications are intended to be descriptive only and not restrictive. The Bidder may substitute alternative standards, brand names and/or catalogue numbers in its Bid, provided that it demonstrates to the Purchaser's satisfaction that the substitutions ensure substantial equivalence to those designated in the Technical Specifications.

**15. Bid Security**

15.1 Pursuant to ITB Clause 9, the Bidder shall furnish, as part of its bid, a Bid Security in the amount as specified in Section-V - Schedule of Requirements.

15.2 The Bid Security is required to protect the Purchaser against the risk of Bidder's conduct which would warrant the security's forfeiture, pursuant to ITB Clause 15.7.

15.3 The Bid Security shall be denominated in Indian Rupees and shall:

(a) at the Bidder’s option, be in the form of either a demand draft, or a bank guarantee from a nationalized/Scheduled Bank located in India;

1. be substantially in accordance with one of the form of Bid Security included in Section-VIII or other form approved by the Purchaser prior to Bid submission;
2. be payable promptly upon written demand by the Purchaser in case any of the conditions listed in ITB Clause 15.7 are invoked;
3. be submitted in its original form; copies will not be accepted; and
4. remain valid for a period of 45days beyond the original validity period of Bids, or beyond any period of extension subsequently requested under ITB Clause 16.2.

15.4 Any Bid not secured in accordance with ITB Clauses 15.1 and 15.3 above will be rejected by the Purchaser as non-responsive, pursuant to ITB Clause 24.

15.5 Unsuccessful Bidder's Bid Securities will be discharged/returned as promptly as possible but not later than 30 days after the expiration of the period of Bid validity prescribed by the Purchaser, pursuant to ITB Clause 16.

15.6 The successful Bidder's Bid Security will be discharged upon the Bidder signing the Contract, pursuant to ITB Clause 34, and furnishing the Performance Security, pursuant to ITB Clause 35.

15.7 The Bid Security may be forfeited:

(a) if a Bidder (i) withdraws its Bid during the period of Bid validity specified by the Bidder on the Bid Form; or (ii) does not accept the correction of errors pursuant to ITB Clause 24.2; or

(b) in case of a successful Bidder, if the Bidder fails:

(i) to sign the Contract in accordance with ITB Clause 34; or

(ii) to furnish Performance Security in accordance with ITB Clause 35.

**16. Period of Validity of Bids**

16.1 Bids shall remain valid for *90 days* after the deadline for submission of Bids prescribed by the Purchaser, pursuant to ITB Clause 19. A Bid valid for a shorter period shall be rejected by the Purchaser as non-responsive.

**17. Format and Signing of Bid**

17.1 The bidders have to scan the bid Documents in (100 - 150 dpi) and upload the documents as instructed for online submission of Bids.

**D. Submission of Bids**

**i) Statutory Documents:**

**i) NIT/SBD**

**ii) Scan Copy of EMD.**

**iii) Annexures – XVI**

**iv) Annexures – XV (Form a and B)**

**v) Annexures – XIV**

**vi) Annexures – XII**

**vii) Annexures – XI**

**ii) Non Statutory Documents/My Document/OID (Other Important Documents)**

**My Document Format of West Bengal Government PWD**

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl No** | **Category Name** | **Sub Category Description** | **Details** |
| A | CERTIFICATES | CERTIFICATES | 1. VAT REGISTRATION CERTIFICATE & AKNOWLAGEMENT   1. PAN 2. PTAX (CHALLAN)   4. LATEST IT RECEIPT |
| B | COMPANY DETAILS | COMPANY DETAILS 1  COMPANY DETAILS 2 | 1. PROPRITORSHIP FIRM   (TRADE LICENCE)   1. PARTNERSHIP FIRM   (PARTNERSHIP DEED, TRADE LICENCE)   1. LTD COMPANY   (INCORPORATION CERTIFICATE, TRADE LICENCE)     1. SOCIETY   (SOCIETY REGISTRATION COPY, TRADE LICENCE) |
| C | CREDENTIAL | CREDENTIAL 1  CREDENTIAL 2 | 1. SIMILAR NATURE OF WORK DONE & COMPLETION CERTIFICATE WHICH IS APPLICABLE FOR ELIGIBILITY IN THIS TENDER 2. ENLISTMENT COPY ISSUED BY DEPT |
| D | EQUIPMENT | MACHINERIES 1  MACHINERIES 2  MACHINERIES 3  MACHINERIES 4  MACHINERIES 5  LABORATORY | 1. AUTHENTICATED COPY OF INVOICE, CHALLAN & WAYBILL (MACHINERY) 2. AUTHENTICATED COPY OF INVOICE, CHALLAN (LABORATORY) |
| E | FINANCIAL INFO | WORK IN HAND |  |
|  |  | PAYMENT CERTIFICATE 1  PAYMENT CERTIFICATE 2 | ONLY PAYMENT CERTIFIACTE NOT THE TDS CERTIFICATE |
|  |  | P/L AND BALANCE SHEET 2012-2013 | PROFIT & LOSS AND BALANCE SHEET (WITH ANNEXURE AND 3CD FORM IN CASE OF TAX AUDIT) |
|  |  | P/L AND BALANCE SHEET 2013-2014 | PROFIT & LOSS AND BALANCE SHEET (WITH ANNEXURE AND 3CD FORM IN CASE OF TAX AUDIT) |
|  |  | P/L AND BALANCE SHEET 2014-2015 | PROFIT & LOSS AND BALANCE SHEET (WITH ANNEXURE AND 3CD FORM IN CASE OF TAX AUDIT) |
| F | MANPOWER | TECHNICAL PERSONNEL | LIST OF TECHNICALSTAFFS ALONG WITH STRUCTURE & ORGANIZATION (AS PER NIT) |
|  |  | TECHNICAL PERSONNEL ON CONTRACT | LIST OF TECHNICALSTAFFS ALONG WITH STRUCTURE & ORGANIZATION (AS PER NIT) |  |

**18. Late Bids**

18.1 Any Bid received by the Purchaser after the deadline for submission of Bids prescribed by the Purchaser will be rejected and/or returned unopened to the Bidder.

**19. Modification and Withdrawal of Bids**

19.1 The Bidder may resubmit or withdraw its Bid after the Bid's submission through online.

19.2 No Bid can be modified subsequent to the deadline for submission of Bids.

**E. Bid Opening and Evaluation of Bids**

**20. Opening of Bids by the Purchaser**

20.1 The Purchaser will open all Bids through online process only, Bidders or Bidders' can see their results through online from <https://wbtenders.gov.in>.

20.2 After downloading all the Bid Documents of respective Bidders, the Technical Evaluation committee will evaluate the Bidders Document.

20.3 The Purchaser will prepare Minutes of the Bid Opening.

20.4 The Final list of the Technically Qualified Bidders will be uploaded in the website only. The Bidders can see their status through online only.

**21. Clarification of Bids**

21.1 During evaluation 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 prices or substance of the Bid shall be sought, offered or permitted.

**22. Preliminary Examination**

22.1 The Purchaser will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed, and whether the Bids are generally in order. Bids from Agents, without proper authorization from the manufacturer, shall be treated as non-responsive.

22.2 Where the Bidder has quoted for more than one schedule, if the Bid Security furnished is inadequate for all the schedules, the Purchaser shall take the Price Bid into account only to the extent the Bid is secured. For this purpose, the extent to which the Bid is secured shall be determined by evaluating the requirement of Bid Security to be furnished for the schedule included in the Bid (offer) in the serial order of the Schedule of Requirements of the Bid Document.

22.3 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words will prevail. If the Bidder does not accept the correction of errors, its Bid will be rejected and its Bid Security may be forfeited.

22.4 The Purchaser may waive any minor informality or non-conformity or irregularity in a Bid which does not constitute a material deviation, provided such a waiver does not prejudice or affect the relative ranking of any Bidder.

22.5 Prior to the detailed evaluation, pursuant to ITB Clause 26, the Purchaser will determine the substantial responsiveness of each Bid to the Bid Document. For purposes of these Clauses, a substantially responsive Bid is one which conforms to all the terms and conditions of the BidDocument without material deviations. Deviations from or objections or reservations to critical provisions such as those concerning Performance Security (GCC Clause 7), Warranty (GCC Clause 15), Force Majeure (GCC Clause 25), Limitation of liability (GCC Clause 29), Applicable law (GCC Clause 31), and Taxes & Duties (GCC Clause 33) will be deemed to be a material deviation. 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.

22.6 If a Bid is not substantially responsive, it will be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the non-conformity.

**23.** Deleted

**24. Evaluation and Comparison of Bids**

24.1 The Purchaser will first evaluate the Technical Documents of the Bidders. If any of the Bidders documents is rejected in the Technical round his/her financial opening will not be considered. At the time of Financial Opening the system will generate a comparative price chart of the qualified bidders only. The Purchaser will only consider the Comparative Chart generated by the system.and compare the Bids which have been determined to be substantially responsive. No Bid will be considered if the complete requirements covered in the SBD is not included in the Bid. However, as stated in Para 11, Bidders are allowed the option to Bid for any one or more schedules and to offer discounts for combined schedules. These discounts will be taken into account in the evaluation of the Bids so as to determine the Bid or combination of Bids offering the lowest evaluated cost for the Purchaser in deciding award(s) for each schedule.

24.2 The Purchaser's evaluation of a Bid will exclude and not take into account:

(a) in the case of goods manufactured in India or goods of foreign origin already located in India, sales and other similar taxes, which will be payable on the goods if a contract is awarded to the Bidder;

(b) any allowance for price adjustment during the period of execution of the Contract, if provided in the Bid.

24.3 Deleted.

24.4 The Purchaser's evaluation of a Bid will take into account, in addition to the Bid Price (Ex-factory/ex-warehouse/off-the-shelf price of the goods offered from within India, such price to include all costs as well as duties and taxes paid or payable on components and raw material incorporated or to be incorporated in the goods, and Excise duty on the finished goods, if payable) and price of incidental services, the following factors, in the manner and to the extent indicated in ITB Clause 26.5 and in the Technical Specifications:

(a) cost of inland transportation, insurance and other costs within India incidental to the delivery of the goods to their final destination;

(b) delivery schedule offered in the Bid;

(c) deviations in payment schedule from that specified in the Special Conditions of Contract;

(d) the cost of components, mandatory spare parts and service;

(e) the availability in India of spare parts and after-sales services for the goods / equipment offered in the Bid;

(f) the projected operating and maintenance costs during the life of the equipment; and

(g) the performance and productivity of the equipment offered.

24.5 Pursuant to ITB Clause 26.4, one or more of the following evaluation methods will be applied:

(a) *Inland Transportation, Insurance and Incidentals*:

(i) Inland transportation, insurance and other incidentals for delivery of goods to the final destination as stated in ITB Clause 11.2 (iii).

The above costs will be added to the Bid Price.

(b) *Delivery Schedule*:

(i) The Purchaser requires that the Goods under the Invitation for Bids (IFB) shall be delivered at the time specified in the Schedule of Requirements.

(c)  *Deviation in Payment Schedule*:

The Special Conditions of Contract (SCC) stipulate the payment schedule offered by the Purchaser. If a Bid deviates from the schedule and if such deviation is considered acceptable to the Purchaser, the Bid will be evaluated by calculating interest earned for any earlier payments involved in the terms outlined in the Bid as compared to those stipulated in this invitation, at a rate of 12% percent per annum.

(d) *Cost of Spare Parts*:*Deleted*

(e) S*pare Parts and After Sales Service Facilities in India*:

The cost to the Purchaser of establishing the minimum service facilities and parts inventories, as outlined elsewhere in the Bid Document, if quoted separately, shall be added to the Bid Price.

(f) *Operating and Maintenance Costs during Warranty Period:* The cost of 5 years annual operation and maintenance service charge during the warranty period will be added to Bid Price for each schedule.

(g) *Performance and Productivity of the Equipment*:

Goods offered shall have a minimum productivity specified under the relevant provisions in Technical Specifications to be considered responsive.

**25.** Deleted.

**26. Contacting the Purchaser**

26.1 Subject to ITB Clause 23, no Bidder shall contact the Purchaser on any matter relating to its Bid, from the time of the Bid opening to the time the Contract is awarded. If the Bidder wishes to bring additional information to the notice of the Purchaser, it should do so in writing.

26.2 Any effort by a Bidder to influence the Purchaser in its decisions on Bid evaluation, Bid comparison or Contract award may result in rejection of its Bid.

**F. Award of Contract**

**27. Post qualification**

27.1 In the absence of prequalification, the Purchaser will determine to its satisfaction whether the Bidder that is selected as having submitted the lowest evaluated responsive Bid meets the criteria specified in ITB Clause 13.3 (b) and is qualified to perform the Contract satisfactorily.

27.2 The determination will take into account the Bidder's financial, technical and production capabilities. It will be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB Clause 13, as well as such other information as the Purchaser deems necessary and appropriate.

27.3 An affirmative determination will be a prerequisite for award of the Contract to the Bidder. A negative determination will result in rejection of the Bidder's Bid, in which event the Purchaser will proceed to the next lowest evaluated Bid to make a similar determination of that Bidder's capabilities to perform the Contract satisfactorily.

**28. Award Criteria**

28.1 The Purchaser will award the Contract to the successful Bidder whose Bid has been determined to be substantially responsive and has been determined as the lowest evaluated Bid, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.

**29. Purchaser's right to vary Quantities**

The Purchaser reserves the right,at the time of Contract award and/or during the Warranty period to increase upto 25% in one lot or at the time of Contract award decrease upto10% in one lot, the quantity of Goods and Services originally specified in the Schedule of Requirements without any change in unit price or other terms and conditions. If such percentage increase or decrease is in decimals, the increase or decrease in quantities may be rounded off to the next whole number irrespective of the order of decimal.

**30. Purchaser's Right to Accept Any Bid and to Reject Any or All Bids**

30.1 The Purchaser reserves the right to accept or reject any Bid, and to annul the Bidding process and reject all Bids at any time prior to Contract award, without thereby incurring any liability to the affected Bidder or Bidders.

**31. Notification of Award**

31.1 Prior to the expiration of the period of Bid Validity, the Purchaser will notify the successful Bidder through online notification, that its Bid has been accepted.

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

31.3 Upon the successful Bidder's furnishing of Performance Security pursuant to ITB Clause 35, the Purchaser will notify the name of the winning Bidder through online process so that all the participants can see the results and will discharge its Bid Security, pursuant to ITB Clause 15.

31.4 If, after notification of award, a Bidder wishes to ascertain the grounds on which its Bid was not selected, it should address it’s written request to the Purchaser, within 10 days of such notification pursuant to ITB Clause 33.3.The Purchaser will promptly respond in writing to the unsuccessful Bidder, within 30 days. The Purchaser is not liable to reply the unsuccessful Bidder’s queries made after this 7 days limit.

**32. Signing of Contract**

32.1 At the same time as the Purchaser notifies the successful Bidder that its Bid has been accepted, the Purchaser will send the Bidder the Contract Form provided in the Bidding documents, incorporating all agreements between the parties.

32.2 Within 21 days of receipt of the Contract Form, the successful Bidder shall sign and date the Contract and return it to the Purchaser.

**33. Performance Security**

33.1 Within 21 days of the receipt of notification of award from the Purchaser, the successful Bidder shall furnish the Performance Security in accordance with the Conditions of Contract, in the Performance Security Form provided in the Bid Document or in another form acceptable to the Purchaser.

33.2 Failure of the successful Bidder to comply with the requirement of ITB Clause 34.2 or ITB Clause 35.1 shall constitute sufficient grounds for the annulment of the award and forfeiture of the Bid Security, in which event the Purchaser may make the award to the next lowest evaluated Bidder or call for new Bids at its discretion.

