ANDHRA PRADESH POWER GENERATION CORPORATION LIMITED
Vidyut Soudha, Vijayawada-520004

Specification No. e-610000662/ HP/ APGENCO /RLA Study /2020

(Two Part Bid)

RESIDUAL LIFE ASSESSMENT (RLA) STUDY/LIFE EXTENSION AND
PREPARATION OF DETAILED PROJECT REPORT FOR TAKING UP RENOVATION,
MODERNISATION & UPRATING OF ALL FOUR UNITS OF LOWER SILERU
HYDRO ELECTRIC PROJECT (4X115MW)

Summary sheet, Instructions to bidders, General, Financial Terms and
Conditions, Technical Specification and schedules

Phone No: 0866-2526802/2526305
Email : se-hpc2@apgenco.gov.in

Sd/-
Superintending Engineer
Hydel-II/APGENCO
Vidyut Soudha, Vijayawada
## CONTENTS

<table>
<thead>
<tr>
<th>SI No</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Notice Inviting Tender</td>
</tr>
<tr>
<td>2</td>
<td>Check List</td>
</tr>
<tr>
<td>3</td>
<td>Instructions to Bidders</td>
</tr>
<tr>
<td>4</td>
<td>General Purchase Conditions (General)</td>
</tr>
<tr>
<td>5</td>
<td>General Purchase Conditions (Financial)</td>
</tr>
<tr>
<td>6</td>
<td>Technical Specification</td>
</tr>
<tr>
<td>7</td>
<td>Appendix-A (Description of the services)</td>
</tr>
<tr>
<td>8</td>
<td>Appendix-B (Reporting requirements)</td>
</tr>
<tr>
<td>9</td>
<td>Appendix-C (RLA Consultants, Sub consultants &amp; Key personnel)</td>
</tr>
<tr>
<td>10</td>
<td>Appendix-D (Duties of owner)</td>
</tr>
<tr>
<td>11</td>
<td>Appendix-E (Break-up of contract price)</td>
</tr>
<tr>
<td>12</td>
<td>Schedule-1 (General Terms &amp; Conditions)</td>
</tr>
<tr>
<td>13</td>
<td>Schedule-2 (Deviations from Specification)</td>
</tr>
<tr>
<td>14</td>
<td>Schedule-3 (Contractor’s references)</td>
</tr>
<tr>
<td>15</td>
<td>Schedule-4 (Approach paper on methodology proposed for performing the assignment)</td>
</tr>
<tr>
<td>16</td>
<td>Schedule-5 (Details of Testing Machinery/equipment proposed for study)</td>
</tr>
<tr>
<td>17</td>
<td>Schedule-6 (Comments/suggestions of consultant)</td>
</tr>
<tr>
<td>18</td>
<td>Schedule-7 (Composition of the team personnel and the task assigned)</td>
</tr>
<tr>
<td>19</td>
<td>Schedule-8 (Work plan time schedule)</td>
</tr>
<tr>
<td>20</td>
<td>Schedule-A (Proforma of Summary Price Proposal)</td>
</tr>
<tr>
<td>21</td>
<td>Guidelines for submission of Bank Guarantee</td>
</tr>
<tr>
<td>22</td>
<td>Annexure-1 (BG Proforma for EMD)</td>
</tr>
<tr>
<td>23</td>
<td>Annexure-2 (BG Proforma for PEMD)</td>
</tr>
<tr>
<td>24</td>
<td>Annexure-3 (BG Proforma for Security Deposit)</td>
</tr>
</tbody>
</table>
**NOTICE INVITING TENDER**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Company Name</td>
</tr>
<tr>
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<td>Andhra Pradesh Power Generation Corporation Limited</td>
</tr>
<tr>
<td>2.</td>
<td>Circle/Division Name</td>
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<td></td>
<td>Chief Engineer /HPC &amp; Hydel Projects /APGENCO Vidyut Soudha, Gunadala, Vijayawada-520004.</td>
</tr>
<tr>
<td>3.</td>
<td>Tender Notice No.</td>
</tr>
<tr>
<td></td>
<td>e-610000662/ HP/ APGENCO /RLA Study /2020</td>
</tr>
<tr>
<td>4.</td>
<td>Name of Work</td>
</tr>
<tr>
<td></td>
<td>Residual Life Assessment (RLA) studies/Life Extension study on civil structures, penstocks, Hydro Mechanical, Electro &amp; Mechanical, Control &amp; Protection equipment of all four units (4x115 MW) of LSHEP and preparation of Detailed Project Report (DRP) for Renovation, Modernization &amp; Uprating of all four units of LSHEP.</td>
</tr>
<tr>
<td>5.</td>
<td>Estimated Contract Value (ECV)</td>
</tr>
<tr>
<td></td>
<td>Rs.1.8Crores</td>
</tr>
<tr>
<td>6.</td>
<td>Tender Type</td>
</tr>
<tr>
<td></td>
<td>Open, Two part bidding</td>
</tr>
<tr>
<td>7.</td>
<td>Tender Category</td>
</tr>
<tr>
<td></td>
<td>Services</td>
</tr>
<tr>
<td>8.</td>
<td>Bid Security (EMD)</td>
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<tr>
<td></td>
<td>Rs.4,60,000/- (Rupees Four Lakhs and Sixty Thousand Only)</td>
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<td>The EMD shall be paid in any of the following forms</td>
</tr>
<tr>
<td></td>
<td>i) Non-PEMD Holders: Rs.1Lakh in the form of DD/BC and balance amount of Rs.3.6Lakhs in the form of Bank Guarantee/DD/BC from any Govt. Banks/ Nationalized Banks/ Public Sector Banks/ Scheduled banks.</td>
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<td></td>
<td>ii) PEMD Holders: Rs.1Lakh in the form of DD/BC/ Pay order and 2% of the estimated value over and above the PEMD amount in the form of DD/BC/Pay order/ Bank Guarantee from any Govt. Banks/ Nationalized Banks/ Public Sector Banks/ Scheduled banks. However, the Permanent EMD holders shall upload the copy of PEMD approval issued by the competent authority along with bid.</td>
</tr>
<tr>
<td>9.</td>
<td>Bid Security (EMD) Payable to</td>
</tr>
<tr>
<td></td>
<td>For DD’s: Pay Officer, APGENCO, Vidyut Soudha payable at Vijayawada. For BG’s: As per Annexure-1</td>
</tr>
<tr>
<td>10.</td>
<td>Bid Validity</td>
</tr>
<tr>
<td></td>
<td>120 days from the date of opening of the PQ/Tech Bid</td>
</tr>
<tr>
<td>11.</td>
<td>Bid Start Date &amp; Time</td>
</tr>
<tr>
<td></td>
<td>27-08-2020 @17.00 Hrs.</td>
</tr>
<tr>
<td>12.</td>
<td>Bid Submission Closing Date &amp;Time</td>
</tr>
<tr>
<td></td>
<td>22-09-2020 @ 15.00 Hrs.</td>
</tr>
<tr>
<td>13.</td>
<td>Bid Submission</td>
</tr>
<tr>
<td></td>
<td>Online through APGENCO e-procurement platform</td>
</tr>
<tr>
<td>14.</td>
<td>Pre Qualification/ Tech. Bid Opening Date.</td>
</tr>
<tr>
<td></td>
<td>23-09-2020 @ 15.00 Hrs.</td>
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<tr>
<td>16.</td>
<td>Price Bid Opening Date &amp; Time (Tentative)</td>
</tr>
</tbody>
</table>
| 17. | Eligibility Criteria | a. The bidder should have a minimum 3 years previous experience as on bid date for conducting RLA studies in Power Generating Units of capacity **50 MW** or more for atleast two reputed organisations in India (Preferably PSUs, Government organisations). **The satisfactory certificates (not older than Twenty years) issued by the end users along with Job order copies shall be uploaded. One satisfactory certificate must pertain to Hydel Station.**  
   b. The bidder should have an annual turnover of not less than **Rs.2.7 Crores** for at least **Two years** during the last ‘3’ years. The bidder should enclose copies of the audited financial statements of the last ‘3’ years so as to prove the financial capacity of the bidder to execute the order. |
| 19. | Contact Details | Phone: 0866 – 2526802/305/309  
   Email: se-hpc2@apgenco.gov.in |
| 20. | Procedure for bid submission | Through APGENCO e-procurement platform, i.e.,  
www.apgenco.gov.in OR https://etender.apgenco.gov.in |
| 22. | Evaluation of Bids | Overall L1 |

**Note:** Ensure that all the documents uploaded as per the CHECK LIST.

*Sd/-
Superintending Engineer
Hydel –II*
CHECK LIST

I. The following documents pertaining to Pre-Qualification & Technical bid should be uploaded in “C-FOLDER ATTACHMENTS” only:

1) **EMD**: DD/BG/PEMD as per item.no.9 of NIT.
2) **Proof of Experience** – Minimum Two Performance certificates along with Job order copies.
3) **Proof of Financial capacity** - Annual Turnover Certificates (with authentication of Charted Accountant) along with Balance Sheets (Financial statements) for last three financial years.
4) **Registration Certificates**: Copies of documents relating to the Registration of the firm, Partnership deed, Articles of Association etc.
5) **Income Tax Registration**: Copy of PAN.
6) **GST Registration**: Copy of GST registration.
7) **Schedules**: Filled in Appendix- A to E and Schedules 1 to 8 (formats enclosed in the tender)
8) **Miscellaneous documents**: Any other documents/issues related to PQ/Technical matters.

II. Copies of the following Price Bid documents shall be uploaded in "ATTACHMENTS FOLDER" which will be visible after Price bid opening only:

1) Price Summary Proposal sheet duly indicating GST as per Schedule-A.
2) Any other items/issues related to Price bid/ Price of items which could not be quoted in the Price Bid can also be uploaded.

**NOTE:**
1) Uploading of Documents in the respective folder of APGENCO e-platform will only be considered. Any wrong attachments will lead to disqualification of the bid.

2) Hard copies shall be submitted by the successful bidder (L1) for verification if asked by the Competent Authority.
1.0 Instructions to Bidders

The instructions given below must be read very carefully, as failure in compliance with any of these may render the offer liable for rejection. If a bidder has any doubt about the meaning of any stipulation therein, General Purchase Conditions, technical specification or any other enclosed document, he should immediately obtain the clarification/ information in writing from the executive who has issued these documents.

1.1 Procedure for Submission of Bids:

a) The bidders need to register on the electronic procurement market place of APGENCO, i.e. www.apgenco.gov.in. On registration in the APGENCO e-procurement website market place the bidder will be provided with a user ID and password by the system using which the bidder can submit their bids on line. For any queries on registration and online bid submission, in APGENCO e-procurement Website, the bidders may contact HELP DESK of Service provider on https://etender.apgenco.gov.in

b) The guidelines for the bidders participating in APGENCO e-procurement tender are detailed in the website www.apgenco.gov.in.

c) The Bids/Schedules should be in the prescribed form that can be downloaded free of cost from the website https://etender.apgenco.gov.in.

d) The dates stipulated in the Bid notice are firm and under any circumstances they will not be relaxed unless officially extended.

e) Digital Certificate Authentication:
   i) The bidder shall authenticate the bid with his Digital Certificate for submitting the bid electronically on APGENCO e-procurement website. Bids not authenticated by Digital Certificate of the bidder will not be accepted on the APGENCO e-procurement website.
   ii) For obtaining Digital Signature Certificate, all the bidders are requested go through Guidelines to bidders for participating in APGENCO e-procurements tenders which is available in the APGENCO e-procurement website.

f) The tenderer should read and understand clearly the general instructions and terms and conditions of the tender document before uploading of documents and submission of the tender. The Bidder is also requested to down load the training Kit, along with above tender document and use the same to acquaint with the procedure. Any offline submission of the bid will be rejected and action will be taken against the bidder according to the norms of APGENCO e-procurement website.
g) The bids shall be submitted online. All the documents to be submitted as soft copies shall be signed & stamped, scanned and uploaded in Zip format. Those documents which shall be submitted as hard copies shall be signed, stamped and sent to reach the tender inviting authority after written request from the tender inviting authority. List of the documents to be submitted in hard copies/soft copies is given in Check List.

h) Any downloading soft copy of the tender documents from the web site is at the sole risk and responsibility of the bidder. APGENCO will not be responsible for any delay/difficulty/ inaccessibility of the downloading facility for any reason whatsoever.

i) Amendments/Addendum, if any will also be posted on website for downloading. APGENCO will not hold any responsibility of amendments being or not being kept tracked from time to time by the bidders.

j) The Bid Opening Authority will not consider any documents uploaded after opening date and time.