**34 Corrupt or Fraudulent Practices**

34.1 It is the Bank’s policy to require that Borrowers (including beneficiaries of Bank loans), as well as Bidders, suppliers, and contractors and their subcontractors under Bank-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. [[1]](#footnote-2) In pursuance of this policy, the Bank:

1. defines, for the purposes of this provision, the terms set forth below as follows:

i)“corrupt practice”[[2]](#footnote-3) is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

(ii)“fraudulent practice”[[3]](#footnote-4) is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(iii)“collusive practice”[[4]](#footnote-5) is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

(iv) “coercive practice”[[5]](#footnote-6) is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

(v) “obstructive practice” is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation, or

(bb) acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under sub-clause 37.1(e) below.

(b) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for the contract in question;

(c) will cancel the portion of the loan allocated to a contract if it determines at any time that representatives of the Borrower or of a beneficiary of the loan engaged in corrupt, fraudulent, collusive, or coercive practices during the procurement or the execution of that contract, without the Borrower having taken timely and appropriate action satisfactory to the Bank to remedy the situation;

(d) will sanction a firm or individual, including declaring them ineligible, either indefinitely or for a stated period of time, to be awarded a Bank-financed contract if it at any time determines that they have, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive or obstructive practices in competing for, or in executing, a Bank-financed contract; and

(e) will have the right to require that a provision be included in Bidding documents and in contracts financed by a Bank Loan, requiring Bidders, suppliers, contractors and consultants to permit the Bank to inspect their accounts and records and other documents relating to the Bid submission and contract performance and to have them audited by auditors appointed by the Bank.

34.2 Furthermore, Bidders shall be aware of the provision stated in Sub-Clause 24.1 (c) of the General Conditions of Contract.”

**SECTION III:**

**GENERAL CONDITIONS OF CONTRACT (GCC)**

**General Conditions of Contract (GCC)**

**1. Definitions**

1.1 In this Contract, the following terms shall be interpreted as indicated:

1. "**Contract**" means the agreement entered into between the Purchaser and the Supplier, as recorded in the Contract Form signed by the parties, including all the attachments and appendices thereto and all documents incorporated by reference therein;
2. "**Contract Price**" means the price payable to the Supplier under the Contract for the full and proper performance of its contractual obligations;
3. "**Goods**" means all the equipment, machinery, and/or other materials which the Supplier is required to supply to the Purchaser under the Contract;
4. "**Services**" means services ancillary to the supply of the Goods, such as transportation and insurance, and any other incidental services, such as installation, commissioning, provision of technical assistance, training and other obligations of the Supplier covered under the Contract;
5. “**GCC**” means the General Conditions of Contract contained in this section.
6. “**SCC**” means the Special Conditions of Contract.
7. “**Purchaser**” means the organization purchasing the Goods, as named in **SCC**.
8. “**Purchaser’s country**” is the country named in **SCC**.
9. “**Bid Document**” means the complete set of documents which the Purchaser issues and requires the Bidder to offer the Bidder’s proposal for the Contract.
10. “**Bidder(s)**” means the individual(s) or firm(s) bidding for the supply of the Goods and Services.
11. “**Bid(s)**” means the completed Bid Document(s)submitted by a Bidder(s) to the Purchaser.
12. "**Bid Price**" means the total price offered by a Bidder in its Bid for providing the Goods and Services.
13. “**Supplier**” means the individual or firm supplying the Goods and Services under this Contract.
14. “**World Bank**” means the International Bank for Reconstruction and Development (WORLD BANK) or the International Development Association (IDA).
15. “**Project Site**”, where applicable, means the place or places named in **SCC**.
16. “**Day**” means calendar day.
17. “**Working Day(s)**” means the day(s) of conduct of business of the office of the Purchaser.

**2. Application**

2.1 These General Conditions shall apply to the extent that they are not superseded by provisions in other parts of the Contract.

**3. Country of Origin**

3.1 All Goods and Services supplied under the Contract shall have their origin in the member countries and territories eligible under the rules of the World Bank as further elaborated in **SCC**.

3.2 For purposes of this Clause "origin" means the place where the Goods are mined, grown or produced, or from which the Services are supplied. Goods are produced when, through manufacturing, processing or substantial and major assembling of components, a commercially recognized new product results that is substantially different in basic characteristics or in purpose or utility from its components.

3.3 The origin of Goods and Services is distinct from the nationality of the Supplier.

**4. Standards**

4.1 The Goods supplied under this Contract shall conform to the standards mentioned in the Technical Specifications, and, when no applicable standard is mentioned, to the authoritative standard appropriate to the Goods' country of origin and such standards shall be the latest issued by the concerned institution.

**5. Use of Contract Documents and Information**

5.1 The Supplier shall not, without the Purchaser's prior written consent, disclose the Contract, or any provision thereof, or any specification, plan, drawing, pattern, sample or information furnished by or on behalf of the Purchaser in connection therewith, to any person other than a person employed by the Supplier in performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only so far as may be necessary for purposes of such performance.

5.2 The Supplier shall not, without the Purchaser's prior written consent, make use of any document or information enumerated in GCC Clause 5.1 except for purposes of performing the Contract.

5.3 Any document, other than the Contract itself, enumerated in GCC Clause 5.1 shall remain the property of the Purchaser and shall be returned (in all copies) to the Purchaser on completion of the Supplier's performance under the Contract if so required by the Purchaser.

**6. Patent Rights**

6.1 The Supplier shall indemnify the Purchaser against all third-party claims of infringement of patent, trademark or industrial design rights arising from use of the Goods or any part thereof in India.

**7. Performance Security**

7.1 Within 21 days of receipt of the notification of contract award, the Supplier shall furnish Performance Security in the amount specified in **SCC**.

7.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.

7.3 The Performance Security shall be denominated in Indian Rupees and shall be in one of the following forms, unless specified otherwise in **SCC**.:

(a) A Bank guarantee or irrevocable Letter of Credit, issued by a nationalized/scheduled bank located in India or a bank located abroad acceptable to the Purchaser, in the form provided in the Bidding documents or another form acceptable to the Purchaser; or

(b) A cashier's check, certified check, or demand draft.

7.4 The performance security will be discharged by the Purchaser and returned to the Supplier not later than 30 days following the date of completion of the Supplier's performance obligations, including any warranty obligations, unless specified otherwise in **SCC**.

**8. Inspections and Tests**

8.1 The Purchaser or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Contract specifications at no extra cost to the Purchaser. **SCC** and the Technical Specifications shall specify what inspections and tests the Purchaser requires and where they are to be conducted. The Purchaser shall notify the Supplier in writing in a timely manner of the identity of any representatives retained for these purposes.

8.2 The inspections and tests may be conducted on the premises of the Supplier or its subcontractor(s), at point of delivery and/or at the Goods final destination. If conducted on the premises of the Supplier or its subcontractor(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.

8.3 Should any inspected or tested Goods fail to conform to the specifications, the Purchaser may reject the goods and the Supplier shall either replace the rejected Goods or make alterations necessary to meet specification requirements free of cost to the Purchaser.

8.4 The Purchaser's right to inspect, test and, where necessary, reject the Goods after the Goods' arrival at Project Site shall in no way be limited or waived by reason of the Goods having previously been inspected, tested and passed by the Purchaser or its representative prior to the Goods shipment.

8.5 Nothing in GCC Clause 8 shall in any way release the Supplier from any warranty or other obligations under this Contract.

**9. Packing**

9.1 The Supplier shall provide such packing of the Goods 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 temperatures, salt and precipitation during transit and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit.

9.2 The packing, marking and documentation within and outside the packages shall comply strictly with such special requirements as shall be provided for in the Contract including additional requirements, if any, specified in **SCC** and in any subsequent instructions ordered by the Purchaser.

**10. Delivery and Documents**

10.1 Delivery of the Goods shall be made by the Supplier in accordance with the terms specified by the Purchaser in the Notification of Award. The details of shipping and/or other documents to be furnished by the supplier are specified in **SCC**.

**11. Insurance**

11.1 The Goods supplied under the Contract shall be fully insured in Indian Rupees against loss or damage incidental to manufacture or acquisition, transportation, storage and delivery in the manner specified in **SCC**.

**12. Transportation**

12.1 Where the Supplier is required under the Contract to transport the Goods to a specified place of destination within India defined as Project Site, transport to such place of destination in India including insurance, as shall be specified in the Contract, shall be arranged by the Supplier, and the related cost shall be included in the Contract Price.

**13. Incidental Services**

13.1 The supplier may be required to provide any or all of the following services, including additional services, if any, specified in **SCC**:

(a) performance or supervision of the on-site assembly and/or start-up of the supplied Goods;

(b) furnishing of tools required for assembly and/or maintenance of the supplied Goods;

(c) furnishing of detailed operations and maintenance manual for each appropriate unit of supplied Goods;

(d) performance or supervision or maintenance and/or repair of the supplied Goods, for a period of time agreed by the parties, provided that this service shall not relieve the Supplier of any warranty obligations under this Contract; and

(e) training of the Purchaser's personnel, at the Supplier's plant and/or on-site, in assembly, start-up, operation, maintenance and/or repair of the supplied Goods.

13.2 Prices charged by the Supplier for incidental services, if not included in the Contract Price for the Goods, shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

**14. Spare Parts**

14.1 As specified in the **SCC**, the Supplier may be required to provide any or all of the following materials, notifications, and information pertaining to spare parts manufactured or distributed by the Supplier:

(a) such spare parts as the Purchaser may elect to purchase from the Supplier, providing that this election shall not relieve the Supplier of any warranty obligations under the Contract; and

(b) In the event of termination of production of the spare parts:

(i) advance notification to the Purchaser of the pending termination, in sufficient time to permit the Purchaser to procure needed requirements; and

(ii) following such termination, furnishing at no cost to the Purchaser, the blueprints, drawings and specifications of the spare parts, if requested.

**15. Warranty**

15.1 The Supplier warrants that the Goods supplied under this Contract are new, unused, of the most recent or current models and that they incorporate all recent improvements in design and materials unless provided otherwise in the Contract. The Supplier further warrants that all Goods supplied under this Contract shall have no defect arising from design, materials or workmanship (except when the design and/or material is required by the Purchaser's Specifications) or from any act or omission of the Supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination.

15.2 This warranty shall remain valid for five years after the Goods or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the Contract, or for five years and six months after the date of shipment from the place of loading whichever period concludes earlier, unless specified otherwise in the **SCC**.

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

15.4 Upon receipt of such notice, the Supplier shall, within the period specified in **SCC** and with all reasonable speed, repair or replace the defective Goods or parts thereof, without cost to the Purchaser other than, where applicable, the cost of inland delivery of the repaired or replaced Goods or parts from ex-works or ex-factory or ex-showroom to the final destination.

15.5 If the Supplier, having been notified, fails to remedy the defect(s) within the period specified in **SCC**, the Purchaser may proceed to take such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

**16. Payment**

16.1 The method and conditions of payment to be made to the Supplier under this Contract shall be specified in the **SCC**.

16.2 The Supplier's request(s) for payment shall be made to the Purchaser in writing, accompanied by an invoice describing, as appropriate, the Goods delivered and the Services performed, and by documents, submitted pursuant to GCC Clause 10, and upon fulfillment of other obligations stipulated in the contract.

16.3 Payments shall be made promptly by the Purchaser but in no case later than sixty (60) days after submission of the invoice or claim by the Supplier and acceptance by the Purchaser.

16.4 Payment shall be made in Indian Rupees.

**17. Prices**

17.1 Prices charged by the Supplier for Goods delivered and Services performed under the Contract shall not vary from the prices quoted by the Supplier in its Bid, with the exception of any price adjustments authorized in **SCC** or in the Purchaser’s request for Bid validity extension, as the case may be.

**18. Change Orders**

18.1 The Purchaser may at any time, by written order given to the Supplier pursuant to GCC Clause 31, make changes within the general scope of the Contract in any one or more of the following:

(a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;

(b) the method of shipping or packing;

(c) the place of delivery; and/or

(d) the Services to be provided by the Supplier.

18.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, 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 Supplier for adjustment under this clause must be asserted within thirty (30) days from the date of the Supplier's receipt of the Purchaser's change order.

**19. Contract Amendments**

19.1 Subject to GCC Clause 18, no variation in or modification of the terms of the Contract shall be made except by written amendment signed by the parties.

**20. Assignment**

20.1 The Supplier shall not assign, in whole or in part, its obligations to perform under the Contract, except with the Purchaser's prior written consent.

**21. Subcontracts**

21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under this Contract if not already specified in the Bid. Such notification, in his original Bid or later, shall not relieve the Supplier from any liability or obligation under the Contract.

21.2 Subcontracts must comply with the provisions of GCC Clause 3.

**22. Delays in the Supplier's Performance**

22.1 Delivery of the Goods and performance of the Services shall be made by the Supplier in accordance with the time schedule specified by the Purchaser in the Schedule of Requirements.

22.2 If at any time during performance of the Contract, the Supplier or its sub-contractor(s) should encounter conditions impeding timely delivery of the Goods and performance of Services, the Supplier 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 Supplier’s notice, the Purchaser shall evaluate the situation and may, at its discretion, extend the Supplier’s time for performance with or without liquidated damages, in which case the extension shall be ratified by the parties by amendment of the Contract.

22.3 Except as provided under GCC Clause 25, a delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 23, unless an extension of time is agreed upon pursuant to GCC Clause 22.2 without the application of liquidated damages.

**23. Liquidated Damages**

23.1 Subject to GCC Clause 25, if the Supplier fails to deliver any or all of the Goods or to perform the Services within the period(s) specified in the Contract, the Purchaser shall, without prejudice to its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in **SCC** of the delivered price of the delayed Goods or unperformed Services for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the Percentage specified in SCC. Once the maximum is reached, the Purchaser may consider termination of the Contract pursuant to GCC Clause 24.

**24. Termination for Default**

24.1 The Purchaser may, without prejudice to any other remedy for breach of Contract, by written notice of default sent to the Supplier, terminate the Contract in whole or part:

(a) if the Supplier fails to deliver any or all of the Goods within the period(s) specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 22; or

(b) if the Supplier fails to perform any other obligation(s) under the Contract.

(c) if the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GCC Clause 34, in competing for or in executing the Contract.

24.2 In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 24.1, the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Services similar to those undelivered, and the Supplier shall be liable to the Purchaser for any excess costs for such similar Goods or Services. However, the Supplier shall continue the performance of the Contract to the extent not terminated.

**25. Force Majeure**

25.1 Notwithstanding the provisions of GCC Clauses 22, 23, 24, the Supplier 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 an event of Force Majeure.

25.2 For purposes of this Clause, "Force Majeure" means an event beyond the control of the Supplier and not involving the Supplier's fault or negligence and not foreseeable. Such events may include, but are not limited to, acts of the Purchaser either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes.

25.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such conditions and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.

**26. Termination for Insolvency**

26.1 The Purchaser may at any time terminate the Contract by giving written notice to the Supplier, if the Supplier becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Purchaser.

**27. Termination for Convenience**

27.1 The Purchaser, by written notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

27.2 The Goods that are complete and ready for shipment within 30 days after the Supplier's receipt of notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect:

(a) to have any portion completed and delivered at the Contract terms and prices; and/or

(b) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and for materials and parts previously procured by the Supplier.

**28. Settlement of Disputes**

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

28.2 If, after thirty (30) days, the parties have failed to resolve their dispute or difference by such mutual consultation, then either the Purchaser or the Supplier may give notice to the other party of its intention to commence arbitration, as hereinafter provided, as to the matter in dispute, and no arbitration in respect of this matter may be commenced unless such notice is given.

28.2.1 Any dispute or difference in respect of which a notice of intention to commence arbitration has been given in accordance with this Clause shall be finally settled by arbitration. Arbitration may be commenced prior to or after delivery of the Goods under the Contract.