1.2 EVALUATION OF BIDS:

a) Bids will be processed in two stages (two part bid). In the first stage, the "Bid" under e-procurement package will be opened to assess whether the Bidder qualifies and whether his offer is technically acceptable and substantially responsive. The Purchaser will examine the Bids to determine whether they are complete, whether required sureties have been furnished, whether the documents have been properly signed, whether relevant hard copies have been furnished and whether the Bids are generally in order. The bids of only such Bidders whose bids are technically and commercially in accordance with the specification will be considered for second stage of Price Bid opening/evaluation. The on-line system will not open the price-bids of tenderer who are not qualified in Technical/PQ.

b) A responsive Bid is the one which accepts and fulfils all the terms and conditions of this specifications and documents, supported by the necessary sureties, and are complete in respect of details as requested in the Bid document.
   i) The responsive Bids received will be evaluated by the Purchaser to ascertain the lowest evaluated Bid for complete works covered under these specifications and documents.
   ii) The purchaser is the final authority in deciding the above and his decision cannot be contended.

c) If the due date for opening of the tenders happens to be a Public holiday, the opening of the tenders will be done on the next working day at the same time and venue as specified originally for opening. APGENCO reserves the right to amend or modify the tender and its conditions.

d) The Bids will be opened at the time and date specified in the tender notice by the Superintending Engineer or his authorized representative in the presence of the bidders or their authorized representatives with valid authorization, who may desire to be present.

e) The tenders which contain the full information and which comply with the requirements regarding technical and financial qualifications, experience and equipment will be considered.
f) The APGENCO e-procurement website market place provides an online self-service registration facility to such of the Bidders who are already registered with the respective participating departments for supply of specified goods and services.

g) Intending bidders can contact the O/o the Superintending Engineer, Hydel-II, APGENCO, 4th Floor, Vidyut Soudha, Vijayawada - 520004 for any clarification/information on any working day during working hours. Phone: 0866 – 2526802/305/317.

h) APGENCO reserves the right to respond to any e-mail received by it through their website. APGENCO does not warrant the privacy and/or security of e-mails during internet transmission.

i) APGENCO reserves the right, without prejudice to other rights under terms and conditions of the NIT and tender documents or other remedies available to cancel tenders without assigning any reasons and will not entertain any correspondence in the matter. APGENCO accepts no liability whatsoever and will not be liable for any loss or damage arising directly or indirectly (including special, incidental or consequential loss or damage) from use of APGENCO e-procurement website or from cancellation of tenders.

1.3 Earnest Money Deposit (EMD): Offers must accompany EMD as per S.No.9 of NIT.

1.4 The EMD shall be forfeited, if
   i) Bidder withdraws the bid before expiry of its validity.
   ii) Successful bidder does not accept the order/LOI or fails to enter in to a contract within validity period of offer.
   iii) Successful bidder fails to furnish Security Deposit within 30 days from the date of issue of P.O/ LOI.
   iv) The offer is disqualified for the reasons outlined in clause 1.7.

1.5 Permanent/ Standing EMD Holders: The bidder may deposit with APGENCO, the permanent fixed deposit of Rs.5,00,000/- (Rupees Five Lakhs only) as EMD in the form of DD/Pay order/ Banker’s cheque. In case of BG, it shall be valid for a period of three years constituting the said sum as security for the compliance with the obligation undertaken in the offer submitted by the bidder. No interest will be payable on such amount. Such bidder shall be entitled to have them considered without payment of EMD upto Rs.5Lakhs with each tender separately. They need to furnish the Registration Certificate Number and shall also furnish a copy of certificate along with the offer.

1.6 The fact of having enclosed the EMD, in requisite forms as indicated (1.3), or bidder holding permanent EMD (1.5), shall be clearly mentioned in their offer, failing which their offer will not be considered for evaluation whatsoever.

1.7 Post tender rebates or deviation in quoted prices and/or conditions or any other such offers which will give a benefit to the bidder will not only be rejected outright but also the original offer will itself get disqualified on this account, and bidders EMD shall be forfeited.
1.8 Bidders may note that due date and time of opening the bids shall be adhered to and accordingly, if they wish to witness the bid opening, they should bring necessary authorization letter from the organization.

1.9 Standard printed conditions of the bidder if uploaded with their offer will not be accepted.

1.10 **Validity of offers**: The offer shall be valid for period of **120 days** from the date of opening of bids. The period of validity cannot be counted from any other date other than the date of opening the bids. During this period bidder shall not be permitted to withdraw or vary their offers, once made and if they do so, the EMD shall be forfeited.

1.11 **Income Tax Certificate**: The bidder shall submit along with their offers, the latest valid Income Tax returns for at least two years during the last three years.

1.12 **Past Experience**: The list of consumers, to whom the bidder had made RLA studies in the past along with P.O details and performance report, if any, shall be furnished.

1.13 **Acceptance of APGENCO Payment Terms**: The bidders will be loaded in price evaluation @ 1.25% of landed cost per month for deviation in payment terms.

1.14 **Price Basis**: Kindly quote FIRM prices. The price quoted shall include all charges for carrying out the tests and submission of comprehensive test reports. Any taxes, duties like GST and any other government levies applicable shall be clearly indicated.

1.15 **Goods & Services Tax**: Kindly indicate clearly as to whether the offered prices are inclusive or exclusive of GST. The rate applicable shall be shown separately. GST will be paid to the contractor at the rate which it is liable to be assessed/actually assessed on the date of study. In case the bidder stipulates GST extra as applicable at the time of dispatch and specifies the present rate of GST (in numeric percentage or NIL), the offer shall be evaluated considering rate of GST for the product as per rate of Govt. of India or as evident from bids received from other bidder. However, liability of APGENCO shall be restricted to actual GST paid at the time of dispatch subject to production of Tax Invoice.

1.17 **Cost Compensation for Deviation**: Deviations specifically declared by the bidders in respective deviation schedules of bid proposal sheets only will be taken into account for the purpose of evaluation. The bidders are required to declare the prices for the withdrawal of the deviations declared by them in the deviation schedules. Such prices declared by bidders for the withdrawal of the deviations in the deviation schedule shall be added to the bid prices to compensate for these deviations. In case prices for the withdrawal of deviations
not furnished by the bidder, the APGENCO shall convert such deviations into Rupee value and add to the bid price to compensate for these. In determining the Rupee value of the deviations, the APGENCO will use parameters consistent with those specified in the specification and documents and/or other information as necessary and available with APGENCO. In case the bidder refuses to withdraw the EMD of bidder shall be forfeited. Bidder may note that deviation variations and additional condition etc. found elsewhere in the bid other than those stated in the Deviation schedules, save those pertaining to any rebates, shall not be given effect to in evaluation and it will be assumed that the bidder complies with all the conditions of bidding documents. In case bidder refuses to withdraw, without any cost to APGENCO, those deviations, which the bidder did not state in the deviation schedules, the EMD of the bidder may be forfeited.

1.18 Offer should strictly be in conformity with technical specifications as stipulated in this tender. In case no deviations are indicated, it shall be taken for granted that the offer strictly as per the requirements.

1.19 **Contract Period:** 4 months - The work shall be started within 7 days from the date of intimation and the work shall be completed within shortest possible time. The final report shall be submitted within 4 months from the date of PO/LOI.

1.20 It is not binding on APGENCO to accept the lowest or any bid. The corporation reserves the right to revise the quantities at the time of placing order. The quoted rates, terms and conditions shall apply. APGENCO further reserves the right to accept or reject any/all bids without assigning any reasons thereof.

1.21 Bidders are requested to fill in the enclosed proforma (Schedule-1) for Terms and conditions and submit the same in duplicate along with their offer.

1.22 APGENCO will provide the following inputs:
(a) Accommodation to the personnel subject to the availability
(b) Data available at Power House. Plant performance such as technical specification of equipment, running hours etc.,

1.23 Officer in-charge of Power Station: The Chief Engineer/O&M/LSHES/Mothugudem-507113/East Godavari (Dist).

**Bidder may visit the site to have complete details of site. For site visit, the bidder may contact or coordinate with the following Officer.**

*Executive Engineer/O&M/LSHES, Cell No. 9490851149*

1.24 If the bidder is on DGS&D Rate contract for item(s) covered enquiry, A copy of the same shall be enclosed along with the offer.

1.25 **Relation between the Parties**
The Consultants subject to this Contract have complete charge of Personnel Performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.

1.26 Amendment of Bidding Documents:
   a) At any time prior to the due date & time 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 through e-platform.
   b) In order to allow prospective Bidders reasonable time to make the amendment into account in preparing their bids, the Purchaser may, at his discretion, extend the due date & time for the submission of bids.

1.27 Language of Bids: The Bid prepared by the Bidder and all correspondence and documents relating to the bid exchanged by the Bidder and the Purchaser, shall be written in English language only.

1.28 Documents Comprising Online Bid:
   List of all documents which shall be submitted as softcopies/ hardcopies are given in the Check List. The documents which shall be submitted as softcopies shall be signed, stamped and scanned and uploaded during bid submission. The documents which shall be furnished as hardcopies shall be signed, stamped and sent as and when requested by the tender inviting Authority by the successful bidder.

1.29 Articles of Association:
   a) All Bids must be accompanied by duly authenticated copies of the documents defining the constitution of the company, power of attorney and other relevant documents, and any bid submitted by a partnership firm must be accompanied by duly authenticated extracts from the partnership deed or other documents, so as to show by which person and in what manner contracts may be entered into by or on behalf of the company, partnership for the due execution of such contracts and responsibilities.
   b) The said documents must be legalized by the local authorities at the place of issue. Such documents should indicate current address of the firm and full name and current address of all partners of the firm.
   c) Any Bid not containing these documents, or if such documents are incomplete, or do not conform to the aforesaid forms, may at the discretion of the Purchaser be excluded from the judicature.

1.30 The Purchaser may, at his discretion, extend the due date & time for the submission of bids through online corrigendum. However, all rights and obligations of the Purchaser and Bidders previously subject to the due date & time will thereafter be subject to the due date & time as extended.

1.31 Date of Commencement of Contract:
   The date of issue of LOI/PO is the date of commencement of contract. The contractor will have to complete all the formalities like submission of Security
Deposit etc. within 30 days of issue of LOI/PO. Any delays in complying with the above formalities will be to the account of the contractor.