28.2.2 Arbitration proceedings shall be conducted in accordance with the rules of procedure specified in the SCC.

28.3 Notwithstanding any reference to arbitration herein,

(a) the parties shall continue to perform their respective obligations under the Contract unless they otherwise agree; and

(b) the Purchaser shall pay the Supplier any monies due the Supplier.

**29. Limitation of Liability**

29.1 Except in cases of criminal negligence or willful misconduct, and in the case of infringement pursuant to Clause 6,

(a) the Supplier shall not be liable to the Purchaser, whether in contract, tort, or otherwise, for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser; and

(b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort or otherwise, shall not exceed the total Contract Price, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment.

**30. Governing Language**

30.1 The contract shall be written in English language. Subject to GCC Clause 30, English language version of the Contract shall govern its interpretation. All correspondence and other documents pertaining to the Contract which are exchanged by the parties shall be written in the same language.

**31. Applicable Law**

31.1 The Contract shall be interpreted in accordance with the laws of the Union of India.

**32. Notices**

32.1 Any notice given by one party to the other pursuant to this Contract shall be sent to other party in writing or by cable, telex or facsimile and confirmed in writing to the other Party’s address specified in **SCC**.

32.2 A notice shall be effective when delivered or on the notice's effective date, whichever is later.

**33. Taxes and Duties**

33.1 Deleted.

33.2 Suppliers shall be entirely responsible for all taxes, duties, license fees, octroi, road permits, etc., incurred until delivery of the contracted Goods to the Purchaser.

**34. Fraud and Corruption**

34.1 If the Purchaser determines that the Supplier has engaged in corrupt, fraudulent, collusive, coercive or obstructive practices, in competing for or in executing the Contract, then the Purchaser may, after giving 14 days notice to the Supplier, terminate the Contract, and the provisions of Clause 24 shall apply as if such termination had been made under Sub-Clause 24.1.

(a) For the purposes of this Sub-Clause:

(i) “corrupt practice”[[6]](#footnote-7) is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;

(ii) “fraudulent practice”[[7]](#footnote-8) is any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(iii) “collusive practice”[[8]](#footnote-9) is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;

(iv) “coercive practice”[[9]](#footnote-10) is impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

(v) “obstructive practice” is

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a Bank investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

(bb) acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under Clause 35 [Inspections and Audits by the Bank].

34.2 Should any employee of the Supplier be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the purchase of the Goods, then that employee shall be removed.

**35.** **Inspections and Audit by the Bank**

35.1 The Supplier shall permit the Bank and/or persons appointed by the Bank to inspect the Supplier’s offices and/or the accounts and records of the Supplier and its sub-contractors relating to the performance of the Contract, and to have such accounts and records audited by auditors appointed by the Bank if required by the Bank. The Supplier’s attention is drawn to Clause 34, which provides, inter alia, that acts intended to materially impede the exercise of the Bank’s inspection and audit rights provided for under Sub-Clause 35.1 constitute a prohibited practice subject to contract termination (as well as to a determination of ineligibility under the Procurement Guidelines).

**SECTION IV:**

**SPECIAL CONDITIONS OF CONTRACT (SCC)**

**SECTION IV: SPECIAL CONDITIONS OF CONTRACT**

**TABLE OF CLAUSES**

**Special Conditions of Contract (SCC)**

The following Special Conditions of Contract (SCC) shall supplement the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract (GCC). The corresponding clause number of the General Conditions is indicated in parentheses.

1. **Definitions (GCC Clause 1)**

1. The Purchaser is : The Superintending Engineer, Damodar Irrigation Circle, I & WD,Burdawan-713101
2. The Supplier is ..: ..............................................

2. **Country of Origin (GCC Clause 3)**

All countries and territories as indicated in Section XIV of the Bid Document, “Eligibility for the Provisions of Goods, Works, and Services in Bank-Financed Procurement”.

3. **Performance Security (GCC Clause 7)**

3.1 Within 21 days after the Supplier’s receipt of Notification of Award, the Supplier shall furnish Performance Security to the Purchaser for an amount of *10%* of the Contract Price, valid upto 60 days after the date of completion of performance obligations including warranty and Annual Maintenance Services obligations.

In the event of any correction of defects or replacement of defective material during the warranty and Annual Maintenance Services period, the warranty for the corrected/replaced material shall be extended to a further period of *12months, beyond the original warranty period* and the Performance Bank Guarantee for proportionate value shall be extended 60 days over and above the extended warranty period.

3.2 Substitute Clause 7.3 (b) of the GCC by the following:

A cashier’s cheque or banker’s certified cheque or crossed demand draft or pay order drawn in favour of *Executive Engineer, Damodar Irrigation Circle, I & WD,Burdawan-713101*

3.3 Substitute Clause 7.4 of the GCC by the following:

The Performance Security will be discharged by the Purchaser and returned to the Supplier not later than 60 days following the date of completion of the Supplier’s performance obligations, including the *warranty* and Annual Maintenance Services obligations, under the Contract.

3.4 Add as Clause 7.5 to the GCC the following:

In the event of any contract amendment, the Supplier shall, within 21 days of receipt of such amendment, furnish the amendment to the Performance Security, rendering the same valid for the duration of the Contract as amended for 60 days after the completion of performance obligations including warranty and Annual Maintenance Services obligations.

4. **Inspection and Tests (GCC Clause 8)**

Any or all of the following inspection procedures and tests are required by the Purchaser.

1. Inspection of equipments before dispatch.
2. Inspection of equipments at site of work before installation/commissioning.
3. Testing of equipments at site of work after installation to ensure conformity to the specification.

The Evaluation Committee shall decide and propose necessary tests as it may deem fit for the purpose of evaluation. The detailed procedure of testing for the purpose of acceptance of the Goods and Services is given under “Schedule of Requirements”.

5. **Packing (GCC Clause 9)**

Add as Clause 9.3 of the GCC the following:

Packing Instructions : The Supplier will be required to make separate packages for each Consignee. Each package will be marked on three sides with proper paint/indelible ink, the following:

i) Project ii) Contract No. iii) Country of Origin of Goods iv) Supplier's Name, and v) Packing list reference number.

6. **Delivery and Documents (GCC Clause 10)**

Upon delivery of the Goods, the Supplier shall notify the Purchaser and the insurance company by cable/telex/fax the full details of the shipment including contract number, railway receipt number and date, description of goods, quantity, name of the consignee etc. The Supplier shall mail the following documents to the Purchaser with a copy to the insurance company:

(i) Two Copies of the Supplier invoice showing Contract number, goods' description, quantity, unit price, total amount;

(ii) Railway receipt/acknowledgment of receipt of goods from the consignee(s);

(iii) Two Copies of packing list identifying the contents of each package;

(iv) Insurance Certificate;

(v) Manufacturer's/Supplier's warranty certificate;

(vi) Inspection Certificate issued by the nominated inspection agency, and the Supplier's factory inspection report; and

(vii) Certificate of Origin.

The above documents shall be received by the Purchaser before arrival of the Goods (except where the Goods have been delivered directly to the Consignee with all documents) and, if not received, the Supplier will be responsible for any consequent expenses.

7. **Insurance (GCC Clause 11)**

For delivery of Goods at Project Site, the insurance shall be obtained by the Supplier in an amount equal to 110% of the value of the Goods from "warehouse to warehouse" (final destinations) on “All Risks" basis including War Risks and Strikes.

8. **Incidental Services (GCC Clause 13)**

The following services covered under Clause 13 shall be furnished and the cost shall be included in the Contract Price:

1. The Services specified under the “Schedule of Requirements”.

9. **Spare Parts (GCC Clause 14)**

Add as Clause 14.2 to the GCC the following:

Supplier shall carry sufficient inventories to assure ex-stock supply of consumables and spares for the Goods during the entire Warranty and Annual Maintenance Services periods.

10. **Warranty (GCC Clause 15)**

(i) G.C.C. Clause 15.2:

The warranty period shall be **2 years** followed by 3 years of AMC from the date of Final Acceptance of Goods. The Supplier shall, in addition, comply with the performance and/or consumption guarantees specified under the Contract (Refer Performance Criteria in Section VI Clause 4. If for reasons attributable to the Supplier, these guarantees are not attained in whole or in part, the Supplier shall at its discretion either:

* 1. make such changes, modifications, and/or additions to the Goods or any part thereof as may be necessary in order to attain the contractual guarantees specified in the Contract at its own cost and expense and to carry out further performance tests in accordance with SCC 4 ;

(ii) Substitute Clause 15.4 of the GCC by the following:

“Upon receipt of such notice, the Supplier shall, within the period specified in SCC 10(iii) and with all reasonable speed, repair or replace the defective goods or parts thereof, free of cost at the ultimate destination. The Supplier shall take over the replaced parts/goods at the time of their replacement. No claim whatsoever shall lie on the Purchaser for the replaced parts/goods thereafter.

In the event of any correction of defects or replacement of defective material during the warranty period, the warranty for the corrected/replaced material shall be extended to a further period of 12 months.”

(iii) GCC Clauses 15.4 and 15.5:

Section VI clause 4 describes the uptime and maximum time to repair (MTTR). If the Supplier fails to remedy the defects within the period specified in Section VI clause 4, Purchaser shall deduct from any monies due to the Supplier including the Performance Security, at the rate of Rs.1000 / day for the first 30 days and at the rate of Rs 2000 / Day thereafter, from the date of notification till the date of setting right the defects or replacing the good with equivalent new Goods. The deduction of monies as above shall be limited to the Performance Security amount.

(iv) The Warranty covers the use of the Goods and Services anywhere in the state of West Bengal.

11. **Payment (GCC Clause 16)**

Payment for Goods and Services shall be made in Indian Rupees as follows:

(i)***Advance Payment*:** The Ten (*10) percent of the* the “Contract Price (item 8, Table:4, Section-IX: Contract Form)” shall be paid to the Supplier within *30 (sixty) days* after the date of the signing of the contract against a bank guarantee of same amount (10 % of contract value).

(ii)***On Delivery*:** Nil

(iii) ***On Installation:*** The 30 (Thirty) percent of the “Contract Price (item 8, Table:4, Section-IX: Contract Form)” shall be paid to the Supplier within *60 (sixty) days* after the date of the Installation Certificate issued by the Purchaser’s representative for the respective delivery.

1. ***On Final Acceptance***: the 2*0 (twenty) percent* of the “Contract Price (item 8, Table:4, Section-IX: Contract Form)” shall be paid to the Supplier within *60 (sixty) days* after the date of the Final Acceptance Certificate issued by the Purchaser’s representative for the respective delivery.
2. On the satisfactory completion of **First year** of warranty and Operation & Maintenance: the 8 (eight) *percent* of the “Contract Price (item 8, Table:4, Section-IX: Contract Form)”shall be paid to the Supplier within *60 (sixty) days* after the date of the completion of first year of Warranty and Operation & Maintenance period after Final Acceptance Certificate. Satisfactory completion is deemed if performance criteria as defined in section VI clause 4 are fulfilled.
3. On the satisfactory completion of **Second year** of warranty and Operation & Maintenance: the 8 (eight) *percent* of the “Contract Price (item 8, Table:4, Section-IX: Contract Form)”shall be paid to the Supplier within *60 (sixty) days* after the date of the completion of second year of Warranty and Operation & Maintenance period after Final Acceptance Certificate. Satisfactory completion is deemed if performance criteria as defined in section VI clause 4 are fulfilled.
4. On the satisfactory completion of **Third year** of warranty and Operation & Maintenance: the 8 (eight) *percent* of the “Contract Price (item 8, Table:4, Section-IX: Contract Form)”shall be paid to the Supplier within *60 (sixty) days* after the date of the completion of third year of Warranty and Operation & Maintenance period after Final Acceptance Certificate. Satisfactory completion is deemed if performance criteria as defined in section VI clause 4 are fulfilled.
5. On the satisfactory completion of **Fourth year** of warranty and Operation & Maintenance: the 8 (eight) *percent* of the “Contract Price (item 8, Table:4, Section-IX: Contract Form)”shall be paid to the Supplier within *60 (sixty) days* after the date of the completion of fourth year of Warranty and Operation & Maintenance period after Final Acceptance Certificate. Satisfactory completion is deemed if performance criteria as defined in section VI clause 4 are fulfilled.
6. On the satisfactory completion of **Fifth year** of warranty and Operation & Maintenance: the 8 (eight) *percent* of the “Contract Price (item 8, Table:4, Section-IX: Contract Form)”shall be paid to the Supplier within *60 (sixty) days* after the date of the completion of fifth year Warranty and Operation & Maintenance period after Final Acceptance Certificate. Satisfactory completion is deemed if performance criteria as defined in section VI clause 4 are fulfilled.

All the payment due to the Supplier will be made by the Purchaser in the form of Government of West Bengal cheques only.

1. The Supplier shall produce **Advance Stamped** Receipts for the payments due before receiving the payments.
2. The Supplier shall get the **Acceptance Certificate** in triplicate from the officer in charge of the equipment, not lower than the rank of Assistant Executive Engineer, when it is installed and the same should also be in the format as follows:

Acceptance Certificate

Certified that the following equipments were supplied and installed by

the Supplier ………………………………………………………

………………………………………………………………………………..

and are functioning well.

Executive Engineer

Office of ……………………

1. The Income Tax and surcharges, if applicable, will be deducted from the payments due to the Supplier.

The Suppliers request for payment with invoice in triplicate, with advance stamp receipt and the Acceptance certificate for each equipment should be sent to the Purchaser’s representative,“ *Superintending Engineer, Damodar Irrigation Circle, I & WD, Burdawan-713101*

1. **Prices (GCC Clause 17)**

Substitute 17.1 of GCC with the following:

1. Prices payable to the Supplier as stated in the Contract shall be firm during the performance of the Contract.
2. The VAT and the other taxes are applicable and the prices should be inclusive of all these taxes at the time of supply. The increase in the rate of VAT shall be borne by the Supplier and the decrease in VAT shall be deducted from the Contract Price.

13. **Sub-contracts (GCC Clause 21)**

Add at the end of GCC sub-clause 21.1 the following:

Sub-contract shall be only for bought-out items and sub-assemblies.

14. **Liquidated Damages (GCC Clause 23)**

14.1 For delays :

GCC Clause 23.1 -- The applicable rate is 0.5% per week and the maximum deduction is 10% of the Contract Price.

15. **Settlement of Disputes (Clause 28)**

The dispute settlement mechanism to be applied pursuant to GCC Clause 28.2.2 shall be as follows:

(a) In case of Dispute or difference arising between the Purchaser and a domestic Supplier relating to any matter arising out of or connected with this agreement, such disputes or difference shall be settled in accordance with the Arbitration and Conciliation Act, 1996. The arbitral tribunal shall consist of 3 arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties and shall act as Presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by the Secretary to the Govt. of West Bengal, I & W Department, Kolkata.

(b) In the case of a dispute with a Foreign Supplier, the dispute shall be settled in accordance with provisions of UNCITRAL (United Nations Commission on International Trade Law) Arbitration Rules. The Arbitral Tribunal shall consist of three Arbitrators one each to be appointed by the Purchaser and the Supplier. The third Arbitrator shall be chosen by the two Arbitrators so appointed by the Parties, and shall act as presiding arbitrator. In case of failure of the two arbitrators appointed by the parties to reach upon a consensus within a period of 30 days from the appointment of the arbitrator appointed subsequently, the Presiding Arbitrator shall be appointed by Secretary to the Govt. of West Bengal, I & W Department, Kolkata.

(c) The decision of the majority of arbitrators shall be final and binding upon both parties. The cost and expenses of Arbitration proceedings will be paid as determined by the arbitral tribunal. However, the expenses incurred by each party in connection with the preparation, presentation etc. of its proceedings as also the fees and expenses paid to the arbitrator appointed by such party or on its behalf shall be borne by each party itself.