1.32 Authentication of Bidding:

a) If the tender is made by an individual, it shall be signed by the individual above his full name and current address.

b) If the tender is made by a proprietary firm it shall be signed by the proprietor above, his full name and the full name of his firm with its current address.

c) If the tender is made by a firm in partnership, it shall be signed by all the partners of the firm above their full names and current address, or by a partner holding the power of attorney for signing the tender in which case a certified copy of the power of attorney shall accompany the tender. A certified copy of the partnership deed, current address of the firm and the full names and the current addresses of all the partners of the firm shall also accompany the tender.

d) If the tender is made by limited company or a limited corporation, it shall be signed by a duly authorized person holding the power of attorney for signing the tender in which case a certified copy of the power of attorney shall accompany the tender. Such limited company or corporation may be required to furnish satisfactory evidence of its existence before Contract is awarded.

e) If the tender is made by group of firms, the sponsoring firm shall submit complete information pertaining to each firm in the group and state along with the bid as to which of the firms shall have the responsibility for tendering and for completion of the Contract document and furnish evidence admissible in law in respect of the authority assigned to such firm on behalf of the group of firms for tendering and for completion of the Contract document. The full information and satisfactory evidence pertaining to the participation of each member of the group of firms in the tender shall be furnished along with the tender.

f) The documents or information as required by paras “(a) to (e)” herein above must be uploaded by the tenderer.

g) All witnesses and sureties shall be persons of status and probity and their full names, occupations and addresses’ shall be stated below their signatures.

h) All signatures in the tender documents uploaded shall be dated.

Sd/-
Superintending Engineer
Hydel –II
2.0 General Purchase Conditions (General)

Intent of Bid
The intent of the bid is to invite proposal from the bidders capable to undertake Residual Life Assessment (RLA) studies on civil structures, penstocks, Hydro Mechanical, Electro & Mechanical, Control & Protection equipment of all four units (4X115 MW) of Lower Sileru Hydro Electric Project (LSHEP) and Preparation of Detailed Project Report (DPR) along with technical specifications for Renovation, Modernization & Up-rating of all four units of LSHEP. The bidder shall carry out Residual life assessment/Life extension studies with a view of making improvement in plant load factor (PLF) and plant availability factor, bringing out unit in original operating parameters, efficiency, meeting statutory requirements regarding environment and safety of LSHEP(4X115MW) and submit their report recommendation for run/repair/replace, recommendation with cost benefit/techno economic evaluation and cost effective technique and capital investment justification.

2.1 The following terms and expressions herein used shall have the meaning as indicated therein:

Contractor/Vendors/Consultant: Shall mean the individual; firm or company whether incorporated or otherwise in whose name this purchase order is addressed and shall include its permitted assigns and successors.


Contract / Agreement: shall mean the Purchase Order.

2.2 Reference: This purchase order number must appear on all the correspondence, packing slips, invoices, drawings or any other document or paper connected with this purchase order.

2.3 Specifications and drawings: Any information or details which are included in the specification but not indicated in the drawings and vice-versa shall have the same effect and meaning as if included for and shown both in the specifications and drawings. In case of any dispute between the specifications and drawings, the decision of the Corporation or its authorized representative shall be final and binding.

2.4 Waiver: Any waiver by the authority or any breach of the terms & conditions of the purchase order shall not constitute any right for subsequent waiver of any other terms and conditions.

2.5 Subletting and Assignment: The contractor shall not, save with prior consent in writing of the Corporation, sublet, transfer or assign this order or any part thereof or interest therein or benefit or advantage thereof in any manner, whatsoever. Provided nevertheless that any such consent shall not relieve the supplier from any obligation, duty or responsibilities under the contract.
2.6 **Information Provided by the Corporation:** All drawings, data and documentation that are given to the contractors by the Corporation for the execution of the order are the property of the Corporation and shall be returned back when demanded. Except for the purpose of executing the order of the Corporation, contractor shall ensure that the above documents are not used for any other purpose. The contractor shall further ensure that the information given by the Corporation is not disclosed to any person, firm, body, corporate and / or authority and make every effort that the above information is kept confidential. All such information shall remain the absolute property of the Corporation.

2.7 **Contractor’s liability:** Contractor hereby accepts full responsibility and indemnifies the Corporation and shall hold the Corporation harmless from all acts of omission and commission on the part of the contractor, his agents, his subcontractors and employees in execution of the purchase order. The contractor also agrees to defend and hereby undertakes to indemnify the Corporation and also hold it harmless from any and all claims for injury to or death of any and all persons including but not limited to employees and for damage to the property arising out of or in connection with the performance of the work under the purchase order.

2.8 **Access to Contractor’s Premises:** The Corporation and /or its authorized representative shall be provided access to contractors and / or his subcontractor’s premises, at any time during the pendency of the purchase order, for expediting the tests, reports etc.

2.9 **Acceptance of order:** The Purchase orders will be sent to contractor. in duplicate and he shall return one copy along with enclosures, duly signed and stamped, within 15 days in token of having received and accepted the order.

2.10 **Jurisdiction:** All and any dispute or difference arising out of or touching this order shall be decided only by the courts situated in Amaravathi/Vijayawada. No suit or other legal proceedings shall be instituted elsewhere.

2.11 **Relation between the Parties**

The Consultants subject to this Contract have complete charge of Personnel Performing the Services and shall be fully responsible for the Services performed by them or on their behalf hereunder.

2.12 **Notices/Intimations**

Any notice, request or consent required or permitted to be given or made pursuant to this Contract shall be in writing. Any such notice, request or consent shall be deemed to have been given or made when delivered in person to an authorized representative of the Party to whom the communication is addressed, or when sent by registered mail to such Party at the address specified. A Party may change its address for notice hereunder by giving the other Party Notice of such change.

2.13 **Authority of Member in Charge**
In case the Consultants consist of a joint venture of more than one entity, the Members hereby authorize the entity specified to act on their behalf in exercising the entire Consultants’ rights and obligations towards the Owner under this Contract, including without limitation the receiving of instructions and payments from the Owner.

2.14 Authorized Representatives
Any action required or permitted to be taken, and any documents required or permitted to be executed, under this Contract by the Owner or the Consultants may be taken or executed by the officials.

2.15 Insurance to be taken out by the RLA/LE Consultants
The RLA/LE Consultants (i) shall take out and maintain and shall cause any Sub-Consultants to take out and maintain, at their (or the Sub-Consultants’, as the case may be) own cost but on terms and conditions approved by the Owner, insurance against the risks, and for the coverage, and (ii) at the Owner’s request shall provide evidence to the Owner showing that such insurance has been taken out and maintained and that the current premiums therefore have been paid.

2.16 Documents prepared by the RLA/LE Consultants to be the Property of the Owner
All plans, drawings, specifications, designs, reports and other documents and software prepared by the RLA/LE Consultants in performing the Services shall become and remain the property of the Owner, and the RLA/LE Consultants shall not later than upon termination or expiration of this Contract, deliver all such documents and software to the Owner, together with a detailed inventory thereof. The Consultants may retain a copy of such documents and software subject to restrictions about the future use of these documents, if any.

2.17 Equipment and Materials furnished by the Owner
Equipment and materials made available to the Consultants by the Owner, or purchased by the RLA/LE Consultants with funds provided by the Owner, shall be the property of the Owner and shall be marked accordingly. Upon termination or expiration of this contract, the RLA/LE Consultants shall make available to the Owner an inventory of such equipment and materials and shall dispose of such equipment and materials in accordance with the Owner’s instructions. While in possession of such equipment and materials, the RLA/LE Consultants, unless otherwise instructed by the Owner in writing, shall insure them at the expense of the Owner in an amount equal to their replacement value.
2.18.1 **GENERAL**

The RLA/LE Consultants shall employ and provide such qualified and experienced Personnel as are required to carry out the Services.

2.18.2 **Description of Personnel**

The titles, agreed job descriptions, minimum qualifications and estimated periods of engagement in the carrying out of the Services of each of the Consultants’ Key Personnel are described in Appendix-C.

*Sd/-*

Superintending Engineer

Hydel –II
3.0 **General Purchase Conditions (Financial)**

3.1 **Prices**: Price(s) mentioned in the purchase order shall be firm and not subject to escalation on any account, till the order is executed in full and its subsequent amendments accepted by the contractor even though the completion/execution of order may take longer time than completion period incorporated and accepted in purchase order.

3.2 **Taxes and Levies**: Taxes and other levies payable shall be shown separately in the invoice. These shall be to the account of Corporation, unless otherwise mentioned in the purchase order.

3.3 **Variations in Statutory Levies**: Any variation, upward or downward, in statutory levies or new levy is introduced after opening of the bids/placement of order under this purchase order shall be to the account of the Corporation, unless otherwise mentioned in the P.O.; provided that in cases where delivery schedule is not adhered to by the supplier and there are upward variation/revision after the agreed delivery date, the bidder/supplier shall bear the impact of such increased levies and if there is downward variation/revision, the corporation shall be given advantage to that extent.

3.4 **Security Deposit (SD):**
   
a) The successful bidder shall furnish the Security Deposit equal to 2.5% of value of purchase order within ONE month from the date of issue of Purchase order (if the value of order is above Rs.2 Lakhs) for proper fulfilment of full execution of order thereof. The amount of security deposit shall be forfeited to the extent of financial loss suffered by the Corporation, if supplier fails to execute the order and fulfil its terms and conditions.

   b) Security deposit may be furnished in the shape of Demand Draft drawn on any Govt. Banks/Nationalized Banks/Public Sector Banks/Scheduled banks, payable to Pay officer/APGENCO or Bank guarantee in prescribed proforma as per **Annexure-3** (Bank Guarantee shall be accepted only if amount of SD is above Rs.10,000/-) from any Govt. Banks/Nationalized Banks/Public Sector Banks/ Scheduled banks. However, the Bank guarantee shall be valid for a period of 6 months over and above the contract period and the validity of the bank guarantee shall be extended suitably in case of delay in execution of order.

   c) The Security deposit will be returned back to the contractor as soon as order is fully executed and there is nothing outstanding either against this purchase order or any other purchase order placed by the corporation on the supplier.

3.5 **Terms of payment:**

3.5.1 The standard payment terms shall be 100% of the all-inclusive price will be paid within 30 days from the date of Submission and acceptance of Final
Report of RLA/LE study and preparation of DPR along with technical specifications for all four units of LSHEP.

3.5.2 Payments shall be made through account Payee CHEQUES ONLY.

3.5.3 If the supplier has received any over payments by mistake or if any amounts are due to the Corporation due to any other reasons, when it is not possible to recover such amount under the contract resulting out of this order, the Corporation reserves the right to collect the same from any other amounts and/or Bank Guarantee given by the supplier due to or with the Corporation.

3.6 **Liquidated damages/ failure and termination:**

3.6.1 In the event of any delay in executing the order within the contract period, the Corporation reserves the right to recover from the contractor a sum equivalent to 0.5% of the value of the uncovered portion of the agreement for each week of delay and part thereof subject to a maximum of 5% of the total value of the order.

3.6.2 Alternatively, the Corporation may cancel the purchase Order completely or partly without prejudice to its right under the alternatives mentioned above.

3.7 **Insurance:** The insurance for the contractor’s personnel who work at site shall be in contractor’s account only.

3.8 **Force Majeure:**

3.8.1 The supplier shall not be liable for any delay or failing to execute the order for reasons of Force Majeure such as Acts of God, Acts of War, Act of Public Enemy, Natural calamities, Fires, Floods, Frost, Strikes, Lockouts etc. Only those causes which have duration of more than 7 days shall be considered for force majeure.

3.8.2 The contractor shall within 10 days from the beginning of such delay notify to the Corporation in writing the cause of delay. The corporation shall verify the facts and grant such extension of time as facts justify.

3.8.3 No price variation shall be allowed during the period of force majeure and Liquidated damages would not be levied for this period.

3.8.4 At the option of the Corporation, the order may be cancelled. Such cancellation, would be without any liability whatsoever on the part of the Corporation. In event of such cancellation, supplier shall refund any amount advanced or paid to him by the Corporation and deliver back any materials issued to him by the Corporation and release the facilities, if any provided by the Corporation.

3.9 **Cancellation of Order:** The Corporation reserves the right to cancel the order in part or in full by giving two weeks’ notice there by if

- The supplier fails to comply with any of the terms of the order.
- The supplier becomes bankrupt or goes into liquidation.
- The supplier makes general assignment for the benefit of the creditors and
- Any Receiver is appointed for the property owned by the supplier.