(d) Where the value of the contract is Rs. 10 million and below, the disputes or differences arising shall be referred to the Sole Arbitrator. The Sole Arbitrator should be appointed by agreement between the parties; failing such agreement, by the appointing authority namely the Secretary to the Govt. of West Bengal, I & W Department, Kolkata.

*(\* Delete whichever is not applicable.)*

16. **Notices (Clause 32)**

For the purpose of all notices, the following shall be the address of the Purchaser and Supplier.

Purchaser: Superintending Engineer, Damodar Irrigation Circle, I & WD,Burdawan713101

Email: sediciwdwb@gmail.com

Supplier: *(To be filled in at the time of Contract signature)*

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

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

17. Supplier shall regularly intimate progress of Supply, in writing, to the Purchaser as under\*:

- Quantity offered for inspection and date;

- Quantity accepted/rejected by inspecting agency and date;

- Quantity despatched/delivered to consignees and date;

- Quantity where incidental services have been satisfactorily completed with date;

- Quantity where rectification/repair/replacement effected/completed on receipt of any communication from consignee/Purchaser with date;

- Date of completion of entire Contract including incidental services, if any; and

- Date of receipt of entire payments under the Contract

(in case of stage-wise inspection, details required may also be specified).

**18. Training:**

The designated Purchaser’s Technical personnel shall be trained by the Supplier to enable them to effectively operate the total system. Suitable training handouts / manual shall be given to each of the Trainee. The training schedule shall be agreed to by both the parties during the Performance of the Contract. Details of the trainings are specified in “Section-VI Technical Specifications, Clause 4

**19. Technical Documentation:**

Technical Documentation involving detailed instructions for Operation and Maintenance is to be delivered with every unit of the equipment supplied. The Language of the documentation shall be in English. Details of Technical Documentation are specified in “Section-VI Technical Specifications, clause 4.

**20.** The Income Tax statement for the past three years should be produced with the Bid document while submitting the Bid.

**SECTION V: SCHEDULE OF REQUIREMENTS**

1. List of Goods and Contract Completion Schedule

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *[The Purchaser shall fill in this table, with the exception of the column “Bidder’s offered Delivery date” to be filled by the Bidder]* | | | | | | | |
| **Line Item**  **N°** | **Description of Goods** | **Quantity** | **Physical unit** | **Final (Project Site) Destination as specified in BDS** | **Delivery (as per Incoterms) Date** | | |
| **Earliest Delivery Date** | **Latest Delivery Date** | **Bidder’s offered Delivery date [*to be provided by the bidder*]** |
| 1 | Complete SCADA system as detailed in  Section VI  Technical Specifications | 1 complete system |  | Distributed in Durgapur Barrage, Executive Engineers’s Office, HO in Kolkata and Asansol as detailed in Section VI |  |  |  |

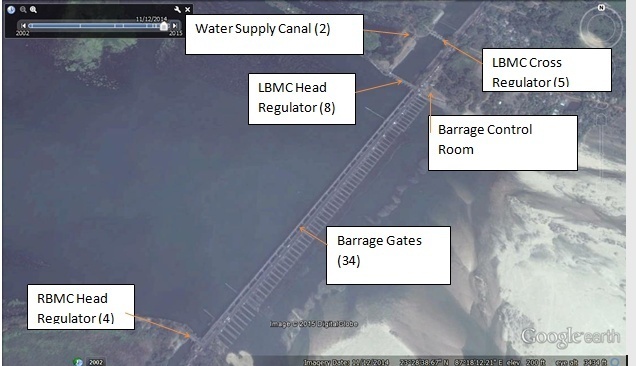
|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Table - 2: List of Related Services and Contract Completion Schedule | | | | | |
| S No | Description of Service | Quantity | Physical Unit | Final Completion Date(s) of Services |
|
| 1 | Installation and Commissioning of the entire system (as defined in section VI) |  |  |  |
| 2 | Operation of the entire system (as defined in Section VI) during 2- year warranty period |  |  |  |

**SECTION VI**

**Technical Specifications**

**1. About Durgapur Barrage**

Durgapur Barrage is constructed on Damodar River. Its Construction was completed in 1955. There are 10 Nos. under sluice gates, 24 Nos. other bay gates in this Barrage. RBMV and LBMC are constructed on right and left side of barrage respectively, for the purpose of irrigation. Water supply canal off-take from the Left bank main canal is located at approximately 500 feet downstream of LBMC head regulator.



**Fig. 1 A map of the Barrage and Canals (figure in brackets indicate No. of Gates)**

**Salient Features:**

Construction year - 1952 - 1955

Length of Barrage - 692 meter

No of Gate - 24 + 10

Gate Size - 60 \* 18 feet

Design discharge maximum - 550,000 cusecs

Discharge Passed - 1,978, 380,000 cusec.

UP Stream H.F.L - 212.0 Metres

Normal Pond level - 211.5 Metres

AC Motor on Spillway Gates - 5 HP 3-Phase

**Brief Detail of Canal gates:**

Number of Gates on LBMC Head regulator: 8 Gates (20 \* 08 feet)

Number of Gates on RBMC Head regulator: 4 Gates (20 \* 08 feet)

Number of Gates on LBMC Cross regulator: 5 Gates (20 \* 08 feet)

Number of Gates on Water Supply Canal: 2 Gates (20 \* 08 feet)

**1.1. Existing Barrage Gate Drive Mechanism**

The existing gate drive is 3-phase 5 HP AC Motor drive with phase reversal starter panel with RAISE/LOWER/STOP buttons for manual control.

STOP

RESET



Raise

LOWER

**Fig. 2 Front View of existing control panel**

The speed is reduced by a series of gears from 3000 rpm to one revolution in about 20 minutes to drive the drum on which the rope moving the gate is wound. The diagram below shows the display Dial for Gate Position with pointer connected directly to the drum shaft. The drum is located just behind the dial



Dial

Pointer

Shaft connecting drum to the drive system

**Fig. 3 Display Dial**

**2. Objective**

The broad objective of the project is monitoring and control of water flow through the main Barrage and Canals of Durgapur Barrage.

The system will receive controlled water discharge information from upstream reservoirs in Maithon and Panchet (about 60-80 Km away) and total discharge at Asansol (about 45 Km upstream) and decide on the desired level of discharge as per guideline document.

Further, the gates are required to be operated from the barrage control room as per the dynamic operational schedule to be incorporated in order to remove the siltation and arrest further accumulation of silt at upstream location from Barrage.

To achieve this objective, an agency will be engaged for the following:

**2.1** Automation of the Barrage by installing a suitable SCADA system with remote viewing facility to view the parameters on line from Executive Engineer’s Office in Durgapur and Head Office in Kolkata.

**2.2** Establishing suitable Data Storage and Archival Facility in Head Office in Kolkata.

**2.3** Measurement of Water Discharge in Durgapur and Asansol.

# 3. Scope of Work

3.1 Supply, installation and commissioning of hardware and software necessary for the SCADA system for:

3.1.1 The Automatic Gate Operation and Control of Durgapur Barrage from Barrage Control Room

3.1.2 On-line monitoring of Barrage from Barrage Control Room, viewing from Executive Engineer’s Office and Head Office in Kolkata

3.1.3 Water level and measurement at the Station at Asansol

3.2 Server in Head Office for Data Collection, Dissemination and Archival using Web Services.

|  |
| --- |
| **The detailed Scope of Work at each location, Technologies and Specifications are described in the following sections.** |

**4 General**

**4.1 Scope of work shall include supply, installation and commissioning of all components necessary for implementation of the functional requirements described in Objective and Scope of work in clauses 2 & 3 and detailed scope of work in clauses 5 to 10. This will include but will not be limited to Hardware, System Software and Utilities, Application Software, Computers, Switches, Controlling Devices (e.g. RTU/PLC/PAC), Data Communication Devices, Field Instruments and Sensors, Device Drivers, Power and Signal Cabling including necessary trenching and junction boxes, Power Supplies, and all structures and fittings necessary for installation of all subsystems and Instruments and Sensors in Control Room and in Field.**

**4.2 Following items will be considered an integral part of deliverables**

**4.2.1 Documentation**

4.2.1.1 The Bidder shall supply full documentation for installation, operation and maintenance in English.

4.2.1.2 Three hardcopies (in printed form) and three softcopies in separate media in CDROM/DVD of each manual will be a part of deliverables.

4.2.1.1 Manuals will be for the system and each subsystem including both hardware and software components.

4.2.1.2 Documentation will include System Block Diagrams, Layout Diagrams, Line Diagrams and Wiring Diagrams for external connections, Interface Specifications, Protocols supported and configuration procedures.

4.2.1.5 All license documents including software licenses will be included in documentation

4.2.1.6 Diagnostic Programs and Tools - Diagnostic Hardware and Software (including all necessary tools and tackles) required for maintenance.

**Note**

|  |
| --- |
| **The documents will be transformed to web format and uploaded in the website of the Department as a part of Web-based Helpline for the project. A summary guide book for operators explaining the building blocks and features in simple terms will be included in the helpline.** |

**4.2.3 Training**

The Bidder will provide formal and on-job training on installation, operation and maintenance of the system. Supply of training document/handout during training is a must and will be considered part of training process.

Apart from Hardware, the training will include both System Software and Application Software.

The training plan in the following sections is a minimum requirement and the Bidder is expected to propose any additional training that is considered critical for the success of the project.

**4.2.3.1 Training Plan, Schedule and Course outline**

The Bidder will prepare a training plan indicating course outline, brief contents and schedules and include the same in the Bid document in the special terms and conditions. The plan will indicate day-wise details of each course.

Training will be repeated each year during the Warranty and AMC periods for refreshing the trained staff and training additional staff.

**4.2.3.2 Cost of Training**

The Bidder is responsible for all training costs including the salaries of the training instructors and expenses for preparation and distribution of all training materials.

The costs of travel, transportation and per diem expenses of the trainees shall be borne by the Purchaser.

**4.2.3.3 Classroom Training**

Training shall be provided by the bidder in several phases. The training shall include both classroom and field trainings and will be continued during all five years for which the system is covered by warranty/AMC. The bidder is required to have hydro-meteorological equipment and software specialists.

**Table: Classroom Training Courses**

|  |  |  |  |
| --- | --- | --- | --- |
| Sl. No. | Description | Numbers of Training sessions /Year | Number of Participants per session |
| 1 | Training Course for Senior Management. Duration: 1 day | 2 | 20 |
| 2 | Operation and Maintenance Course for Engineers and Technicians Duration: 5 days | 2 | 20 |
| 3 | User Training Course for Operators Duration: 3 day | 2 | 20 |
| 4 | Design, operation and maintenance of the database at Central Data Centre at Kolkata including back-up, recovery, archival and web-services.  Basic statistical, graphical and reporting capabilities for data conversion and data aggregation  Duration: 3 days | 2 | 10 |
| 5 | Operation and Maintenance of ADCP  Duration: 3 days | 2 | 5 |

**4.2.3.4 On-Job Training**

On-job training will be provided by the selected Bidder during installation of the SCADA system and Field Instruments and also during the course of maintenance and operations of the system as required.

**4.2.3.5 Training Video**

The classroom training and hands-on experience of troubleshooting will be used to prepare a video and will be posted on the web for easy access. All training modules will also be provided as Windows Media Player compatible media files on a USB Drive. Three copies on three separate media shall be required.

**4. 2.3.4 Location and Logistics of Training**

The theoretical training will take place in Durgapur or Kolkata as decided by the purchaser. On-job training will be in Durgapur, except for operation and maintenance of ADCP, which can take place in Durgapur or Asansol.

Purchaser will provide class room and other logistics.

**4.2.4 Spares**

**`**

**4.2.4.1 Spares to be included in the Bid price and Bid evaluation**

1. Critical Subsystems like Gate Position Sensing Unit, Gate Control Unit/RTU, Sensing Instruments etc. which are not for installation but for immediate replacement at subsystem level in case of failure.

2. Critical high usage components (not entire subsystems) which will be used for field level repair. This may include Gate Control Parts, Gate Position Sensors, communication components, connectors etc.

**Note:**

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| **The bidder shall decide components and subsystems to be stocked as spares in the Barrage Office on the basis of MTTR (Maximum Time To Repair) figure quoted in section 4.6.3** |

**4.2.4.2 Spares to be quoted but not to be included in the Bid price and Bid Evaluation**

1. In addition, the Bidder must submit a complete list of recommended spare parts at Subsystem Level as well as Component Level, which will be ordered separately as and when needed.

2. Price quoted must be valid for 5 (five) years from the date of Final Acceptance of the system.

**4.3 Warranty**

The entire system in Durgapur Barrage, Asansol, Executive Engineer’s Office and Head office in Kolkata will be covered under a warranty against all design and manufacturing defects for a period of two years beginning from the date of Final Acceptance.

**4.4 Operation and Maintenance (O&M)**

**4.4.1** **Operation**

The bidder will be responsible for the operation of the entire system as defined by clauses 5-10 during the warranty period.

**4.4.2 Warranty Maintenance**

The bidder will be responsible for the free on-site maintenance (with free placement of parts) of the entire system as defined in sections 5-10 during the warranty period.

**4.4.3 Annual Maintenance Contract (AMC)**

The selected bidder shall provide post-warranty maintenance services for a period of three years after completion of warranty. Annual Maintenance Contract will be signed for this purpose. Scope of AMC will include on-site maintenance with free replacement of parts. AMC amount will be added to compute Bid price and Bid evaluation.

**4.4.4** The bidder must be an Indian Firm or Indian arm of an International Firm with an all-India support base available during and after the project implementation phase.

**4.5 Guarantee for future support beyond warranty**

The selected Bidder agrees to provide maintenance support for a minimum period of 10 years from the date of Final Acceptance of the system.

**4.6 System Performance Criteria**

In general, the response to any query from control room will be immediate and will not exceed three seconds for any response where no computation or wide area networking is involved.

The following performance parameters must be strictly maintained.

**4.6.1** Average uptime – 99.5% for 24x7 operation

**4.6.2** MTBF (Mean Time Between Failures) for individual units - 6 months

**4.6.3** MTTR (Maximum Time To Repair) when the system is down as per definition given below:

- 3 hours during rainy season (June - October)

- 24 hours during the rest of the year.

**Note**

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| **Computation of Down time:**  **The System will be considered to be down under any of the following conditions:**  A. Control for more than 3 (three) Barrage Gates are down at a time  B. Control for more than 1 (one) Canal Gate on LBMC Head Regulator are down at a time  C. Control for more than 1 (one) Canal Gate on RBMC Head Regulator are down at a time  D. Control for more than 1 (one) Canal Gate on LBMC Cross Regulator are down at a time  E. Control for more than 1 (one) Canal Gate on Water Supply Canal are down at a time  F. Monitoring of Water Level in Durgapur is down for more than three (3) hours  G. Monitoring of Water Level in Asansol is down for more than 8 (eight) hours.  H. Monitoring of any other parameter as defined in clause 5.2 is down for more than 24 (twenty four) hours.  I. Remote Monitoring of Barrage from Executive Engineer’s Office or HO in Kolkata is down for more than 3 (three) hours.  J. Any particular hardware or software functionality defined in technical specifications is down for more than 72 (seventy two) hours.    Unless otherwise stated, Control/Monitoring as referred above will mean Monitoring or Control from Barrage Control Room. |

**4.7 Specifications and Model Offered**

The specifications offered by the bidder will be part of the contract between purchaser and the selected bidder and will be used by the inspection authority to verify compliance on delivery. All goods supplied shall be new, unused and of the most recent or current models, incorporating all the latest improvements in design and materials used.

**4.8 Legal Issues and Intellectual Property Rights**

All hardware and software supplied will be legal and without any dispute on intellectual property rights. The Bidder indemnifies the purchaser against any legal issues that may arise out of usage of any part or the whole supplied system.

**5 Scope of Work at Durgapur Barrage**

Supply, Installation and Commissioning of SCADA system for automation of Durgapur Barrage with the following functional specifications described below.

**5.1 Control of the Barrage and Canal Gates**

5.1.1Barrage Gates 34 Gates

5.1.2 LMBC Head Regulator 8 Gates

5.1.3 RBMC Head regulator 4 Gates

5.1.4 LBMC Cross regulator 5 Gates

5.1.5 Water Supply Canal 2 Gates

5.1.6 Control Inputs: 3 for each Gate - RAISE, LOWER and STOP

|  |
| --- |
| **Note: In case of any problem with the control of the automated system, it should be possible to revert to the manual system of Gate Drive immediately.** |

**5.2 Data Acquisition from Barrage Site**

The system will acquire the following parameters at specified intervals and store them in a data base. The parameters will be displayed in wide screen monitors.

**5.2.1** **Gate Position and Gate Status (Moving UP/Moving Down/Static) of the following:**

**5.2.1.1**  Main Barrage 34 Gates

**5.2.1.2**  LMBC Head Regulator 8 Gates

**5.2.1.3**  RBMC Head regulator 4 Gates

**5.2.1.4**  LBMC Cross regulator 5 Gates

**5.2.1.5**  Water Supply Canal 2 Gates

**5.2.2 River Water Level:**

**5.2.2.1** River Water Level in Durgapur Barrage 2 Sensing Units

**5.2.2.2**  River Water Level in Asansol 1 Sensing Unit

**5.2.3 Automatic Weather Station (AWS) Parameters:**

**5.2.3.1**  Air Temperature 1 Sensing Unit

**5.2.3.2**  Relative Humidity 1 Sensing Unit

**5.2.3.3**  Rainfall 1 Sensing Unit

**5.2.3.4** Wind Speed 1 Sensing Unit

**5.2.3.5**  Wind Direction 1 Sensing Unit

**5.2.3.6**  Solar Radiation 1 Sensing Unit

**5.2.4 Video Surveillance System**

5.2.4.1Barrage Gates 8 Cameras

5.2.4.2 LMBC Head Regulator 2 Cameras

5.2.4.3 RBMC Head regulator 1 Camera

5.2.4.4 LBMC Cross regulator 1 Camera

5.2.4.5 Water Supply Canal 1 Camera

**5.2.5 Remote Inputs:**

5.2.5.1 Water Level of Asansol 1 Sensing Unit

5.2.5.2 Water Discharge in Panchet Dam 1 Remote Input

5.2.5.3 Water Discharge in Maithon Dam 1 Remote Input

**5.2.6 Water Discharge (Gate wise and Total):**

5.2.6.1 Barrage River Discharge 1 Computed Parameter

5.2.6.2 Left Bank Canal Discharge 1 Computed Parameter

5.2.6.3 Right Bank Canal Discharge 1 Computed Parameter

5.2.6.4 Left Bank Water Supply Canal Discharge 1 Computed Parameter

5.2.6.5 River Water Discharge at Asansol 1 Computed Parameter

**5.2.7 Solar Panel**:

5.2.7.1 In Durgapur 1

5.2.7.2 In Asansol 1

**5.3 System Description**

**5.3.1** The proposed system can be divided in three conceptual levels - Management Level in Control room, Controller Level and Field Level Equipments as shown in the indicative block diagram shown in Fig. 4

**5.3.2** **Redundancy**

Distributed system instead of one strong Host Server is recommended for having a built-in redundancy in the system. Total host functionalities should be divided in the two systems as described below.

Redundancy should be incorporated in other areas like Controller to Field Device communication by having additional ports in RTU and dual bus to which each device is connected.

The idea is not to build a duplicate system but to ensure that the core system operates without any major break. Bidders can incorporate their own ideas in the proposal.

**5.3.3** In general, while designing the system, the Bidder will conform to:

* Use of state of the art and reliable technology suitable for 24x7 operations
* Modular design and ease of maintenance
* Uptime, MTBF and MTTR as defined clause 4.6
* Redundancy in design

**5.3.4 System Architecture**

The diagram below proposes architecture based in MODBUS backbone and multi dropped MODBUS devices on a 485 bus. However, the Bidder should feel free to propose a more modern backbone and controllers conforming to IEC standards. Similarly, instrument specifications and interfaces recommended in clause 10 are minimum requirements and the Bidder may like to choose intelligent and better equipments, if they so desire

**Data Base and Communication Server**

**(Remote Connectivity through Internet and Cellular GSM/GPRS network)**

|  |
| --- |
| **SCADA Server** |

**Management Level**

**(In the Control Room located within 100 metres of Barrage)**

MODBUS TCP

**-----------------------------------------------------------------------------------------------------------------**

MODBUS TCP To

MODBUS RTU/ASCII GATEWAY

**Controller Level**

**(In Control Room/Field)**

MODBUS RTU/ASCII

**------------------------------------------------------------------------------------------------------------------**

**Instrument Level**

**(In Field)**

Water Level

AWS

Slave Gate Control Unit # n

Slave Gate Control Unit # 1

**----------**

**Fig. 4**

**5.3.5** No. of gates controlled by a field level gate control unit shall not exceed 8. The device should preferably be an intelligent device (named here as Slave Gate Control Unit in the diagram).

**5.3.6** **Recommended minimum configuration for servers:**

**No. of servers: 2**

**Configuration:**

Intel Processor with 4/6 cores

Clock 1.6 GHz minimum,

L1/L2 cache 256KiB/1MB minimum

8GB RAM

Hot plug-in power supply

Rack mounted,

2x500GB HDD with RAID.

Two IP Ports (100/1000mbps)

Secured open operating system preferably UNIX/LINUX.

Open RDBMS PostgreSQL or equivalent.

Wide Screen LED Color Monitor (53-55 in) with keyboard and mouse.

**5.3.6.1** The bidder will divide the total load of the host to the two computers so as to have a optimum load balance. It is recommended that control and data acquisition be handled by one computer and the rest of the load including wide area networking and data base server be allotted to the other.

**5.3.6.2** Design and operational procedures should ensure that in case any of the individual Computers is down, other Computer will take over the functionalities of the defective one and the whole system will recover in less than 15 minutes.

**5.3.7 Other peripheral Devices to be supplied:**

1x Multifunction Laser Printer (HP Color Laserjet Pro MFP M176n or equivalent)

1x Deskjet Printer (HP Deskjet 1112 or equivalent)

**5.3.8 It is mandatory that the Bidder will submit a detailed description of the proposed system in each location complete with Block Diagram clearly indicating individual subsystems /units /instruments /sensors and their interconnections and how the proposed system will address the requirements referred in the technical specifications and features in clause 5.3.3.**

**5.4. SCADA Functionalities**

**5.4.1 Control**

Barrage gate control is the prime activity of the SCADA. No. of gates and control inputs are described in clause 5.1

There may be two types of control:

**5.4.1.1** Normally Dynamic Gate Operation Scheduling Program will decide position of each Gate depending on the Water Discharge requirement.

Development of Dynamic Scheduling Program is included in the scope of work. Final logic will be decided by the purchaser in consultation with bidder (refer clause 9.2.1)

**5.4.1.2** Operator sitting on the Control Panel should be able to control movement of individual gates. This is needed for testing and emergency handling.

**5.4.2 Data Acquisition**

Clause 5.2 gives details of the parameters to be acquired from the sensors. The frequency of acquisition of each parameter should be programmable and the operator should be able to change the frequency from the control panel.

Computed Parameters include water discharge at various locations as detailed in clause 5.2.6. Data base will contain in tabular form River/Canal/Gate profile information collected by measurement using ADCP. Water discharge will be computed from the table and current water level.

**5.4.3 HMI/View Server**

Control and Monitoring screen formats are to be proposed by the selected Bidder and decided in consultation with the buyer.

All the inputs and outputs as listed in clauses 5.1 and 5.2 will be displayed on two Wide Screen (53-55 in) Monitors.

Parameters should be displayed in both Graphic and Text modes. Graphic Interface should resemble the actual buttons, switches, dials and display on the sensing units as much as possible, so that the operator gets a feel of the instrument sitting in the control room.

**5.4.4 Data Base Server**

An open ODBC compliant Data Base like PostgreSQL will be used.

Data Base must have sufficient capacity to store 5 years data with frequency of acquisition of once in 30 minutes.

The Data Base will be duplicated on line in Head Office in Kolkata.

**5.4.5 Communication Server**

Communication with remote stations will use web service for communication. GSM/GPRS service will be used as backup. In case of communication with Asansol, the devices and the area may not be covered by internet services and GSM/GPRS may be the prime mode of communication.

**5.4.6 Alarms and Reports**

System will generate audio alerts (hooter). System will also generate alerts through email/SMS as per user defined logic.

System will analyse parameters, trend and generate reports in various formats like Excel, Word etc. and send them to HO in Kolkata.

Details of alarms and reports will be decided by the customer in consultation with the Bidder.

**5.5 SCADA Software**

Non-proprietary open system like UNIX and SQL will be used as Operating System and Data Base. Same OS and Data Base software will be used in all the servers of the distributed system, including the Server in HO, Kolkata.

The software to be developed or procured by the Bidder includes all functionalities required for the configuration, control and operation of all components (including sensors, data loggers and telemetry system).

Features include real-time data decoding, processing and storing of incoming messages, database management, basic statistical, graphical and reporting capabilities as well as data conversion.

The software also provides the graphical user interface which offers site mimic screens, alarm pages, trend pages and control functions.

Network management software will control the communications network for local as well as wide area networking with Kolkata, Asansol and Executive Engineer’s Office.

RTU automation software will configure and maintain the application housed within the RTU. It will include automation tasks (control and acquisition) and all data processing tasks performed at RTU level.

All report and display formats will be decided by the purchaser in consultation with the selected Bidder.

**5.6 RTU**

Bidder can choose any modern intelligent controller like RTU (or PAC or PLC) for the purpose of automation.

**5.6.1 RTU Design**

The RTUs shall be designed in accordance with applicable International Electro- technical Commission (IEC), Institute of Electrical and Electronics Engineer (IEEE), American National Standards Institute (ANSI), and National Equipment Manufacturers association (NEMA) standards, unless otherwise specified in this technical specification. In all cases the provisions of the latest edition or revision of the applicable standards in effect shall apply.

**5.6.2 RTU Functions**

All functional capability described herein shall be provided by the Bidder even if a function is not initially implemented.

As a minimum, the RTUs shall be capable of performing the following functions:

A. Collecting and processing the digital status inputs, analog inputs, accumulated values and transmitting to master station

B. Receiving and processing digital & analog control commands from master station

C. Accepting polling messages from master station.

D. Communication simultaneously on all Communication ports and using multiple concurrent protocols, including the IEC 60870-5-101, 60870-5-104 & MODBUS/103 protocol.

E. Data transmission rates from 300 to 9600 baud for serial ports (for both IEC 60870-5-101 & MODBUS/103) and 10/100 Mbps for TCP/IP Ethernet ports.

F. RTU shall support protocol 61850 for communication with IEDs.

G. RTU shall have the capability of automatic start-up and initialisation following restoration of power after an outage without need of manual intervention. All restarts shall be reported to the connected master station.

H. RTU shall support time synchronization through messages received from master station.

I. RTU shall support downloading of RTU database from the master station.

J. RTU shall support SOE (Sequence of events) feature

**5.6.3** **Communication Ports in RTU**

The RTUs shall support simultaneous communications with master station, maintenance and configuration terminal (Laptop PC), a local logger (printer), Multi-function transducers and Local Data Monitoring System (LDMS)/Logger.

The RTUs shall have communication ports as follows:

A. Two Ethernet ports for connectivity to Master Station on IEC 60870-5-104

B. 2x RS232 ports

C. One port for the RTU maintenance and configuration terminal.

D. One port for Local Data Monitoring System (LDMS) and local logger (printer).

E. Required number (minimum two) of RS 485 ports for polling Multi-function transducers using MODBUS/103 protocol in multi-drop (party line) mode

It shall be possible to increase the number of communication ports in the RTU by addition of cards, if required in future. The RTU shall respond to independent scans and commands from Master Station, LDMS and Configuration & Maintenance Terminal simultaneously. The RTU shall support the use of a different communication data exchange rate (bits per second) and scanning cycle on each port.

**5.6.4 Power Supply**

The RTU will be powered from a 48V DC system.

The characteristics of the input DC power supply shall be

A. Nominal voltage of 48V DC with operation between 41 and 60V DC

B. Maximum AC component of frequency equal to or greater than 100 Hz will be 0.012 times the rated voltage peak-to-peak.

C. The RTU shall have adequate protection against reversed polarity, over current and under voltage conditions, to prevent the RTU internal logic from being damaged and becoming unstable causing mal-operation.

**5.6.5 Environmental Requirements**

The RTU should be able to operate in areas with no temperature or humidity control. The RTUs shall be capable of operating in ambient temperature from 0 to +55 degree C with rate of temperature change of 20 degree C/hour and relative humidity less than 95%, non-condensing.

**5.6.6 Portable Configuration and Maintenance Terminal (PCMT)**

**The bidder shall supply a Portable Configuration and Maintenance Terminal (Laptop PC)** which shall provide followings capabilities:

A. RTU Data Base Configuration & Maintenance

B. Local Operator Interface & RTU Diagnostics

C. Master Station and RTU simulator cum protocol analyser

**5.6.7 Wiring/Cabling requirements**

Shielded (screened) cables shall be used for external Cabling from the RTU

A. All cables shall have stranded copper conductor of suitable cross section depending on load.

B. The Communication cable shall be of shielded, twisted pairs and of minimum 0.22 sq mm size.

These are minimum requirements. Bidder is free to propose improved cabling technology.

**5.7 Instrument Level:** (Refer clause 10)

**Note:**

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| **Data Logger:**  Section 10.3.2 gives recommended specification for External Data Loggers. It should be noted that the purpose is to ensure that the information procured by the instruments are stored locally for up to 6 months to avoid loss of data. Many of the modern intelligent instruments and controllers may have built-in data logging facility and an external data logger may not be needed in such cases. |

**5.8 Measurement and Calibration of Water Discharge using ADCP**

**5.8.1** Measurement of Discharge and Calibration of Gate discharge in Spillway Gates and Canal Gates of Durgapur Barrage

**5.8.2** Verification of Gate Level-Discharge relationship in the Spillway Gates and Canal Gates

**5.8.3** Development of Stage-Discharge relationship for the Asansol Water Level Monitoring Site

**Note**

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| --- |
| **Asansol Water Level Monitoring Site will be treated as a remote station for the SCADA. Water Level Data will be received in the Control Room of Durgapur Barrage and Water Discharge will be computed and displayed in the Monitor and saved in the Data Base.** |

**5.9 Video Surveillance** (Refer clause 5.2.4)

The video surveillance system will be a standard standalone monitoring system complete with DVR and cameras.

Primary Purpose is to view gate movement from Control room. Operator should be able to see that the gates moves up/down or stop when the appropriate command is given.

Camera and DVR must be of same make, a well proven and widely used model, produced by a primary brand like PELCO, BOSCH, SONY, HONEYWELL, SAMSUNG, PANASONIC and LG and tested in a large number of installations. Provide manufacturer’s certificate that the model proposed has been in production for at least 2 years.

Cables must be of reputed make like Finolex, Polycab, Mescab or equivalent.

The DVR will be installed in the control room. Cameras will be installed on Barrage and Canals.

**5.9.1 DVR**

It is proposed that one 16 Channel Hybrid DVR supporting 16 Analog Cameras and upto 8 IP cameras be used for the purpose.

**Salient Features:**

Operating system: Linux/Windows; System embedded H264 video compression algorithm; 16 channel DVR 400 fps-PAL; Simultaneous viewing, network, recording, backup & playback functions; Multiple viewing options (VGA/BNC); Video in out/Loop out: 16/16; Audio in/out: 16/2; Video output: 1 composite, 1 VGA, 1 Spot, 1 HDMI; Recording rate: PAL, real time (25 fps per channel).