*Sd/-
Superintending Engineer
Hydel –II*
4.0 TECHNICAL SPECIFICATION

4.1 Scope

4.1.1 To conduct Residual Life Assessment (RLA) and Life extension (LE) studies on civil structures, penstocks, Hydro Mechanical, Electro & Mechanical, Control & Protection equipment of all four units (4X115 MW) of LSHEP and preparation of Detailed Project Report (DRP) along with technical specifications for taking up Renovation, Modernization & Up-rating of all four units of LSHEP.

Based on the spot residual Life Assessment tests and up-rating study of all units and associated auxiliaries, collected data, a basic report is to be prepared and submitted with hard copies and soft copies. The outcome of the Basic Study Report is to be used as basis for preparation of DPR which would eventually form the basis for preparation of the tender specification for implementation of R,M&U of the station.

RLA & LE studies should cover the following in the Part-I technical Bid:

a. Probable time of commencement of RLA& LE.

b. Duration of RLA& LE study for one unit.

c. Period of shutdown required for conducting RLA& LE study.

d. Details of tests going to be conducted and the time required for the same.

e. Measurement of the condition of plant in its running condition such as vibration, noise signal analysis, pressure pulsation test etc.,

f. Performance assessment involves efficiency tests on the hydro turbine, generator, transformers etc at various loads.

The scope of tests should include the following categories of tests besides other tests to be specified by you:

i) Dynamic studies on the running machine to study operational integrity of the machine.

ii) Analysis of shaft and bracket vibrations at various points.

iii) Analysis of noise signals at turbine pit draft tube area.

iv) Pressure pulsation analysis by recording pressure pulsations at penstock and other locations.

v) Examination of system parameters like Head race and Tail race levels, Servomotor stroke, guide vane openings, pressure gauge readings, bearing temperatures etc. under various loading conditions.

vi) Natural frequency tests to test structural integrity of runner.
vii) Metallurgical examination and non-destructive tests on various turbine components.
   a) Magnetic particle inspection of welds.
   b) Hardness measurements of various turbine components.
   c) Incite Metallography.

viii) Ventilation investigations of generator covering measurement of airflow velocities and pressure in air passage and temperature measurements of stator winding, stator core etc.

ix) Insulation studies of generator by conducting following tests:
   a) Measurement of insulation Resistance and polarization Index
   b) D.C. Step voltage test.
   c) Tan-Delta and capacitance test.
   d) Partial discharge test
   e) ELCID test to assess the condition of stator core insulations, wedge tapping test to assess the tightness of the wedges and test on pole coils etc.

x) Study on Auxiliary Systems of hydro turbine and generator.

xi) Any other tests that may be required for RLA & LE studies.

4.1.2 The intending contractor shall visit the power house to have a firsthand information about the machines and to have any other technical particulars required for conducting the RLA & LE studies. All expenditures related to their site visit will be to their account only.

4.1.3 These works shall be done in the best manner using the modern technology and scientific methods so that maximum benefits are derived at minimum cost / carrying out barest minimum and necessary works.

4.1.4 The testing equipment shall be in Contractor’s scope. The Contractor may include additional tests also (if required) as mentioned earlier. However, APGENCO may take final decision on the same.

4.1.5 Following should be kept in view while checking up-rating possibilities.
   (i) The outer dimensions of major equipment viz Generator, rotor, turbine, Runner, Head cover etc., can undergo no change as these have to fit in existing housings of civil structures.
   (ii) Up-rating of generators also should involve improving cooling/ventilation capacity to take away higher heat loss.
   (iii) Higher output of turbine would mean more water through the machine which results in increased run away speed, axial thrust, speed, back pressure in case of tripping of unit which would require calculation of centrifugal force of rotating parts to check the mechanical strength of rotating parts, their fasteners.
4.1.6 **Civil Structures:**

I. Foundations, Pedestals, Columns, Beams and Slabs of Power House, Lower bracket Foundations (Generator foundation structures), D.T Cone and spiral case concrete foundation.

II. Intake structure, Trash Racks ‘ panels, 2 Nos of Intake gates and 1st and 2nd stage foundation embeddings for the same along with rope drum hoists including controlling accessories.

III. Concrete lined Head Race Tunnel-3.24 KM.

IV. Surge shaft (24.40 M dia) along with 3 Nos. Intake gates and their embeddings, hoisting equipment including controlling accessories etc.,

V. Foundation of pressure Shafts.

VI. 6 Mtrs. Dia steel lined Pressure shafts-116 M length

VII. Foundation and structure of Valve house

VIII. Penstock pipes, Anchor blocks and expansion joints for Penstock pipes

IX. Draft Tube gates and their hoisting structure including controlling accessories.

X. Tail Race Channel of length -585 M length.

XI. Any other civil structures which are not mentioned above and require RLA&LE studies shall also be conducted by the contractor.

*All tests on all the civil structures shall be of non-destructive duly following relevant IS Codes.*

4.2 **Details of scope of work:**

i. Review of original design and operational history and analysis of records pertaining to failures, modifications and overhauls carried out from time to time.

ii. Visual inspection and detailed diagnostic and health assessment.

iii. Review of operation & maintenance practices

iv. Walk down surveys.

v. RLA & LE study shall be undertaken on the Turbine, generator, Generator transformer and its auxiliaries, inlet valves, Shut off rotary valves, Butterfly valves and any other valves etc., and other equipment of units, all the station auxiliaries such as EOT cranes, Gantry cranes etc.

(a) Hardness testing is to be carried out on components operating at high stress to examine the extant of micro-structural degradation.
The location of hardness measurement is to be selected based on tests and visual examination.
(b) The components liable for deformation/distortion/bulging due to wear/creep like bolts, valve stems, bushes etc are to be thoroughly cleaned and dimensions measured to be compared with original one for any change.
(c) Metallographic examinations by portable optical microscope and by surface replication technics are to be carried out to assess the present micro-structure condition of the components.
(d) The components subjected to high tensile stress namely turbine runner and generator rotor, shafts, weld joints etc., are to be examined by MPI to check for any surface and sub-surface defects.
(e) Dye-penetrant examinations using colored or fluorescent dye are to be used for detection of surface crack/porosity/discontinuity. The components subjected to tensile stress should be examined by DPT.
(f) Magnetic particle inspection using wet fluorescent method is to be employed for detection of surface and subsurface defects. The examination is to be conducted using continuous method i.e. the magnetizing field, should remain on while fluorescent particles are sprayed. These areas are to be examined under ultra violet light of adequate intensity.
(g) Ultrasonic examination shall be employed for detection of surface and subsurface crack, loose bonding, material defect or any of discontinuity to ensure internal soundness of the component for further use. This method shall be employed to determine wall thinning of tubes/surface and cracking due to corrosion fatigue.

vi. Study of water conducting system and specific problems that may be required to be set right and to suggest replacement/refurbishment of necessary items with appropriate latest technology to get all the units uprated as well as renovated.

vii. Scientific study to be conducted to confirm the economic viability of R,M&U of all the units.

viii. **It is preferred to execute R,M & U scheme without carrying out any major modification to the civil structure/ water conducting system.**
ix. Carrying out of various types of destructive and non-destructive tests with minimum downtime of units, at site / manufacturing works / laboratory, etc. All the components have to be visually examined before and after cleaning the surface by using aids like illuminated low magnifying glass, mirror etc for abnormalities such as dimensional changes, breakage, crack abrasion, porosity, erosion, corrosion and pitting. Shaft bores are examined after preparing the bore by cleaning/honing with the help of video image scope. Deposits are collected and analyzed for its composition.

x. Evaluations of test results /condition analysis for arriving at judicious run/repair /replace recommendations.

xi. Residual life assessment & condition assessment of power plant components/ equipment’s / systems with minimum downtime of units.

xii. Adequacy of bearings and lubrication system to take on additional stresses for uprated capacity.

xiii. Adequacy of Runner, Generator, Rotor and shafts for uprated capacity with calculations.

xiv. (a) Adequacy of penstocks to discharge additional quantity of water for uprated capacity with supporting calculations (including surge shaft).

(b) It is preferred to utilize present quantum of water through penstocks for uprated capacity by modifications on runner and other equipment.

xv. Stability of scroll casing/ manifold to withstand uprated capacity.

xvi. Adequacy of the coupling bolts to withstand the uprated capacity.

xvii. Healthiness of Generator Stator frame and core and its suitability for uprating.

xviii. Upgradation of protection & control and metering & instrumentation systems.

xix. Supervisory Control and Data Acquisition system and Man - machine interface to be envisaged.

xx. Adequacy of the existing rotor main field winding to meet uprated requirement.

xxi. Adequacy of the existing foundations to withstand uprated stress.

xxii. Structural integrity of existing components.
xxiii. Structural suitability for further continued operation and uprated capacity.

xxiv. Residual stress of rotating parts, Spiral Case and Penstock.

xxv. Bearing and shaft vibrations.

xxvi. Pressure variation/ difference at different parts/ components of the Turbine from inlet valve to draft tube discharge.

xxvii. Adequacy of EOT crane facility to handle uprated equipment, whether overhaul necessary.

xxviii. 220KV, 33KV & 11KV switchyard equipment.


xxx. Recommendations in respect of the following:
   a) Run/Repair/Replace recommendations with justifications & backup information.
   b) Technological and metallurgical upgradations in plant & systems
   c) Capacity upgradations in plant and systems, wherever feasible.
   d) Improvements in operation & maintenance practices
   e) Automation technology improvement
   f) Environment upgradation to meet the statutory norms
   g) Improvement in plant safety
   h) Training needs for the O&M personnel

xxx. Cost benefit/ techno-economic evaluation & capital investment justification

xxxii. Any other works not covered above but are necessary

Above works or some of it may be required to be performed on various units/equipment and systems as under, but not limited to these equipment & systems

   a) Intake gates/stop logs/water conductor system and other civil engineering works
   b) Lower Bracket Foundations (Generator foundation structure)
   c) Penstock pipes
   d) Draft tube gates, D.T Cones
   e) Penstock service gates
   f) Surge shaft gates, Surge shaft
   g) Shutoff rotary valves
   h) Flow measurement of each Unit.
   i) Valve house EOT crane, its systems
   j) Gantry cranes at Draft tube area and Surge shaft area.
k) Turbine
   i. Runner
   ii. Runner Disc, labyrinth seals
   iii. Guide vanes/stay vanes
   iv. Top cover
   v. Spiral casing
   vi. Draft tube
   vii. Servomotor
   viii. Governor
   ix. Turbine shaft/shaft seal
   x. Pressure oil system
   xi. Instrumentation/control/protective devices
   xii. Turbine guide bearing and its coolers.
   xiii. Other equipment.

l) Generator
   i. Winding insulation
   ii. Stator core
   iii. Rotor
   iv. Excitation equipment
   v. Automatic voltage regulator
   vi. Neutral grounding and LAVT equipment
   vii. Cooling water system
   viii. Generator shaft
   ix. Thrust and guide bearings(LGB & UGB), Thrust collar, thrust runner disc.
   x. Thrust bearing, UGB & LGB bearing oil coolers.
   xi. Thrust bearing lubrication system.
   xii. Stator air coolers.
   xiii. Instrumentation/controls/protective relays
   xiv. Bus ducts, LAVT, CTs, PTs, Isolators.
   xv. Other equipment

m) Auxiliary systems
   i. Drainage/dewatering system
   ii. Compressed air system
   iii. Firefighting system
   iv. LT AC/DC systems
   v. Main step up and auxiliary transformers
vi. Switchyard equipment
vii. Power and control cables
viii. Power House EOT cranes and its systems.
ix. 11 KV HT Switchgear
x. Battery banks and Battery chargers
xi. Greasing system.
xb. OPU system of Governor and Shutoff rotary valve.
xii. Ventilation system
xiii. Unit Auxiliary transformers, Station service transformers.
xiv. Hydro static lubrication system, Brakes & Jacks system.
xv. Any other equipment.

n) Any other items not covered above but are necessary for Up-rating and life extension and sustained economic operation shall also be carried out.

If required, necessary L/C and dismantling works for study and reassembling works after completion of study will be arranged by APGENCO.

You are requested to quote the duration of study to enable APGENCO to arrange for L/C. As this is to be arranged without affecting the Grid operation, prior intimation regarding the programme of study and mobilization of men and materials is to be given in advance to the CE/HPC & Hydel Projects.

Tests proposed to be conducted and methodology of evaluation of test results may be detailed.

4.3.1 Preliminary Report:
Based on the study/testing, collection of data covered and discussion with APGENCO officials, a preliminary report is to be prepared and submitted to CE/HPC & Hydel Projects with hard copies and soft copies of preliminary report.

The study report shall include the following besides the other data.

Date and time of test, Ambient Temperature, frequency, active and reactive components of generator output, temperature of different parts, data observed, inferences arrived at and list of test equipment’s used along with valid calibration certificate, measured water head discharge, vibration at different levels and stress of different components.

4.3.2 Final report:
Final report shall be furnished after carrying out all the studies along with technical specification of equipment (refer Clause No.4.4) and attending to any queries/comments by APGENCO on the preliminary Report.

4.4 Technical Specification:
4.4.1 Taking into consideration of the possibility to up-rate the units and Residual life of the equipment’s etc, and to execute the scheme under TURNKEY basis, the Technical specifications for R,M&U scheme has to be prepared duly incorporating the following aspects based on the study results.

i. Specifications should include firefighting system, cooling water system, protection and control system, Generator Transformer, Shut off Rotary Valves, Brake set, HS Lub oil System, Bearings, pressurized air system, HP/LP valves, OPUs, Governors, AVRs & Excitation system, metering, all LT/HT and control cables, LT power supply system, Ventilation and air conditioning etc., apart from Turbine and Generator, whichever is applicable/necessary so that the life of the machines gets extended and capacity up-rated to the maximum extent possible.

ii. Any other item that may be required to achieve the targeted Generation capacity as per the report subject to APGENCO approval.

iii. While evolving specification for the equipments, all minor items required to commission the equipments, related cables, piping, power supply, minor civil works etc., should be included so that the package is complete in all respects. Design details for such works are to be furnished.

**The Technical specification on R, M & U scheme should include the following.**

a. Generator, Turbine, Mechanical equipment such as SOR, Brake System and Governor etc.

b. Protection and control & Metering Equipment

c. LT switch gear /MCC and Starter panels.

d. Electric Motors, cooling water system, pressurized air system, Drainage and Dewatering system.

e. Cables- LT,HT, Power and control cables

f. Generator Transformer

g. Miscellaneous

h. SCADA & its Instrumentation to be proposed for R,M&U.

i. Fire fighting system including emulsifier for transformer yard

j. Ventilation System & Air conditioning of control room

k. Renovation of EOT cranes, Gantry cranes.

4.4.2 Detailed Technical Specification may be furnished in hard & soft copies.

4.4.3 **Detailed Project Report (DPR):**

After detailed study, a draft DPR is to be submitted to CE/HPC&HP/VS/Vijayawada for approval/comments.

Based on the approval of APGENCO on draft DPR, finalization of Detailed Project Report should be done duly considering the views of APGENCO.DPR should cover justification for the schemes and also every item of work apart from cost benefits with reference to investment. 10 (Ten) hard copies with 5
soft copies in CDs of final DPR is to be submitted to CE(HPC&HP), VS, APGENCO.

DPR should cover the following:

i. Ultimate capacity to which the units can be up-rated with the existing water conducting system and hydrology.

ii. The best period to go in for R&M/R, M&U, the tentative period of completion, estimated cost for both the options (R&M and R,M&U) may also be included in the report.

iii. List of modifications suggested.

iv. Technical specification of the equipment proposed for R,M&U.

v. Scheme justification report duly considering the space availability and stability of civil and mechanical structures.

vi. Brief description and salient features of the proposed modifications and new equipment.

vii. Additional generation that could be achieved with the proposed modifications (without up-rating and with up-rating).

viii. Payback period, cost benefit analysis, NPV, IRR work sheet.

ix. Cost estimates specifying the assumptions made.

x. Time schedule for scheme implementation after considering the local conditions and also to minimize loss in generation by properly choosing the time of shutdown of units/plants. This should be supported by PERT/Bar charts.

Among the other things the Detailed Project Report should cover the following salient features:

a. Brief History of the existing project.

b. Salient features of the existing project and performance review.

c. Need for the project and justification.

d. Hydrology.

e. Renovation and Modernisation/ Renovation, Modernisation and Uprating studies with descriptive narration of tests on different components, discussions and interpretations of test observations.

f. Renovation and Modernisation/ Renovation, Modernisation and Uprating possibility and proposals.

g. Project implementation Schedule.

h. Environmental aspects.

i. Manpower and training.


k. Conclusion and Recommendation.

4.5 Details to be furnished by APGENCO:

4.5.1 As the power house is more than 44 years old, only limited detailed drawings that are in routine use are available at power house and HQs. Hence it may not be possible to provide copy of all drawings to the contractor. Only limited number of drawings that are available will be spared. Wherever tracings are available, prints will be taken and copies will be furnished. Hence all the
Bidders may inspect the power house before furnishing their offer to know about the availability of crucial drawings and complete equipment details. If necessary, assistance will be provided for preparing the drawings required to finalize the specification to a limited extent and this service will be only for preparing drawings based on consultant’s technical details. Non-availability of component drawings, blade profile drawings, hydraulic forces and moments characteristics and model test results are major constraints. At present, for restoring the generating capacity of the machine, the wornout components are repaired based on the drawings developed through reverse engineering. The Chief Engineer/O&M/LSHES/Mothugudem-507113/East Godhavari (Dist) is the in-charge of power house.

4.5.2 All other requirements are to be arranged by the consultants. Regarding scientific instruments, Tools and plants required to carry out testing etc. at site, the contractor is requested to make their own arrangements to meet their requirements and APGENCO will not provide them.

4.5.3 After finalization of the order and on receipt of your readiness to carry out study/test/analysis, a programme is to be charted and approval of APGENCO is to be obtained in advance so that Line clear is arranged with the concurrence of Load Dispatch centre to the maximum extent possible on the dates proposed. The period required for the study for each machine may clearly be given in your offer so as to programme the above works. On the part of APGENCO, every effort will be made to carry out such study etc., as per the programme as well without any problem/minimum inconvenience in managing the Grid demand, loss in generation, etc. The components will be dismantled for study/analysis purpose as per requirement. After completion of study, same will be reassembled by APGENCO.

4.6 Special Conditions:

i. Power Facility: 415 V 3 phase AC supply if required will be provided free of cost. Necessary cables, switchboard etc. shall be arranged by the contractor.

ii. Tools & Plants and instruments: All instruments and tools and plants required for the study shall be arranged by the contractor at his own cost. Special tools and tackles if any required for the works will be spared, if available at free of cost on returnable basis at the discretion of the Chief Engineer/O&M/LSHES. EOT Crane facility will be made available at free of cost.

iii. Contractor shall have to make his own arrangements for food of his personnel. Subject to availability, office and residential accommodation will be provided on chargeable basis. LT supply for these purposes will be charged on appropriate LT Tariff for commercial/residential as applicable.
iv. Man Power Requirement: Required number of skilled and unskilled man power to be arranged by the contractor.

The offer should cover the following:

a. Probable time of commencement of RLA & LE.
b. Duration of RLA & LE study for each unit and all the four units and plant as a whole.
c. Details of tests to be conducted and the time required for each test.
d. Period of shutdown required for conducting RLA & LE study on each unit and total period of shutdown for 4 units.
e. Probable time required for preparation of DPR.

4.7 Comprehensive Final Report: Comprehensive final report shall include report on RLA/ LE study, Preliminary report based on study, Final report by attending to any queries/comments by APGENCO on preliminary report, Preparation of technical specifications & preparation of Detailed Project Report (DPR) etc.,

4.8 The Technical particulars of Main Equipment at Lower Sileru Power House as follows.

<table>
<thead>
<tr>
<th>S. No</th>
<th>Equipment Name</th>
<th>Stage-I</th>
<th>Stage-II</th>
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<tbody>
<tr>
<td>I</td>
<td><strong>Turbine:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type</td>
<td>Vertical Francis Reaction</td>
<td>Vertical Francis Reaction</td>
</tr>
<tr>
<td></td>
<td>Make</td>
<td>M/s LMW, Russia</td>
<td>BHEL</td>
</tr>
<tr>
<td></td>
<td>Gross head</td>
<td>202.7mts(max) 186.9mts(min)</td>
<td>202.7mts(max) 186.9mts(min)</td>
</tr>
<tr>
<td></td>
<td>Net Head</td>
<td>193.6mts</td>
<td>193.6mts</td>
</tr>
<tr>
<td></td>
<td>Rated Output</td>
<td>199.6Mtrs(max) 172.4mtrs(min)</td>
<td>199.6Mtrs(max) 172.4mtrs(min)</td>
</tr>
<tr>
<td></td>
<td>Normal speed</td>
<td>119 MW</td>
<td>119 MW</td>
</tr>
<tr>
<td></td>
<td>Runaway Speed</td>
<td>300 RPM</td>
<td>300 RPM</td>
</tr>
<tr>
<td></td>
<td>Disc. Through M/c</td>
<td>580 RPM</td>
<td>580 RPM</td>
</tr>
<tr>
<td>II</td>
<td><strong>Generator:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Type</td>
<td>Salient Pole</td>
<td>Salient Pole Synchronous</td>
</tr>
<tr>
<td></td>
<td>Make</td>
<td>Russian</td>
<td>BHEL, Hardwar</td>
</tr>
<tr>
<td></td>
<td>Rated voltage</td>
<td>11KV, 50Hz</td>
<td>11KV, 50Hz</td>
</tr>
<tr>
<td></td>
<td>Rated output</td>
<td>127.7 MVA</td>
<td>127.7 MVA</td>
</tr>
<tr>
<td></td>
<td>Current</td>
<td>6700 Amps</td>
<td>6700 Amps</td>
</tr>
<tr>
<td></td>
<td>Speed</td>
<td>300 RPM</td>
<td>300 RPM</td>
</tr>
<tr>
<td></td>
<td>Power factor</td>
<td>0.9 Lagging</td>
<td>0.9 lagging</td>
</tr>
<tr>
<td>III</td>
<td><strong>Generator Transformers:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Make</td>
<td>Transformers and Electricals Limited Kerala</td>
<td>Mitsubishi Electric Corporation Japan</td>
</tr>
<tr>
<td></td>
<td>Capacity</td>
<td>42.5 MVA single Phase</td>
<td>42.5 MVA Single Phase</td>
</tr>
<tr>
<td></td>
<td>Voltage ratio</td>
<td>11/220 KV, 50Hz</td>
<td>11/220 KV, 50Hz</td>
</tr>
<tr>
<td></td>
<td>Impedance voltage</td>
<td>13.02 %</td>
<td>12.04 %</td>
</tr>
<tr>
<td></td>
<td>Vector Group</td>
<td>42Yd11</td>
<td>Yd1</td>
</tr>
<tr>
<td></td>
<td>Type of cooling</td>
<td>OFWF</td>
<td>OFWF</td>
</tr>
<tr>
<td>IV</td>
<td><strong>Excitation:</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>160V DC</td>
<td>160V DC</td>
<td></td>
</tr>
<tr>
<td>--------------</td>
<td>---------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>Current</td>
<td>1500 A</td>
<td>1500 A</td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>240 KW (DC compound wound generator)</td>
<td>240 KW (DC compound wound generator)</td>
<td></td>
</tr>
<tr>
<td>Make</td>
<td>ABB, INDIA</td>
<td>ABB, INDIA</td>
<td></td>
</tr>
</tbody>
</table>

| Penstocks: |
| Diameter    | 5.5m/5m/3.6m | 5.5m/5m/3.6m |
| Length      | 350 meters   | 350 meters   |

| Governors: |
| Make       | ABB, INDIA | ABB, INDIA |
| Type       | Microprocessor based digital governors Governor | Microprocessor based digital governors Governor |
| Oil Pressure required | 40Kg/sq.cm | 40Kg/sq.cm |

| Governor OPU motors: |
| Quantity     | 2 Nos for each Unit | 2 Nos for each Unit |
| Capacity     | 50 HP               | 50 HP               |
| Voltage      | 415-440 V           | 415-440 V           |
| Current      | 65 Amps             | 65 Amps             |
| Speed        | 1480 Rpm            | 1480 Rpm            |
| Phases & frequency | 3phase, 50Hz | 3phase, 50Hz |