System should be robust & capable of working in 24x7 environments, scalable/ upgradable.

Provision for minimum 04 SATA slots for 3 HDD + DVD - RW (Each SATA slot should be of minimum 2 TB HDD capacity); Data storage for minimum 30 days: Data recycling on FIFO basis.

Network interface: Ethernet; Support multi zone motion detection, real time & motion base recording; Support multilevel password for operation, setup & remote access; Support tempering detection alarm function to indicate tempering of DVR/cameras; Visual indication for local faults, disc full, malfunction etc.

Support video signal loss alarm; System should do health check of all cameras;

Support real time & motion based recording; Support HDD sleep mode & FAT 32 file system; Support USB flash disk, USB DVD-RW for backup with built in DVD-RW, 2 USB ports, one of which should be in front panel; Support playback in various modes; fast slow, pause, forward, backward, frame-by-frame; Support standard protocols -TCP, UTP, PPPOE, Multicast and DHCP; Provision for ADSL, PSTN, Leased line, Broad band; Remote viewing through mobile phone and any other PC with IP;

System should have file player software support so that back up can be auto played on any PC using windows media player.

Central Monitoring Station (CMS) Software free of cost; The system should be capable of running remote health monitoring System.

Power: AC 100-240 V 50 Hz

Should carry UL/FCC/CE certification

**5.9.2 Cameras**

Cameras will operate in open field (on main barrage/canals) and hence must be suitable for outdoor use. Material of casing, weather resistance, lightning and surge protection and enclosure standard should conform to common specifications of field instruments as described in clause 10.2

**5.9.2.1** The length of about 700 metres of the main barrage with 34 gates will be covered by 8 cameras. Hence bullet or other cameras with suitable focus must be chosen to give a reasonably clear image of the gates. Both Analog and IP cameras will be acceptable. Cameras will have following minimum specifications:

**Infra Red Cameras with**

A. 1/3 inch color CCD,

B. Min resolution 650 TV lines

C. Min 24 LEDs and 2.8 -11mm lens

D. Must include Vandal-proof Enclosure, Mounting Bracket and Housing

E. Must carry UL/FCC/CE certification (all three) F. Power Supply: 12V (Power as needed)

**5.9.3** Monitor : 42-in Color LED

**5.9.4** Hard Disk: 2x2TerraBytes

**5.9.5** Video Cable: RG-6 coaxial video cable with BIS approved 20 mm GI conduit or better

**6. Scope of Work at Head Office in Executive Engineer’s Office**

**6.1** Supply, installation and Commissioning of Hardware and Software for Remote Viewing of Durgapur Barrage.SCADA System.

**6.2** Two wide screen (53-55 in) LED Colour Monitors are to be used for Display of Data.

**7. Scope of Work at Head Office in Kolkata**

Supply, installation and Commissioning of Hardware and Software for storage and hosting in Website for public dissemination.

7.1 Archival of Historical Data

7.1.1 Historical data available in hard copy (may be hand written) to be entered in the Archive.

7.2 Active Data Base which will update Durgapur Barrage Data on-line.

7.3 Remote Viewing of Durgapur Barrage Parameters. Two wide screen (53-55 in) LED colour monitors are to be used for Display of Data.

The software will include data quality control that shall allow for the flagging and/or removal of data using threshold analysis. Easy to use interface allowing sensor by sensor quality control for threshold and rate of change data screening is required. The software will include:

* A tool to allow for the viewing of graphs, plots and the export of data in Excel, MS Access, Comma Separated Variable (CSV) formats.
* In addition, it shall be possible to export data to Hydrological Information System (HIS) to be developed under National Hydrology Project in Future.
* Report and display formats will be decided by the purchaser in consultation with the bidder.

**7.4 Server in Kolkata**

**It is recommended that configuration of Server in HO in Kolkata be identical in Hardware, OS and RDBMS as the Host Server in Durgapur with expandable Disk Capacity.** This will help resolve many of the compatibility issues and will bring ease in maintenance.

Intel Processor with 4/6 cores

Clock 2.0 GHz minimum,

L1/L2 cache 256KiB/1MB minimum

8GB RAM

Hot plug-in power supply

Rack mounted,

2x500GB HDD with RAID.

Two IP Ports (100/1000mbps)

Secured open operating system preferably UNIX/LINUX.

Open RDBMS PostgreSQL or equivalent.

2XWide Screen Monitor (53-55 in) with keyboard and mouse.

1x Multifunction Laser Printer (HP Color Laserjet Pro MFP M176n or equivalent)

1x Deskjet Printer ( HP Deskjet 1112 or equivalent)

**8. Scope of Work at Asansol**

Supply, installation and Commissioning of Hardware and Software for:

**8.1** Water Level Measurement using Pulse Radar Technology

**8.2** Data Logging (Refer clause 10.3.2)

**8.2** Water Discharge Profiling using ADCP

**8.3** Local storage of Water Level data in Data Logger and on line communication to Durgapur Barrage Control Room using GSM/GPRS network.

**9. Software**

**9.1 SCADA Software** (refer clause 5.5)

**9.2 Application Software:**

**9.2.1 Dynamic Gate Operation Schedule**

This software will be the guide to the Gate Operation. The schedule will generate a chart indicating desired Position of each Barrage Gate for a particular Water Discharge requirement of the Barrage.

Water discharge information from upstream reservoirs in Maithon and Panchet and water discharge in the River in Asansol will be taken into account to plan the Barrage Discharge.

The logic will be decided by the purchaser in consultation with the Bidder.

Specific software for hydro meteorological analyses, modelling and forecasting purposes is not part of this procurement process. An appropriate software solution will be developed and implemented at a later stage. The software provided by the bidder must be open for integration with the specialised software package to be developed and the bidder must provide sufficient database documentation and user rights for this purpose.

**9.3** **Licenses**

For procured software, all licenses and maintenance agreements should be in the name of Purchaser and the Bidder should seek full support and updates for such software for the duration of the warranty period of 2 years and Annual Maintenance Services Period of 3 years.

**10. Field Equipments**

**10.1** The Bidder will supply a list of Field Equipments to fulfil the requirements of clauses 5.1 and 5.2.

The Bidder has to certify that each equipment fulfils Common Features and Specifications criteria of clause 10.2.

**10.2 Common Features and Specifications**

The minimum environmental, electrical and other common specifications that each of the equipments and the Masts and Support Fixtures must adhere to, are given below.

**10.2.1 Site Environment**

The equipments quoted must be able to operate in the ambient environment defined below.

**10.2.1.1** Ambient Temperature 0-60 Degree C

**10.2.1.2** Relative Humidity 10 - 100%

**10.2.1.3** Altitude 0-1000 Metres

**10.2.1.4**  Wind Speed 0-110 Km/hr

**10.2.2 Power Supply**

10.2.2.1 Common Power Supply for all Field Instruments, Sensors and Field Communication Equipments (e.g. GSM/GPRS devices)

10.2.2.2 Input Input will be +12V DC solar photo voltaic system with sufficient capacity to supply power to all equipments of the station.

10.2.2.3 Capacity The Solar and Battery must be sized according to the needs of the equipments provided. Battery must be able to supply power for at least 30 days without recharge. The bid should contain a power budget to indicate how this requirement will be met.

10.2.2.4 Voltage/ Charge Regulator A solar regulator should be installed to regulate power and maintain optimum battery and data collection platform operation.

10.2.2.5 Battery Test Indicator Should be included

10.2.2.6 On-line Status Reporting The balance battery charge available and the number of days it can support all the equipment at a site should be reported everyday live to the Host System in the control room and displayed on-line.

10.2.2.7 Battery Charging The system should include battery charging from mains (input 230V AC/output +12 V DC)

**10.2.3 Interface** SDI-12, RS 485, 4-20mA Current Loop

**10.2.4 Material of Casing** Corrosion resistant metal (e.g. Aluminium or Stainless Steel)

**10.2.5 Weather Resistance** Should be capable of working in rain, harsh environmental and weather conditions in Durgapur and Asansol.

**10.2.6 Surge Protection** Built-in or external

**10.2.7 Lightning Protection** The Bidder has to setup lightning protection system including lightning rod, ground rod and conductors to protect each field instrument.

**10.2.7 Enclosure Standard** IP 65 or better for items having active electronic components. If the instrument/sensor does not have suitable enclosure, the Bidder may use external boxes conforming to the specification

**10.2.8 Licence/ Certification** Instruments should be have EMC/FCC or equivalent country-specific certificate against electromagnetic interference and emission as applicable. In case the equipment needs any special licence or certification in India (e.g. license for radio transmission in certain frequency bands), it will be the Bidder’s responsibility to comply with the requirement.

**10.2.9 Accessories** As required, including suitable Sensor Mounting Support, Power and Signal Cables etc.

**10.2.10 Tools** Complete tool kit for installation and routine maintenance giving full details of number and type of each tool.

**10.2.11 Manuals** Full documentation with maintenance instructions in English (one copy per instrument) is to be supplied.

**10. 3 Field Equipments and Sensors**

**10.3.1 Gate Position Sensor 1 unit for each gate**

Technology Optical Shaft Encoder for measurement of angle.

Absolute Encoder is recommended for cases where sensor is placed on the final driving shaft. Here accurate measurement of angle of movement (typically 0-360 degree) is important.

Incremental or relative encoder can be used for cases where the sensor is placed on a high speed area.

Measurement Range Depends on encoder position. For Barrage gates it is 0-360 degrees, if the encoder is placed on the shaft driving the drum (refer fig. 3)

Accuracy ±0.5% of the full range

Interfaces SDI-12, RS 485, 4-20mA Current Loop

**10.3.2 Data Logger with GSM/GPRS for Wireless Data Communication – 1 unit in**

**Asansol**

Well proven and widely used model, produced by a primary brand name and tested in a large number of installations. Provide manufacturer’s certificate that the model proposed has been in production for at least 1 year.

**10.3.1 Salient Features:**

* Open design, operating with a wide variety of sensors.
* Multi tasking operating system capable of simultaneous data collection and transmission.
* Change of setup should not affect logged data.
* Should be windows plug and play device
* Non-volatile Flash memory that can one store year of data and expandable to a minimum of 1GB.
* Resolution ≥ 16 bit.
* User defined recording intervals
* user configurable alarms (triggering)
* Monitoring of voltage level.
* Internal clock with drift less than 2 seconds per day
* Protocols: Must support TCP/IP protocol capable of sending data based on threshold exceedance as well as responding to queries through GSM/GPRS.
* Interfaces: The SDI-12, RS-232 and USB
* Appropriate category to use with ADCP and/or AWS
* Output needed for:

Permanent connection to transmission unit.

Data retrieval through plugged device such as computer.

Direct data downloading to a USB flash drive without the need for a laptop or data retrieval device.

* Enclosure: Wall-mounting with protection IP 65 (NEMA 4) or better
* Windows software for system configuration / communication.
* English version
* All required licenses included
* Different user levels, system of user rights / passwords, access restricted to authorised personnel.
* Redundant storage, periodic automatic backup procedures.
* System integrity check procedures
* Serial cable + adaptor (if required) for notebook connection. All other accessories (fixing units, etc.) as required
* complete tool kit for installation and routine maintenance giving full detail ( number of pieces and type)

**10.3.3 ADCP - Acoustic Doppler Current Profiler – 1 unit to be used for profiling in**

**Durgapur and Asansol**

ADCP must be from a reputed and branded manufacturer with at least 5 years experience in ADCP manufacturing. The model quoted must be in market for at least one year with minimum 5 customers who have used it for River Water Discharge Measurement.

The ADCP supplied will be a high-performance, water current profiler that is accurate, reliable, and easy to use. The ADCP should use state-of-the-art transducers and electronics designed to reduce side-lobe interference problems. This allows the ADP to make the very near-boundary (surface or bottom) current measurements critical to shallow water applications.

Axis 2 or 3 (2D/3D) suitable for River Water Discharge Measurement

Frequency: 1.5 MHz

Profiling Range: 0.5 – 25 m

Minimum Cell Size: 0.25 m

Water Velocity:

* Range: ± 10 m/s
* Resolution: 0.1 cm/s
* Accuracy: ±1% of measured velocity, ±0.5 cm/s
* Up to 100 range cells

**Standard Features:**

* Compass/2-Axis tilt sensor (up/down)
* Flexible deployment control for reduced duty cycle operation
* Internal recorder
* Temperature sensor
* Battery pack for autonomous operation
* 3 m probe cable
* 10 m power/communications cable
* Titanium encased transducers with resistant epoxy coating
* Power input: 12/24 DC with Battery support for minimum 15 days operation.
* RS 422 output for cable lengths up to 1500 meters

**Software:** Windows (XP and above) software for instrument setup, data collection, flow calculation and post-processing.

**10.3.4 Water Level Sensor – 2 units in Durgapur and 1 unit in Asansol**

* Technology Non-Contact Pulse Radar
* Measurement Time 20 Sec (Max)
* Measurement Range 2-30 meters
* Accuracy ± 1 cm
* Interfaces SDI-12, RS 485, 4-20mA Current Loop

**10.3.5 Automatic Weather Station Sensors: - 1 set**

**10.3.5.1 Wind Speed and Direction Sensor**

* Technology Ultrasonic Anemometer with no Moving Part
* Range of Wind Speed 0-65 Meters/Second
* Range of Wind Direction 0-360 Degrees
* Starting Threshold 0.5 Meter/Second
* Accuracy of Wind Speed ± 4% upto 0.2 Meter/Second
* Accuracy of Wind Direction ± 2.0 Degrees
* Resolution of Wind Speed 0.5 Meters/Second
* Resolution of Wind Direction 1.0 Degree

**10.3.5.2 Solar Global Radiation Sensor**

Technology Silicon Photo Voltaic Cell or Thermopile

Range 0-1500 W/M2

Accuracy ± 5%

Resolution 5W/M2

**10.3.5.3 Barometric Pressure Sensor**

Technology Temperature Compensated

Range 800-1100 h Pa (mb) or as determined by sensor elevation

Accuracy ±0.5 mb

**10.3.5.4 Air Temperature**

Technology Resistance Type

Range 0 - 60 Degrees C

Accuracy ± 0.1 Degree or Better

Resolution 0.1 Degree

Response Time 60 Seconds or less

**10.3.5.5 Relative Humidity**

Technology Capacitive/Solid State

Range 0 – 100%

Accuracy ±3% or better

Resolution 0.5% or better

Response Time 60 Seconds or better

**10.3.5.6 Rainfall**

Technology Tipping Bucket with Siphon

Range/ Intensity of rainfall 0-500 mm/hr

Receiver/Collecting Funnel 200 mm ± 0.3 mm diameter with machined Aluminium 8-inch rim or equivalent

Accuracy 2% of intensity (over a period of 15 minutes)

Resolution 0.5 mm

Sensitivity One tip at 0.5 mm rainfall

Serviceability Ability to service tipping bucket gauge without relevelling the gauge.

Contact System Dual Reed Switch, potted in Silicon Rubber

**11 Power and Power Conditioning**

**11.1 UPS**

Unless otherwise stated, all locations will have single phase/3-phase AC power available in the installation site. The Bidder will supply UPS with sine wave inverters and battery backup of appropriate power to protect the devices from damage and data loss. Battery capacity will be sufficient for a planned shutdown and in no case be of less than 15 minutes of coverage.

**11.2** **Solar Power**

Field instruments will be Battery operated with solar powered battery charging facility. Where AC power is available, alternate charging facility from mains will be provided. Refer to clause 10.2.2 (Power Supply)

**11.3** Appropriate Lightning and Surge Protection systems will be installed at all locations to protect equipments supplied.