**SOR OPU**

| Capacity     | 75 HP (2 Nos)  |
| Voltage      | 415-440 V     |
| Current      | 90 Amps       |
| Speed        | 1480 Rpm      |
| Phases & frequency | 3phase, 50Hz |

| DC Distribution Board: |
| Make         | PEC Electricals Pvt. Ltd |
| Voltage      | 220V DC         |
| Current      | 400Amps         |

<table>
<thead>
<tr>
<th>Station Transformer1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make</td>
</tr>
<tr>
<td>Capacity</td>
</tr>
<tr>
<td>Voltage ratio</td>
</tr>
<tr>
<td>Type of cooling</td>
</tr>
<tr>
<td>Vector Group</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Station Transformer2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make</td>
</tr>
<tr>
<td>Capacity</td>
</tr>
<tr>
<td>Voltage ratio</td>
</tr>
<tr>
<td>Type</td>
</tr>
<tr>
<td>Vector Group</td>
</tr>
</tbody>
</table>

Air compressors for brakes & Jacks:
<table>
<thead>
<tr>
<th>Make</th>
<th>Ingersoll rand air compressors</th>
<th>Ingersoll rand air compressors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pressure</td>
<td>7Kg/sq.cm</td>
<td>7kg/sq.cm</td>
</tr>
<tr>
<td>Motor capacity and voltage</td>
<td>30HP, 440V, 3phase, 50Hz, 1475rpm</td>
<td>30HP, 440V, 3phase, 50Hz, 1475rpm</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>XII Circuit Breakers</strong></th>
<th>For Unit No. 1 to 4, Bommuru, Donkarayi Feeder</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>SF6 gas filled</td>
</tr>
<tr>
<td>Make</td>
<td>Alstom</td>
</tr>
<tr>
<td>Voltage</td>
<td>245 KV, 50Hz</td>
</tr>
<tr>
<td>Current</td>
<td>3150Amps</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>XIII Circuit Breakers</strong></th>
<th>Bommuru, Donkarayi Feeder</th>
<th>KTS-I&amp;II</th>
<th>Bus Coupler</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>GL 314</td>
<td>200-SFM-50AA</td>
<td>ELF-SL4-1</td>
</tr>
<tr>
<td>Make</td>
<td>GE</td>
<td>CG Power &amp; Industrial Solutions Ltd</td>
<td>ABB</td>
</tr>
<tr>
<td>Voltage</td>
<td>245 KV</td>
<td>245 KV</td>
<td>245 KV</td>
</tr>
<tr>
<td>Current</td>
<td>3150 Amps</td>
<td>4000 Amps</td>
<td>3150 Amps</td>
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</table>

<table>
<thead>
<tr>
<th><strong>XIV Current Transformers</strong> (Unit-1,2,3,4, KTS-I and Donkarayi feeders)</th>
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</thead>
<tbody>
<tr>
<td>Type</td>
</tr>
<tr>
<td>CT ratio</td>
</tr>
<tr>
<td>Burden</td>
</tr>
<tr>
<td>Class</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>XIV Current Transformers (Bommuru, KTS-II feeder):</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
</tr>
<tr>
<td>CT ratio</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>XV Cooling water pumps(3Nos.)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Make</td>
</tr>
<tr>
<td>Voltage</td>
</tr>
<tr>
<td>Capacity</td>
</tr>
<tr>
<td>Current</td>
</tr>
<tr>
<td>speed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>XVI Cooling water pump(2 Nos.):</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Make</td>
</tr>
<tr>
<td>Voltage</td>
</tr>
<tr>
<td>Capacity</td>
</tr>
<tr>
<td>Current</td>
</tr>
<tr>
<td>speed</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>XVII Dewatering pumps(4Nos.)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Make</td>
</tr>
<tr>
<td>Voltage</td>
</tr>
<tr>
<td>Capacity</td>
</tr>
<tr>
<td>XVIII LT Panels</td>
</tr>
<tr>
<td>-------------------------------------</td>
</tr>
<tr>
<td>Voltage</td>
</tr>
<tr>
<td>Current</td>
</tr>
<tr>
<td>No. of outgoing feeders</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XIX Battery sets</th>
<th>XIX Battery sets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make</td>
<td>Exide Industries Ltd Exide Industries Ltd</td>
</tr>
<tr>
<td>No. of cells</td>
<td>110 V 110</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XX Battery chargers</th>
<th>XX Battery chargers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make</td>
<td>Caldyne automatics Ltd Voltech Manufacturing Company Ltd</td>
</tr>
<tr>
<td>DC voltage</td>
<td>236.5 V (float) 247 V(float) 297 V(boost)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XXI Capacitive Voltage Transformers</th>
<th>XXI Capacitive Voltage Transformers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make</td>
<td>GE T&amp;D India Ltd</td>
</tr>
<tr>
<td>Voltage ratio</td>
<td>220000V/V3/110/V3 220000V/V3/110/V3</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XXII DG set</th>
<th>XXII DG set</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make</td>
<td>Cummins India Ltd</td>
</tr>
<tr>
<td>Voltage</td>
<td>415 V</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>XXIII Isolators</th>
<th>XXIII Isolators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Make</td>
<td>Versatek Switch gears Pvt. Ltd Switch Gear &amp; Manufacturing Company Pvt. Ltd</td>
</tr>
<tr>
<td>Volatage</td>
<td>245 KV 245 KV</td>
</tr>
<tr>
<td>Current</td>
<td>1000 A 1600 A</td>
</tr>
<tr>
<td>EOT Crane at PH</td>
<td>EOT Crane at PH</td>
</tr>
<tr>
<td>180 T/30 T-2 Nos, Chitram Make</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** The supplier is advised to visit the site i.e Lower Sileru Power House before participating in the tender to Ascertain the complete Data & equipment details.

Sd/-
Superintending Engineer
Hydel –II
APPENDIX-A

DESCRIPTIPON OF THE SERVICES
(Reference Clause 4.1 of Contract)

[Give detailed descriptions of the Services to be provided; dates for completion of various tasks, place of performance for different tasks; specific tasks to be approved by owner, etc.]
APPENDIX-B

REPORTING REQUIREMENTS
(Reference Clause 2.16 of Contract)

[List format, frequency and contents of reports, persons to receive them, dates of submission, etc., if no reports are to be submitted, state here “Not applicable”]
APPENDIX-C

RLA CONSULTANTS’ SUBCONSULTANTS AND KEY PERSONNEL
(Reference Clause 2.18.2 of Contract)

[List under:

C-1 Titles (and names, if already available), detailed job descriptions and minimum qualifications of foreign personnel to be assigned to work in India, and staff-months for each.

C-2 Same as C-1 for key foreign personnel to be assigned to work outside India.

C-3 List of approved Sub consultants [if already available]; same information with respect to their personnel as in C-1 or C-2.

C-4 Same information as C-1 for key local personnel]
APPENDIX-D

DUTIES OF OWNER

List here under:

D-1 Services, facilities and property to be made available to the RLA/LE consultants by owner
D-2 Counterpart personnel to be made available to the RLA/LE consultants by the owner
(List here the elements of cost used to arrive at the breakdown of the Lump sum price.)

1. Monthly rates for Personnel (Key Personnel and other Personnel)
2. Other reimbursable expenditures
   b. Living allowance for long-term foreign Personnel, plus totals.
   c. Cost of local transportation.
   d. Cost of other local services, rentals, utilities, clerical assistance etc.
3. Computer software cost.
4. Cost of various tests.
**Schedule – 1**  
**Schedule of General Terms And Conditions**  
(to be uploaded in the Part-I Pre-qualification bid)

Bidders are requested to fill in the blank space and upload the same along with offer otherwise their offer will be either treated as non-responsive or suitable cost compensated for deficiencies as deemed fit by the Corporation.

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tender Specification No., date and due date :</td>
</tr>
<tr>
<td>2</td>
<td>Offer/quotation No. &amp; Date :</td>
</tr>
<tr>
<td>3</td>
<td>Name of the bidder :</td>
</tr>
<tr>
<td>4</td>
<td>GST Registration No :</td>
</tr>
<tr>
<td>5</td>
<td>DGS&amp;D's Registration No., if any (Please enclose copy of rate contract, if any) :</td>
</tr>
<tr>
<td>6</td>
<td>NSIC/SSI/MSME Registration No., if any (Copies of certificates to be enclosed) :</td>
</tr>
<tr>
<td>7</td>
<td>Price Basis (F.O.R.) :</td>
</tr>
<tr>
<td>8</td>
<td>Discount, if any :</td>
</tr>
<tr>
<td>9</td>
<td>GST for services : Included/Excluded (Indicate rate)</td>
</tr>
<tr>
<td>10</td>
<td>Insurance to Personnel : To be provided by the Contractor</td>
</tr>
<tr>
<td>11</td>
<td>Bank charges : To be borne by Contractor.</td>
</tr>
<tr>
<td>12</td>
<td>Contract Period : _______ months</td>
</tr>
<tr>
<td>13</td>
<td>Earnest Money Deposit Details (APGENCO reserves the right to reject/consider offers without EMD) :</td>
</tr>
</tbody>
</table>

We Confirm acceptance towards the following:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>Security Deposit : Submission of Security Deposit for 2.5 % of order value for full execution of order.</td>
</tr>
<tr>
<td>15</td>
<td>Payment Terms : APGENCO payment terms as per tender specification</td>
</tr>
<tr>
<td>16</td>
<td>Validity of offer : 120 days from the date of opening of pre-qualification &amp; Technical bids</td>
</tr>
<tr>
<td>17</td>
<td>Recovery of Liquidated Damages. : In case of delay in Execution of order beyond stipulated contract period, APGENCO reserves the right to recover from the vendor Liquidated Damages equivalent to 0.5% of the value of order for each week or part thereof subject to maximum of 5% of total value of Purchase Order.</td>
</tr>
<tr>
<td>18</td>
<td>Price Variation : The prices quoted shall remain firm till execution of full order (in case of any specific price variation formula, the same shall be mentioned with ceiling limits. If the bidder quotes for variable prices, Non furnishing of Ceiling limit and the applicable formula may lead to disqualification of the tender.)</td>
</tr>
<tr>
<td>19</td>
<td>Rate Certificate : It is certified that prices quoted herein are the same as applicable to other Government Departments/ Public Sector Undertakings.</td>
</tr>
</tbody>
</table>

*(Signature of Bidder with Name, Designation and Office Seal)*
**Schedule –2**

**Schedule Of Deviations From The Specification**
(to be enclosed in the Part-I Pre-qualification bid)

Tenderer shall carefully state below all points not in accordance with enclosed specification.

<table>
<thead>
<tr>
<th>Para</th>
<th>Section</th>
<th>Deviation</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

The tenderer hereby certifies that the above mentioned are the only deviations from the specification No.

**Signature of the tenderer**
### SCHEDULE - 3
**CONTRACTOR’S REFERENCES**

Details of relevant Services carried out/Current commitments on hand in the last 20 years which best illustrate qualifications.

The following information should be provided in the format below for each reference assignment for which your firm either individually as a corporate entity or as one of the major companies within a consortium was legally contracted the client below:

<table>
<thead>
<tr>
<th>Assignment Name:</th>
<th>Country:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location within Country:</td>
<td>Professional Staff Provided by your firm:</td>
</tr>
<tr>
<td>Name of Client:</td>
<td>No. of Staff:</td>
</tr>
<tr>
<td>Addresses:</td>
<td>No of staff Months:</td>
</tr>
<tr>
<td>StartDate (Month/Year)</td>
<td>Completion Date:(Month/Year):</td>
</tr>
<tr>
<td>Name associated firm (s), if any:</td>
<td>No. of Months of Professional Staff Provided by Associated firm (s)</td>
</tr>
</tbody>
</table>

**Name of Senior Staff (Project Director/Coordinator, Team Leader) involved and functions performed:**

**Narrative Description of Project:**

**Description of actual Services Provided by your Staff:**

---

Signature:
Name:
Designation:
Company:
Date:

Seal of the Company
SCHEDULE - 4

APPROACH PAPER ON METHODOLOGY
PROPOSED FOR PERFORMING THE ASSIGNMENT

Signature:
Name:
Designation:
Company:
Date:

Seal of the Company
### SCHEDULE- 5

**Details of Testing Machinery/Equipment Proposed for Study**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of Equipment</th>
<th>No. of Units</th>
<th>Make</th>
<th>Capacity</th>
<th>Age/Condition</th>
<th>Present location</th>
<th>Remarks</th>
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</thead>
<tbody>
<tr>
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<td>8</td>
<td></td>
<td></td>
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</tbody>
</table>

Details of each item may be furnished in enclosures.

Signature:

Name:

Designation:

Company:

Date:

Seal of the Company
SCHEDULE-6

COMMENTS/SUGGESTIONS OF CONSULTANT

On the Technical Specifications:

1. 
2. 
3. 
4. 
5. 
6. 
7.

On the Data Services and facilities to be provided by the Client indicated in Technical specifications

1. 
2. 
3. 
4. 
5. 
6. 
7.

Signature:

Name:

Designation:

Company:

Date:

Seal of the Company
### SCHEDULE-7

**COMPOSITION OF THE TEAM PERSONNEL AND THE TASK ASSIGNED**

1. **Technical/Managerial Staff**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name</th>
<th>Position</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
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<tr>
<td>3.</td>
<td></td>
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<tr>
<td>4.</td>
<td></td>
<td></td>
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<tr>
<td>5.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

2. **Support Staff**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name</th>
<th>Position</th>
<th>Task</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
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<tr>
<td>3.</td>
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<td></td>
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<tr>
<td>4.</td>
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<td></td>
<td></td>
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<tr>
<td>5.</td>
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<td></td>
</tr>
</tbody>
</table>

Signature: 
Name: 
Designation: 
Company: 
Date: 

Seal of the Company
**SCHEDULE-8**

**WORK PLAN TIME SCHEDULE**

A. **Field Investigation**

(1\textsuperscript{st}, 2\textsuperscript{nd} etc., are months from the date of assignment)

<table>
<thead>
<tr>
<th>S. No</th>
<th>Item of work/Activities</th>
<th>1\textsuperscript{st}</th>
<th>2\textsuperscript{nd}</th>
<th>3\textsuperscript{rd}</th>
<th>4\textsuperscript{th}</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>________________________</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

B. **Completion and Submission of Reports**

(As indicated under Appendix-B enclosed with GCC)

<table>
<thead>
<tr>
<th>Reports:</th>
<th>Program:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Inspection Report</td>
<td></td>
</tr>
<tr>
<td>2. Interim Progress Reports</td>
<td></td>
</tr>
<tr>
<td>(a) First Status Report</td>
<td></td>
</tr>
<tr>
<td>(b) Second status Report</td>
<td></td>
</tr>
<tr>
<td>3. Draft Report</td>
<td></td>
</tr>
<tr>
<td>4. Final Report</td>
<td></td>
</tr>
</tbody>
</table>

Signature:

Name:

Designation:

Company:

Date:

Seal of the Company
**Schedule – A**

Proforma of Summary Price Proposal

<table>
<thead>
<tr>
<th>Sl.No</th>
<th>Description of Material</th>
<th>Qty.</th>
<th>Rate/each (Rs)</th>
<th>Amount (Rs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Residual Life Assessment (RLA) and Life Extension (LE) studies on civil structures, penstocks, Hydro Mechanical, Electro &amp; Mechanical, Control &amp; Protection equipment etc., of all four units (4X115 MW) of LSHEP.</td>
<td>1 Job</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Preparation of Detailed Project Report (DPR) along with Technical Specification for Renovation, Modernization &amp; Up-rating of all four units of LSHEP.</td>
<td>1 Job</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>GST for services @18%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note:**
1) The Bidder shall compulsorily quote the Prices of all items in the price bid through APGENCO e-platform otherwise their offer will be treated as non-responsive and disqualified.
2) However, the bidder may upload this sheet in Attachments folder in the price bid.

Superintending Engineer
Hydel-II

Date
Place

Signature--------------------
Name------------------------
Designation-----------------
(Seal)---------------------
Guide-Lines for Submission of Bank Guarantee

The Bank Guarantee shall fulfil the following conditions failing which it shall not be considered valid:

1. Bank Guarantee shall be executed on non-judicial stamp paper of applicable value purchased in the name of bank.

2. Non-judicial stamp paper shall be used within 6 months from the date of purchase. Bank Guarantee executed on the stamp paper of more than 6 months old shall be treated as invalid.

3. The contents of the Bank Guarantee shall be as per our proforma which will be enclosed along with the Purchase Order.

4. The Bank Guarantee should be executed by a nationalized bank.

5. The executor of Bank Guarantee (Bank Authority) should mention the Power of Attorney No. and date executed in his/her favour authorizing him/her to sign the document or produce the Photostat copy of Power of Attorney.

6. All conditions, corrections, deletion in the Bank Guarantee should be authenticated by signature of Bank Officials signing the Bank Guarantee.


8. Two persons should sign as witnesses mentioning their full name and address.

9. **Validity of Bank Guarantees:**
   a) The Bank Guarantee for EMD shall be valid for a period of 270 days from the date of opening of pre-qualification with a claim period of 3 months.
   b) The Bank Guarantee for PEMD shall be valid for a period of 3 years from the date of submission with a further claim period of 6 months.
   c) The Bank Guarantee for Security Deposit shall be valid for a period of 6 months over and above the Delivery period.
ANNEXURE-1
(TOBESTAMPEDINACCORDANCEWITHINDIANSTAMPACT)

PROFORMA OF BANK GUARANTEE FOR THE EARNEST MONEY DEPOSIT (EMD)

In consideration of the Andhra Pradesh Power Generation Corporation Limited (hereinafter referred to as 'APGENCO' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Indian Companies Act, 1956 read with subsequent amendments and Act(s) and having its registered office at Vidyut Soudha, Gunadala, Vijayawada, Andhra Pradesh, India-520004
having agreed to exempt (Name of the Tenderer/Vendor/Contractor/Supplier) having its registered office at ________ (hereinafter called the said Tenderer/Contractor which term includes Supplier), under the terms and conditions of the Tender Notification No. ________ , Dated ________ , payment of EMD of Rs. __________ (Rupees ______________ only) is payable part of EMD for the due fulfillment by the said Tenderer/Contractor of the terms and conditions contained in the said Tender for __________ on production of a Bank Guarantee for Rs. __________ (Rupees ______________ only).

At the request of [Tenderer/Contractor] We, ______________ (indicate the name of the Bank), having Registered/Head office at __________ and a branch at __________ being the Guarantor under this Guarantee, do hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the APGENCO without any delay or demur, merely on your first demand any sum or sums up to a maximum amount but not exceeding Rs. ______________ (Rupees ______________ only).

We undertake to pay unconditionally to the APGENCO any money so demanded notwithstanding any dispute(s) raised by the Tenderer/Contractor in any suit, or proceedings pending before any Court or Tribunal or Arbitration or any other Authority relating thereto our liability under this Guarantee is absolute and unequivocal. The payment under this guarantee would not wait till the disputes have been decided by any Court or Tribunal or in the Arbitration proceeding or by any other Authority.

The payment made by us under this guarantee shall be a valid discharge of our liability for payment hereunder and the Tenderer/Contractor shall have no claim against us for making such payment.

We, ______________ (indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect till the award of tender to the successful bidder. Validity of BG will be for a period of 270 days from the date of opening of pre-qualification bid with a further claim period of 6 months. However, BG of EMD will be returned after the award of Tender. BG is to be valid till __________.

We, ______________ (indicate the name of the Bank) further agree with the APGENCO that the APGENCO shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Tender or to extend time of BG by the said Tenderer/Contractor from time to time or to postpone for any time or from time to time.

This guarantee will not be discharged due to the change in the constitution of the Bank or the Tenderer/Contractor.

We, ______________ (indicate the name of the Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the APGENCO in writing. Furthermore, we ______________ (indicate the name of the Bank) accept that

1. This Bank Guarantee is unconditional and absolute
2. Claim against this Bank Guarantee shall be honoured without any delay or demur; and
3. This Bank guarantee covers all the losses, claims, damages and costs suffered by the APGENCO against the said Tender.

Notwithstanding anything to the contrary contained hereinabove:

a) The liability of the Bank under this Guarantee shall not exceed ______________.

b) This Guarantee shall be valid up to Dt. ______________.

c) Unless the Bank is served a written claim or demand on or before Dt. ______________ (claim period) all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, ______________ (indicate the name of the Bank), have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

In witness where of signed this Guarantee on this _____ Day __ Year ___ for __ Bank at ____________

(Signature(s) of Authorised Personnel of the Bank with Seal)

Designation:
Address:
ANNEXURE-2
TO BE STAMPED IN ACCORDANCE WITH INDIAN STAMP ACT

PROFORMA OF BANK GUARANTEE FOR THE PERMANENT EARNEST MONEY DEPOSIT (PEMD)

Bank Guarantee No:
Date:
Valid Up to:
Claim Period up to:

In consideration of the Andhra Pradesh Power Generation Corporation Limited (An enterprise of the Government of Andhra Pradesh) (hereinafter referred to as “APGENCO” which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Indian Companies Act, 1956 read with subsequent amendments and Act(s) and having its registered office at Vidyut Soudha, Gunadala, Vijayawada, Andhra Pradesh, India-520004 has afforded a facility to Tenderer(s)/Contractor(s)/Vendor(s) and Supplier(s) who submit tender(s)/bid(s)/offer(s) in response to the Tender notice(s) of the Andhra Pradesh Power Generation Corporation Limited calling for Tenders for supply of materials or rendering of services or execution of works permitting Tenderer(s)/Contractor(s)/Vendor(s) and Supplier(s) who furnish a Permanent Earnest Money Deposit (PEMD) of Rs.______ (Rupees ______ only) in the shape of Bank Guarantee in lieu of Cheque/Demand Draft to have their tenders considered without separate payment of earnest monies with each tender, wherever the EMD is not more than Rs. 5.00 lakhs (Rupees Five Lakh only) in a single case/Tender.