**12 Responsibilities of the Bidder**

Apart from all other responsibilities as described in this document, the Bidder will be responsible for:

**12.1** Proving information on country of origin of all equipments and software

**12.2** Cost of Data Communication during 2-year warranty and 3-year post-warranty AMC. The Bidder should clearly identify the cost and include in the Bid.

## 13 Responsibilities of the Purchaser

The Purchaser will be responsible for

* Land ownership issues
* Obtaining government approvals as required
* Assist in import / customs clearance
* Direct the bidder in transportation of equipment to the installation sites
* Witnessing tests at purchaser’s own cost

**14 Installation and Site Preparation**

The Bidder will be responsible for the site installation of all the equipment including the required ‘last mile connection civil and electrical works’. Bidder is responsible for providing sufficient and correct documentation on the civil and electrical works and installation, including site-specific features such as Lightning and Surge Protection and Power Supply for purposes of supervision by the Purchaser.

### 15 Civil Works

All the civil works required for installation, commissioning and operation of the system should be provided by the bidder and included in the cost. The civil works would include erection of suitable masts for mounting the sensors, radars, data loggers, solar panels, cameras and all other associated equipments of the Automation system. Scope of work will also include the civil works required at water level monitoring site at Asansol for mounting the radar, data logger and solar panels if any.

**16 General Requirements and Specifications**

**16.1** All Goods and materials to be incorporated in the supply should be new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials unless provided otherwise in the contract.

**16.2** Wherever reference is made in the Technical Specifications to specific standards and codes to be met by the goods and materials to be furnished or tested, the provisions of the latest current edition or revision of the relevant standards or codes in effect shall apply, unless otherwise expressly stated in the Contract. Where such standards and codes are national or relate to a particular country or region, other authoritative standards that ensure substantial equivalence to the standards and codes specified will be acceptable.

**16.3** **Units**

Measurement Units of all the equipments and systems will be metric.

**17 Bid-Related Requirements**

### 17.1 Plans and Schedules to be provided

A project execution plan shall be provided after award of Contract, including system design block diagrams, a list of critical engineering activities, a manufacturing and delivery schedule, the proposed training programme, as well as guidelines and standard drawings for civil works.

**17.2 Spare Parts (Refer Clause 4.2.4)**

**18 Shipping and Delivery**

**18.1 Shipping, Transport and Storage of Equipment**

The Bidder shall be responsible, at his costs, for loading, transporting, shipping and unloading of the equipment to be supplied under the contract from the point of manufacture to the final destination of delivery. The transportation of equipment to field locations for installation after receiving inspection shall also be the responsibility of the Bidder as part of installation requirement.

The Bidder shall provide such packing of the equipment as is required to prevent its damage or deterioration during transit to its final destination.

**18.2 Delivery and Completion Schedule**

The delivery and installation schedules are described in Schedule of Requirements. The maximum time period from the date of effectiveness of Contract to Final Acceptance is four (4) months followed by a Warranty period of two (2) years and Annual Maintenance Services Period of three (3) years. The bidder must comply with the milestones indicated in the delivery schedule and schedule for installation and commissioning.

The Bidder shall furnish to the Purchaser a complete program of delivery for the equipment, and shall provide revisions to this program as and when necessary.

**19 Inspections and Tests**

The following inspections and tests shall be performed:

## 19.1 General

It is the Bidder’s responsibility to ensure that the equipment is sufficiently tested prior to shipment and installation. During final acceptance testing, the Bidder will have to demonstrate full functionality and performance of all system components according to specifications. Prior to final acceptance, all expenditures related to unsatisfactory performance of the equipment, such as the costs of repairs, additional site visits, shipping costs etc., will be at the Bidder’s expenses.

The costs for all tests and for all inspections to be made under the contract shall be borne by the Bidder and shall be deemed to be included in the Contract Price with the exception of the Purchaser’s costs for witnessing tests.

## 19.2 Factory Acceptance Test

Prior to system shipment, the bidder shall conduct a Factory Acceptance Test (FAT). The FAT shall be conducted at the bidder’s facilities and shall demonstrate “end-to-end” performance of the system components. In order to avoid delays, the factory acceptance testing may or may not be witnessed. However, the bidder is required to write a FAT report that will describe the test layout, the individual testing results for each subsystem/component, as well as any problems found. All deficiencies revealed by testing shall be rectified by the bidder at his own expenses and to the approval of the Purchaser. Rectified components shall be subject to re-testing.

## 19.3 Receiving Inspection

The system is to be inspected in-country, after clearing customs (if applicable), to ensure that 100 percent of the shipment is received and delivered. The Bidder is to arrange for this receiving inspection as well as for customs clearance and delivery to appropriate storage facilities.

## 19.4 Site Installation and Acceptance Tests

The Bidder will install all the equipments and will undertake site tests for the entire SCADA system.

After final configuration and programming, the Bidder will conduct an “end-to-end” operational test for each location (Durgapur Barrage, Executive Engineer’s Office, Asansol and HO in Kolkata). A formal check list shall be followed and the results of the tests shall be recorded. The Purchaser’s personnel will be trained in conducting the same site acceptance tests. A Site Acceptance Test will be passed if all functionalities operate correctly for a period of 24 hours.

## 19.5 Operational Test (OT)

The final OT shall be test for “end-to-end” performance of the entire system for a period of one week. The bidder shall demonstrate and document that the system correctly generated 95% of all expected control and data (normally scheduled data collections and transmissions) for the one-week period. The Bidder will produce a report documenting the quantities of data expected / received and indicating the success / failure of the OT. The OT will be repeated until the 98% success level is achieved or a specific waiver of the requirement (minimum 95%) is obtained.

All equipment failures will be counted except those that can be specifically determined to be “acts of God”. Failure of stations due to acts of God (natural disasters or other incidents) will not count against the 95%. Equipment needed for testing shall be provided by the Bidder.

## 19.6 Final Acceptance

When the system has passed the Final OT, the Bidder can apply for Final Acceptance. When Final Acceptance is given, the system will be officially considered to be under Warranty.

**SECTION VI-A : QUALIFICATION CRITERIA**

(Referred to in Clause 13.3(b) of ITB)

After determining the lowest-evaluated bid, the Purchaser shall carry out the post qualification verification of the Bidder in accordance with ITB Clause 38, using only the requirements specified. Requirements not included in the text below shall not be used in the evaluation of the Bidder’s qualifications.

**A Financial Capability:**

The Bidder shall furnish documentary evidence that it meets the following financial requirement(s):

A.1 Capacity to have a cash flow - The Bidder must provide a letter from a reputed bank stating the availability of liquid assets and/or credit facilities exclusively for this Contract only, of no less than *INR 15.0 Million*. In the case of joint Ventures, the cumulative liquid assets of the members of joint venture will be considered.

A.2 The Minimum required annual turnover in respect of supply, installation and commissioning of goods for the successful Bidder in any two of the last five (5) years shall be of *INR 50 Million or its equivalent*. In the case of joint Ventures, the cumulative turnover of the members of joint venture will be considered, but lead member of joint venture must at least meet 40% of this requirement.

**B Experience and Technical Capacity**

The Bidder will have to substantiate that they have capacity to design, manufacture and supply the offered SCADA system including Host Server, RTUs, Relays etc. within specified delivery schedule. It may be noted that for the purpose of qualifying this requirement, the Bidder will have to submit clear certificates/documents as under:

B1. They should have a minimum experience of five years of design, manufacture and supply of SCADA system including Host Server, RTUs, Relays etc. offered by them.

B2. The bidder must have experience in design, engineering, supply, installation & commissioning of SCADA involving AC Motor Control. Experience in SCADA for Reservoir Automation desirable

B3. The SCADA system should have been in satisfactory operation for at least three years period in at least one location.

B4. Firm should also have ISO 9001/2000, ISO 27001:2005 for Information Security Management system & ISO 14001:2004 or higher certification for Environmental

Management system

B5. The bidder must have all necessary testing facilities at their works for carrying out such routine and acceptance tests as prescribed in the relevant ISS/International standards/ tender specification. Documentary evidence of existence of such facilities must be submitted.

B6. The supplied equipments must have been fully type tested as per relevant ISS and/or any other specified international standards during last 5 years from date of bid opening. Photo copy of such type test reports/certificate must be submitted.

Bids of Bidders quoting as authorized representative of an equipment manufacturer, meeting with the above requirement in full, can also be considered provided:

The manufacturer furnishes authorization in the prescribed format assuring full guarantee and warranty obligations as per GCC and SCC and

B.7 The Bidder, as authorized representative of their manufacturer has supplied, installed and commissioned satisfactorily at least 3 (three) similar SCADA systems in the last three years from the date of bid opening.

B8. The bidder shall guarantee that adequate specialized maintenance capability and expertise will be made available.

B.9 The Bidder shall provide evidence to the satisfaction of the Purchaser to the effect of having in house or externally engaged hydrological and hydraulic expertise to:

1. Conduct the river gauging operations to measure the discharges at different river water levels with all the required equipment like current meters, ADCPs and trained manpower.

2 Develop the conversion of the river water levels into river discharges, like stage discharge curves for river courses/bridges and co-efficient of discharge for weirs/sluices.

B.10 The Bidder shall provide the CVs of the hydrographers, field operators and the list of equipment. The CVs of these personnel should demonstrate the successful operation of at least one such assignment.

* The Bidder shall furnish documentary evidence to demonstrate that the Goods it offers meet the following Purchaser requirement in general and also the Purchaser requirements specified in detail in Technical Specifications of this bidding document. In case the Bidder is not the manufacturer or producer of the goods it offers to supply and has submitted the bid in accordance with ITB clause 19.1 (b), the bid shall include the above information about the manufacturer whose equipments are being offered.
* The Bidder should furnish the information on all past supplies and satisfactory performance for both (a) and (b) above, in Performa under Section XI.
* All the Bids submitted shall also include the following information along with formats under Section XV.
* Copies of original documents defining the constitution or legal status place of registration and principle place of business of the company or firm or partnership etc.
* The Bidder should furnish a brief write up backed with adequate data explaining his available capacity and experience (both technical and commercial ) for the manufacture and supply of the manufacturer and supply of the required systems and equipment within the specified time of completion after meeting all their current commitments.
* The Bidder should clearly confirm that all the facilities exist in his factory for inspection and testing and these will be made available to the Purchaser or his representative for inspection. The Purchaser shall decide and propose necessary tests as it may deem fit for the purpose of evaluation.
* Details of Service Centres and information on service support facilities that would be provided after the warranty period (in the Service Support form given in Section XIV).
* Reports on financial stating of the Bidder such as profit and loss statements balance sheets and auditor‘s report for the past three years bankers certificates etc.

**SECTION VI-B : TECHNICAL RESPONSIVENESS**

(Referred to in Clause 13.3(b) of ITB)

This section is designed to help Purchaser as well as Bidder understand that:

1. Bidder has technical capability to execute the project

2. Bidder has understood the technical requirements clearly

There are two types of questions in this section. Part 1 has binary questions, whose answer is YES/NO. If the answer is NO, it will be presumed that the Bidder is not capable enough for this project and the bid will be rejected. If the answer is YES, bidder is expected to provide documentary evidence in support of the claim. Part 2 questions are required to be answered in detail.

**Part 1**

1. Has the bidder designed and successfully executed at least one SCADA project which involved control of at least five 3-phase AC Motors in the last five years?

2. Has the bidder designed and successfully executed at least one SCADA project which used GSM/GPRS communication to acquire data from field instruments to the control room?

3. Has the bidder designed and successfully executed at least one SCADA project which used Web Service to communicate between Control Room and a Remote Station?

4. Has the bidder designed and successfully executed at least one SCADA project which used MODBUS to monitor or control at least five multi dropped field devices on a single port (e.g. RS 485 port) of a RTU?

5. Has the bidder designed and successfully executed at least one SCADA project which used any version of an SQL Data Base for Data Storage?

**Part 2**

**If any of the questions in this part is answered in detail in the section VI, the Bidder can give reference and need not repeat the answer. Otherwise, the Bidder is expected to give a detailed reply:**

1. Explain the level of redundancy you plan to incorporate in your design for each of the three levels (Management, Controller and Field Instruments) as explained in clause 5.3.4 in section VI.

2. Explain your Gate Control and Gate Position Sensing Scheme with diagram and explanations. Explanation must include features of Field Level Gate Control Unit.

3. Explain features of Data Communication hardware and software you propose to incorporate in Durgapur Barrage, Durgapur Executive Engineer’s Office, Asansol Station and HO in Kolkata.

**SECTION VIII:**

**BID SECURITY FORM**

**SECTION VIII: BID SECURITY FORM**

Whereas ...........................1*(hereinafter called “the Bidder”)* has submitted its Bid dated ......................*(date of submission of Bid)* for the supply of“Supply, installation, testing, commissioning, training and maintenance of Automatic Operation of Durgapur Barrage along with collection, storage and dissemination of data”

.”

*(name and/or description of the goods)* (hereinafter called “the Bid”).

KNOW ALL PEOPLE by these presents that WE .....................*(name of bank)* of .................. (name of country),having our registered office at ..................*(address of bank)* (hereinafter called “the Bank”), are bound unto Superintending Engineer, Damodar Irrigation Circle, I &WD, Kanainutsal Campus, Burdawan,713101.

*(name of Purchaser)* (hereinafter called “the Purchaser”) in the sum of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ for which payment well and truly to be made to the said Purchaser, the Bank binds itself, its successors, and assigns by these presents. Sealed with the Common Seal of the said Bank this \_\_\_\_ day of \_\_\_\_\_\_\_\_\_ 20\_\_\_.

THE CONDITIONS of this obligation are:

1. If the Bidder

(a) withdraws its Bid during the period of Bid validity specified by the Bidder on the Bid Form; or

(b) does not accept the correction of errors in accordance with the ITB; or

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

(a) fails or refuses to execute the Contract Form if required; or

(b) fails or refuses to furnish the performance security, in accordance with the Instruction to Bidders;

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

This guarantee will remain in force up to and including forty five (45) days after the period of the Bid validity, and any demand in respect thereof should reach the Bank not later than the above date.

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

(Signature of the Bank)

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1 *Name of Bidder*

**SECTION IX:**

**CONTRACT FORM**

**\*\*\* Will be submitted at the time of Contract in Offline Mode \*\*\*SECTION IX: CONTRACT FORM**

**THIS AGREEMENT** made the .......day of.................................., 20... Between Superintending Engineer, Damodar Irrigation Circle, I &WD, Kanainutsal Campus, Burdawan,713101.  *(Name of purchaser)* of India*(Country of Purchaser)* (hereinafter called "the Purchaser") of the one part and .....................*(Name of Supplier)*  of .........................*(City and Country of Supplier)* (hereinafter called "the Supplier") of the other part :

WHEREAS the Purchaser is desirous that certain Goods and ancillary services viz., “Supply, installation, testing, commissioning, training and maintenance of Automatic Operation of Durgapur Barrage along with collection, storage and dissemination of data”

*(Brief Description of Goods and Services)* and has accepted a Bid by the Supplier for the supply of those goods and services in the sum of .............................. *(Contract Price in Words and Figures)* (hereinafter called "the Contract Price").

**NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:**

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.

2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:

(a) the Bid Form and the Price Schedule submitted by the Bidder;

(b) the Schedule of Requirements;

(c) the Technical Specifications;

(d) the General Conditions of Contract;

(e) the Special Conditions of Contract; and

(f) the Purchaser's Notification of Award.

3. In consideration of the payments to be made by the Purchaser to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Purchaser to provide the goods and services and to remedy defects therein in conformity in all respects with the provisions of the Contract.

4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the goods and services and the remedying of defects therein, the Contract Price 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.

Brief particulars of the goods and services which shall be supplied/provided by the Supplier are as under:

|  |  |  |  |
| --- | --- | --- | --- |
| **Table-1: Goods**  **Provide the Delivery Date only** | | | |
| Line Item  N° | Description of Goods | Delivery Date | Quantity and physical unit |
| 1 | Supply, installation, testing, commissioning, training and maintenance of Automatic Operation of Durgapur Barrage along with collection, storage and dissemination of data  as per Technical Specification. |  |  |

**SECTION X.**

**PERFORMANCE SECURITY FORMSECTION X. PERFORMANCE SECURITY FORM**

To: Superintending Engineer, Damodar Irrigation Circle, I &WD,

Kanainutsal Campus, Burdawan,713101.

**WHEREAS**................................................................... (Name of Supplier)

hereinafter called "the Supplier" has undertaken , in pursuance of Contract (Notification of Award) No................. dated,........... 20... to supply“Supply, installation, testing, commissioning, training and maintenance of Automatic Operation of Durgapur Barrage along with collection, storage and dissemination of data”

(Description of Goods and Services) hereinafter called "the Contract".

**AND WHEREAS** it has been stipulated by you in the said Contract that the Supplier shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with the Supplier's performance obligations in accordance with the Contract.

**AND WHEREAS** we have agreed to give the Supplier a Guarantee:

**THEREFORE WE** hereby affirm that we are Guarantors and responsible to you, on behalf of the Supplier, up to a total of ................................... ........................................ (Amount of the Guarantee in Words and Figures) and we undertake to pay you, upon your first written demand declaring the Supplier to be in default under the Contract and without cavil or argument, any sum or sums within the limit of ................................ (Amount of Guarantee) as aforesaid, without your needing to prove or to show grounds or reasons for your demand or the sum specified therein.

This guarantee is valid until the ........day of...................20......

Signature and Seal of Guarantors

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

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

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

Date......................20....

Address:........................

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

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

**SECTION XI:**

**PERFORMANCE STATEMENTSECTION XI: PERFORMANCE STATEMENT**

*“Proforma for Performance Statement*(for a period of last five years)***”***

[Please see Clause 13.3 (b) (ii) of Instructions to Bidders]

Bid No. Date of opening: Time :\_\_\_\_\_ Hours

Name of the Firm:

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Order placed bv  ("full address of  Purchaser) | Order No.  and date | Description and quantity  of ordered equipment  (including model types) | Value of  Order  (Rs) | Date of completion of delivery | | Remarks indicating  reasons for late  delivery, if any | Has the equipment been  satisfactorily functioning  (Attach a certificate from the Purchaser/Consignee) |
| As per contract | Actual |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  | | Total |  |  | | | |

Signature and seal of the Bidder

**SECTION XII**

**MANUFACTURERS' AUTHORIZATION FORM**

**SECTION XII**

(Please see Clause 13.3(a) of Instructions to Bidders)

**MANUFACTURERS' AUTHORIZATION FORM\***

No. dated

To

Superintending Engineer, Damodar Irrigation Circle, I &WD

Kanainutsal Campus, Burdawan,713101.

Dear Sir,

IFB No. : *WBIW/SE/DIC /NIT-01(e)/2016-17*

We who are established and reputable manufacturers of *(name and description of goods offered)* having factories at (*address of factory)* do hereby authorize M/s *(Name and address of Agent)* to submit a Bid, and sign the contract with you for the goods manufactured by us against the above IFB.

We understand that we are allowed, under this procurement, to authorize more than one supplier should we so wish.

We hereby extend our full guarantee and warranty as per Clause 15 of the General Conditions of Contract and Clause 10 of the Special Conditions of Contract for the goods and services offered for supply by the above firm against this IFB.

Yours faithfully,

(Name)

(Name of manufacturers)

Note: This letter of authority should be on the letterhead of the manufacturer and should be signed by a person competent and having the power of attorney to legally bind the manufacturer. It should be included by the Bidder in its Bid.

\* Modify this format suitably in case where manufacturer’s warranty and guarantee are not applicable for the items for which Bids are invited.

**SECTION XIV**

**ELIGIBILITY FOR THE PROVISION OF GOODS, WORKS AND SERVICES IN BANK-FINANCED PROCUREMENT.**

**SECTION XIV**

**ELIGIBILITY FOR THE PROVISION OF GOODS, WORKS AND SERVICES IN BANK-FINANCED PROCUREMENT.**

**As of March 2000**1

For the information of Borrowers and Bidders, and with reference to paragraph 1.6, footnote 9, of the *Guidelines: Procurement under WORLD BANK Loans and IDA Credits,* dated January 1995 (revised January and August 1996 and September 1997, and January 1999), set forth below is a list of countries from which Bidders, Goods and Services are not eligible to participate in procurement financed by the World Bank or IDA2.

* Andorra
* Cuba
* Democratic People’s Republic of Korea (North Korea)
* Liechtenstein
* Monaco
* Nauru
* Tuvalu

In addition, Bidders, Goods and Services from other countries or territories may be declared ineligible by a provision in the Bidding. Documents if the borrower’s country has excluded them by a law, an official regulation, or an act of compliance meeting the requirements of paragraph 1.8 (a) of the *Guidelines: Procurement under WORLD BANK Loans and IDA Credits*.

The Loan/Credit Agreement also prohibits a withdrawal from the Loan / Credit Account for the purpose of any payment to persons or entities, or for any import of goods, if such payment or import, to the knowledge of the Bank, is prohibited by a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations. At the present time, this prohibition applies to no country.

**Notes**:

1. The most current listing of eligible countries can be viewed on the PublicInformationCenter’s Web page at: <http://www.worldbank.org/html/pic/PROCURE.html>. A list of firms debarred from participating in World Bank projects is available at: [http://www.worldbank.org/html/opr/procure/debarr.html](http://www.worldbank.org/html/pic/PROCURE.html).

2. Any questions regarding this list should be addressed to the Senior Manager, Procurement Policy and Services Group, Operational Core Services Network, The World Bank

#### ANNEXURE XV

**PROFORMA FOR EQUIPMENT AND QUALITY CONTROL EMPLOYED BY THE MANUFACTURER**

#### ANNEXURE XV (form A)

**PROFORMA FOR EQUIPMENT AND QUALITY CONTROL EMPLOYED BY THE MANUFACTURER**

**FORMAT FOR QUALIFICATION REQUIREMENTS**

All the Bidders submitting their Bids against this Bid must submit the qualification requirements along with the information in the following formats together with the relevant documentation:

**FINANCIAL, BUSINESS AND TECHNICAL CAPABILITY**

**(FORMAT –A)**

Name and address of Bidder

Phone: Telex: Fax :

1. Latest Balance Sheet filed with----------------------------on---------------------------(Attach audited copies of annual accounts of past 3 years. Indigenous Bidders to attach copy of accounts audited under section 44 AB of Income Tax Act. In case the accounts are not required to be audited, the information in this statement should be attested by a Chartered Accountant or Manager of a reputable Bank.

2. Latest Profit & Loss Statement from---------------------------to---------------------filed with--------------------------on----------------------------------------.(Attach an audited copy)

3. Financial position (in the respective currency)

|  |  |
| --- | --- |
| a) | Cash & Bank balances |
| b) | Fixed Assets Gross and Net |
| c) | Current Assets |
| d) | Current Liabilities |
|  | Bank cash credit |
|  | Loans |
|  | Others (including sundry creditors) |
| e) | Provisions |
| f) | Contingent Liability (include claims not acknowledged, pl. specify) |
| g) | Inventories |
| h) | Share Capital |
|  | Free Reserves |
|  | Other reserves (Please specify |
| i) | Terms loans from financial institute & Banks |
| j) | Working Capital |
| k) | Net worth |
| l) | Debtors & advances considered good more than 6 months |
|  | less than 6 months |

|  |  |
| --- | --- |
| 4) | Total liabilities |
| a) | Current Ratio |
|  | Current Assets to |
|  | Current liabilities |
| b) | Acid Test Ratio |
| c) | Total liability to Net worth |
|  |  |
| 5) | Net Sales (in respective currency) |
| a) | Current period |
| b) | During the last financial year |
| c) | During the year before last financial year |
| 6) | Net Profit before Tax |
| a) | Current period |
| b) | During last financial year |
| c) | During the year before the last financial year |
|  |  |

The profit and loss statements have been certified through--------------------------------------------------------------------------------by---------------------------------------.

|  |  |  |
| --- | --- | --- |
| 7) | Bidders’ Financial arrangements (check appropriate item) | |
| a) | Own Resources | |
| b) | Bank Credits | |
| c) | others (specify) | |
|  |  | |
| 8) | Certificate of Financial Soundness from bankers of Bidders. | |
|  |  | |
| 9) | Income Tax clearance [for Bidders from India only] | |
|  | Please enclose copies of following documents: | |
| a) | Details of Income Tax registration; and | |
| b) | Last Income Tax clearance certificate | |
|  |  | |
| 10) | SALES: | |
|  |  | |
| Category | value of current orders to be executed in respective currency | Value anticipated sales for next financial year in respective currency |
| A) | Govt. Department |  |
| B) | Commercial |  |
|  |  |  |
| 11) | Licensed capacity to manufacture | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Description of equipt. | Size cap. | Licensed capacity | No. of Units Manufactured | | |
|  |  |  | Current Yr | Last Yr | 2nd Last Yr |

12. List, if any of Bidder’s rate contract with the following organizations :

|  |  |  |  |
| --- | --- | --- | --- |
|  | Organization | Yes/No | If Yes, date contract finalized |
| a. | Directorate General of Supplies and Disposal, Government of India |  |  |
| b. | Central equipment Stores Purchase Organization for state Governments |  |  |
| c. | Others |  |  |

13. Describe Quality Control Organization, if any, and give the organization Chart.

a) Are goods offered subject to batch test, random sampling or full 100% test for quality?

b) Are tests carried out by factory employees or by a separate testing agency?

c) Are independent Quality Control Organization checks made and certificates issued?

**CAPABILITY STATEMENT OF PERSONNEL, EQUIPMENT, PLANT AND PAST PERFORMANCE**

**(FORMAT – B)**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. | Name and address of the Bidder | Phone : | |
| 2. | Classifications) | 1) | Manufacturer |
|  | Circle what is applicable | 2) | Authorized Agent |
|  |  | 3) | Dealer |
|  |  | 4) | Others, please specify |
| 3. | Plant: |  |  |
| a) | Location |  |  |
| 4. | Equipments |  |  |

a) Type of equipment manufactured and supplied during last 2 years

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of equipment | Capacity/ Size | Nos. Manufactured | Projects to which supplies are made | No. of orders on hand |
|  |  |  |  |  |

b) Type of equipment manufactured, supplied, installed and commissioned during last 3 years.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Name of equipment | Capacity/ Size | Nos. Manufactured | Projects to which supplied ,installed and commissioned | No. of orders on hand |
|  |  |  |  |  |

5. a) Types of equipment supplied during last 3 years other than those covered under 4 above.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name of equipment | Capacity/ Size and model | Nos. Manufacturers and Country of origin | Total Nos. supplied in India | Projects to which supplies are made | No. of orders on hand |
|  |  |  |  |  |  |

b) Type of equipment supplied, installed and commissioned during last 3 years other than those covered under 4 (a) and (b) above

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Name of equipment | Capacity/ Size and model | Nos. Manufacturers and Country of origin | Total Nos. supplied in India | Projects to which supplies are made | No. of orders on hand |
|  |  |  |  |  |  |

6. Details of Testing facilities available

|  |  |  |
| --- | --- | --- |
| a. | List testing-equipment available |  |
| b. | Give details of tests which can be carried out on items offered. |  |
| c. | Details of the testing organization available. |  |
|  |  |  |

7. Personnel/Organization:

Give Organization chart for following indicating clearly the No. of employees at various levels.

1. Quality assurance
2. Production
3. Marketing
4. Service
5. Spare parts
6. Administrative

8. Nearest service center to Purchaser :

Location......................................................

.Phone No............................................................

9. Names of two buyers to whom similar equipment are supplied installed and commissioned in the past and to whom reference may be made by the purchaser regarding the Bidder’s technical and delivery ability :

1. -----------------------------------------------------------------------

2. -----------------------------------------------------------------------

10. Workload as percentage of total capacity for the current and forthcoming financial year on quarterly basis................................................................................................................

11. Details of Organization at Service Centre

a) No. of skilled employees \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

b) No. of Unskilled employees \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

c) No. of Engineering employees \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

d) No. of Administrative employees \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

e) List of special repair/workshop

facilities available \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

f) The storage space available for spare

parts (sq.m.) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

g) Value of minimum stock of spares

available at all the service centres in

respective currency \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

h) Value of the modes/types by number of

equipment serviced by the centre in the

last 3 years

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

Signature and seal of the Manufacturer

**ANNEXURE XV (form B)**

**PROFORMA FOR EQUIPMENT AND QUALITY CONTROL EMPLOYED BY THE MANUFACTURER**

TENDER ID : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

NAME OF THE BIDDER : \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

(Note : All details should relate to the manufacturer for the items offered for supply)

1. Name & full address of the Manufacturer

2. (a) Telephone & Fax No Office/Factory/Works

(b) Telex No. Office/Factory/Works

(c) Telegraphic address :

3. Location of the manufacturing factory.

4. Details of Industrial License, wherever required as per statutory regulations.

5. Details of important Plant & Machinery functioning in each dept. (Monographs & description pamphlets be supplied if available).

6. Details of the process of manufacture in the factory.

7. Details & stocks of raw materials held.

8. Production capacity of item(s) quoted for, with the existing Plant & Machinery

8.1 Normal

8.2 Maximum

9. Details of arrangement for quality control of products such as laboratory, testing equipment etc.

10. Details of staff:

10.1 Details of technical supervisory staff in charge of production & quality control.

10.2 Skilled labour employed.

10.3 Unskilled labour employed.

10.4 Maximum No. of workers (skilled & unskilled) employed on any day during the 18 months preceding the date of Tender.

11. Whether Goods are tested to any standard specification? If so, copies of original test certificates should be submitted in triplicate.

12. Are you registered with the Directorate General of Supplies and Disposals, New Delhi 110 001, India? If so, furnish full particulars of registration, period of currency etc. with a copy of the certificate of registration.

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

Signature and seal of the Manufacturer

**ANNEXURE XVI**

**PROFORMA FOR SERVICE SUPPORT DETAILS**

**ANNEXURE XVI**

PROFORMA FOR SERVICE SUPPORT DETAILS

The Bidder shall provide the proposed method of service support during the Warranty and AMC periods including the helpdesk function, downtime management etc.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Name of Service Stations | Destination  Address and District | Phone No.  /Mobile phone No. | Telex/Fax No. | Office Working Days and Hours | Number of Service Engineers | Number of service Staff | Value of Minimum Stock Available at all times (Rs) |
|  |  |  |  |  |  |  |  |

Signature and Seal of the Manufacturer/Bidder

1. In this context, any action taken by a bidder, supplier, contractor, or a sub-contractor to influence the procurement process or contract execution for undue advantage is improper. [↑](#footnote-ref-2)
2. “another party” refers to a public official acting in relation to the procurement process or contract execution]. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions. [↑](#footnote-ref-3)
3. a “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution. [↑](#footnote-ref-4)
4. “parties” refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels. [↑](#footnote-ref-5)
5. a “party” refers to a participant in the procurement process or contract execution. [↑](#footnote-ref-6)
6. “another party” refers to a public official acting in relation to the procurement process or contract execution]. In this context, “public official” includes World Bank staff and employees of other organizations taking or reviewing procurement decisions. [↑](#footnote-ref-7)
7. a “party” refers to a public official; the terms “benefit” and “obligation” relate to the procurement process or contract execution; and the “act or omission” is intended to influence the procurement process or contract execution. [↑](#footnote-ref-8)
8. “parties” refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non competitive levels. [↑](#footnote-ref-9)
9. a “party” refers to a participant in the procurement process or contract execution. [↑](#footnote-ref-10)