Whereas (Name and address of the Tenderer/Vendor /Contractor/ Supplier) ______________ has offered the guarantee of this Bank (indicate the name and address of the Bank), towards the Fixed/Permanent Earnest Money Deposit and the APGENCO has agreed to accept the same.

At the request of ______________[Tenderer/Contractor] We, ________________, (hereinafter referred to as the “Bank”), having Registered/Head office at ______________ and a branch at ______________ being the Guarantor under this Guarantee, do hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the APGENCO without any delay or demur, merely on your first demand any sum or sums up to a maximum amount but not exceeding Rs. ______________ (Rupees ______ only).

We, ______________ (indicate the name of the Bank), do hereby undertake to forthwith and immediately pay the amounts due and payable under this guarantee without any demur, merely on a demand from APGENCO. Any such demand made on the bank, shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. ______________ (Rupees ______ only).

We, ______________ (indicate the name of the Bank) undertake to pay unconditionally to the APGENCO any money so demanded notwithstanding any dispute(s) raised by the Tenderer/Vendor /Contractor / Supplier in any suit, or proceedings pending before any Court or Tribunal or Arbitration or any other Authority relating thereto our liability under this present is being absolute and unequivocal. The payment under this guarantee would not wait till the disputes have been decided by any Court or Tribunal or in the Arbitration proceeding or by any other Authority.

The payment so made by us under this guarantee shall be a valid discharge of liability for payment thereunder and Tenderer/Vendor /Contractor / Supplier shall have no claim against us for making such payment.

We, ______________ (indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect till the award of tender to the successful bidder. Validity of BG shall be for a period of 3 years from the date of submission with a further claim period of 6 months. BG is to be valid till ______________.

This guarantee will not be discharged due to the change in the constitution of the Bank or the Tenderer/Vendor /Contractor / Supplier.

We, ______________ (indicate the name of the Bank) lastly undertakes not to revoke this guarantee during its currency except with the previous consent of the APGENCO in writing. Furthermore, we ______________ Bank accept that

1. This Bank Guarantee is unconditional and absolute
2. Claim against this Bank Guarantee shall be honoured without any delay or demur; and
3. This Bank guarantee covers all the losses, claims, damages and costs suffered by the APGENCO against the Tender.

Notwithstanding anything to the contrary contained hereinabove:

a. The liability of the Bank under this Guarantee shall not exceed Rs. ______________ (Rupees ______ only)

b. This Guarantee shall be valid up to Dt. ______________.

c. Unless the Bank is served a written claim or demand on or before Dt. ______________ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, ______________ (indicate the name of the Bank), have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

In witness whereof signed this Guarantee on this ______________ Day ______________ for ___________ Bank at

(Signature(s) of Authorised Personnel of the Bank with Seal)

Designation:
Address:
ANNEXURE-3

(TOBESTAMPEDINACCORDANCEWITHINDIANSTAMPACT)

PROFORMA OF BANK GUARANTEE FOR THE SECURITY DEPOSIT (SD)

Bank Guarantee No:
Date:
Valid Upto:
Claim Period:

In consideration of the Andhra Pradesh Power Generation Corporation Limited (An enterprise of the Government of Andhra Pradesh) (hereinafter referred to as ‘APGENCO’ which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Indian Companies Act, 1956 read with subsequent amendments and Act(s) and having its registered office at Vidyut Soudha,Gunadala, Vijayawada, Andhra Pradesh,India-520004 having agreed to exempt (Name of the Contractor/Supplier/Vendor) having its registered office at _____ (hereinafter called the said Contractor/Supplier/Vendor) from the demand/payment of Security Deposit payable under the terms and conditions of the Contract/Purchase Order/Work Order No. , Dated _______ made between the APGENCO and (Name of the Contractor/Supplier/Vendor) for supply/commissioning/rendering services/execution of work _____ (herein after called ‘the said Contract/Agreement’), on production of a Bank Guarantee for Rs. ____________(Rupees __________ only).

At the request of ____________[Tenderer/Contractor] We, ______________, (hereinafter referred to as the "Bank"), having Registered/Head office at __________ and a branch at __________ being the Guarantor under this Guarantee, do hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the APGENCO without any delay or demur, merely on your first demand any sum or sums up to a maximum amount but not exceeding Rs ________________ (Rupees _______ ________) in the event of any breach by the said Tenderer/Contractorof any of the terms and conditions contained in the said Contract/Purchase Order/Work Order No. , Dated _______.

We, ________________ (indicate the name of the Bank), do hereby undertake to forthwith and immediately pay the amounts due and payable under this guarantee without any demur, merely on a demand from APGENCO. Any such demand made on the bank, shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs_______(Rupees_________ only).

We undertake to pay unconditionally to the APGENCO any money so demanded notwithstanding any dispute(s) raised by the Contractor/Supplier/Vendor in any suit, or proceedings pending before any Court or Tribunal or Arbitration or any other Authority relating thereto our liability under this present being is absolute and unequivocal. The payment under this guarantee would not wait till the disputes have been decided by any Court or Tribunal or in the Arbitration proceeding or by any other Authority.

The payment so made by us under this guarantee shall be a valid discharge of our liability for payment hereunder and the Contractor/Supplier/Vendor shall have no claim against us for making such payment.

We, (indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/Agreement and that it shall continue to be enforceable till the due date of the APGENCO under by virtue of the said Agreement and that the guarantee shall be fully paid and its claims satisfied or discharged or till the concerned authority of APGENCO certifies that the terms and conditions of the said Contract/Agreement have been fully and properly carried out by the said Contractor/Supplier/Vendor and accordingly discharge the guarantee, subject to however that the APGENCO shall have no right under this Bank guarantee after expiry of __________ (period) from the date of its execution. BG is to be valid till ________, Unless a demand or claim under this guarantee is made on us in writing on or before the ________, we (indicate the name of the Bank) shall be discharged from all the liability under this guarantee thereafter.

We, (indicate the name of the Bank) further agree with the APGENCO that the APGENCO shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract/Agreement or to extend time of BG by the said Contractor/Supplier/Vendor from time to time or to postpone for any time or from time to time.

This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor/Supplier/Vendor.

We, (indicate the name of the Bank) lastly undertakes not to revoke this guarantee during its currency except with the previous consent of the APGENCO in writing. Furthermore, we (indicate the name of the Bank) accept that

1. This Bank Guarantee is unconditional and absolute.
2. Claim against this Bank Guarantee shall be honoured without any delay or demur; and
3. This Bank guarantee covers all the losses, claims, damages and costs suffered by the APGENCO against the said Contract/Agreement.

Notwithstanding anything to the contrary contained hereinabove:

a) The liability of the Bank under this Guarantee shall not exceed ___________________________.
b) This Guarantee shall be valid up to Dt. ___________________________.
c) Unless the Bank is served a written claim or demand on or before Dt. _______________________ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, (indicate the name of the Bank), have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.
In witness whereof signed this Guarantee on this _____Day ___Year___ for ___ Bank at

(Signature(s) of Authorised Personnel of the Bank with Seal)

Designation:
Address:
ANNEXURE-4

(TOBESTAMPEDINACCORDANCEWITH INDIAN STAMPACT)

PROFORMA OF BANK GUARANTEE FOR THE PERFORMANCE (PBG)

Bank Guarantee No:
Date:
Valid Up to:
Claim Period up to:

In consideration of the Andhra Pradesh Power Generation Corporation Limited (An enterprise of the Government of Andhra Pradesh) (hereinafter referred to as 'APGENCO' which expression shall unless repugnant to the context or meaning thereof, include its successors and permitted assigns) incorporated under the Indian Companies Act, 1956 read with subsequent amendments and Act(s) and having its registered office at Vidyut Soudha, Gunadala, Vijayawada, Andhra Pradesh, India-520004 has agreed to accept upon request of (Name of the Contractor/Supplier/Vendor) having its registered office at ___________, (hereinafter called the said Contractor/Supplier/Vendor) this Bank Guarantee No. __________, Dt. _______ for making payment without effecting recovery of 10% of the value of Contract/Agreement/Purchase Order/Work Order towards Performance Guarantee for the satisfactory fulfilment of the Contract/Agreement/ Purchase Order/Work Order under the terms and conditions of the said Contract/Agreement/Purchase Order/Work Order No. __________, Dated _______ made between the APGENCO and (Name of the Contractor/Supplier/Vendor) for supply/commissioning/ rendering services/execution of work _______ (herein after called 'the said Contractor/Agreement'), on production of a Bank Guarantee for Rs. __________ (Rupees __________ only).

At the request of __________ [Tenderer/Contractor] We, _______________, (hereinafter referred to as the "Bank"), having Registered/Head office at ______________ and a branch at ______________ being the Guarantor under this Guarantee, do hereby irrevocably and unconditionally undertake to forthwith and immediately pay to the APGENCO without any delay or demur, merely on your first demand any sum or sums up to a maximum amount but not exceeding Rs ______________ (Rupees ______________ only).

We, ______________ (indicate the name of the Bank), do hereby undertake to forthwith and immediately pay the amounts due and payable under this guarantee without any demur, merely on a demand from APGENCO. Any such demand made on the bank, shall be conclusive as regards the amount due and payable by the Bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs ______________ (Rupees ______________ only).

We undertake to pay unconditionally to the APGENCO any money so demanded notwithstanding any dispute(s) raised by the Contractor/Supplier/Vendor in any suit, or proceedings pending before any Court or Tribunal or Arbitration or any other Authority relating thereto our liability under this present being absolute and unequivocal. The payment under this guarantee would not wait till the disputes have been decided by any Court or Tribunal or in the Arbitration proceeding or by any other Authority.

The payment so made by us under this guarantee shall be a valid discharge of our liability for payment hereunder and the Contractor/Supplier/Vendor shall have no claim against us for making such payment.

We, ______________ (indicate the name of the Bank) further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the performance of the said Contract/Agreement and that it shall continue to be enforceable till the said Guarantee is fully paid and its claims satisfied or discharged or till the concerned authority of APGENCO certifies that the terms and conditions of the said Contract/Agreement have been fully and properly carried out by the said Contractor/Supplier/Vendor and accordingly discharge the guarantee, subject to however that the APGENCO shall have no right under this Bank guarantee after expiry of __________ (period) from the date of its execution. BG is to be valid till ________ .

We, ______________ (indicate the name of the Bank) further agree with the APGENCO that the APGENCO shall have the fullest liberty without our consent and without affecting in any manner our obligations hereunder to vary any of the terms and conditions of the said Contract/Agreement or to extend time of BG by the said Contractor/Supplier/Vendor from time to time or to postpone for any time or from time to time.

This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor/Supplier/Vendor.

We, ______________ (indicate the name of the Bank) lastly undertake not to revoke this guarantee during its currency except with the previous consent of the APGENCO in writing. Furthermore, we ______________ (indicate the name of the Bank) accept that
1. This Bank Guarantee is unconditional and absolute
2. Claim against this Bank Guarantee shall be honoured without any delay or demur; and
3. This Bank guarantee covers all the losses, claims, damages and costs suffered by the APGENCO against the said Contract/Agreement.

Notwithstanding anything to the contrary contained hereinabove:
   a) The liability of the Bank under this Guarantee shall not exceed ..........................................................
   b) This Guarantee shall be valid up to Dt.__________________
   c) Unless the Bank is served a written claim or demand on or before Dt.____________ all rights under this guarantee shall be forfeited and the Bank shall be relieved and discharged from all liabilities under this guarantee irrespective of whether or not the original bank guarantee is returned to the Bank.

We, __________ (indicate the name of the Bank), have power to issue this Guarantee under law and the undersigned as a duly authorized person has full powers to sign this Guarantee on behalf of the Bank.

In witness whereof signed this Guarantee on this ______Day __Year___ for __ Bank at

(Signature(s) of Authorised Personnel of the Bank with Seal)

Designation:
Address: