

MEGHALAYA POWER GENERATION CORPORATION LIMITED



MePGCL
Generating Clean And Green Energy

OFFICE OF THE

**SUPERINTENDING ENGINEER GENERATION CIRCLE - II
LUMJINGSHAI, SHORT ROUND ROAD, SHILLONG – 793001,
PHONE NO – 0364 2310278**

TENDER

FOR

**CONSTRUCTION OF FOUNDATION AND ERECTION OF 33KV SWITCHYARD
EQUIPMENTS INCLUDING CIVIL WORKS AND REINFORCEMENT OF 33 KV
LA & EARTHING ALONG WITH EARTHING & LIGHTNING SYSTEM OF DAM
AT GANOL 3 x 7.5 MW SHEP**

COST OF TENDER – Rs. 500.00 (Rupees Five Hundred only).

TENDER FOR

CONSTRUCTION OF FOUNDATION AND ERECTION OF 33KV SWITCHYARD EQUIPMENTS INCLUDING CIVIL WORKS AND REINFORCEMENT OF 33 KV LA & EARTHING ALONG WITH EARTHING & LIGHTNING SYSTEM OF DAM AT GANOL 3 x 7.5 MW SHEP

1. To be submitted by 13:00 hours of the 5th December, 2022
2. Tenders shall be opened in presence of the intending tenderers or their authorized representatives at 14:30 hours of 5th December, 2022 in the office chamber of the Superintending Engineer, Generation Circle –II, MePGCL, Shillong.
3. Detailed NIT issued to Shri/Smt/M/s -----
-----against demand draft/banker's cheque No. -----
-----of-----Bank, dated -----
----- for 500.00 (Rupees Five Hundred only).

Dated Shillong, the ____ 2022

Issue by:

AEE/AE
O/o Superintending Engineer,
GC –II, MePGCL, Shillong.



MEGHALAYA POWER GENERATION CORPORATION LIMITED
OFFICE OF THE SUPERINTENDING ENGINEER GC-II
Lumjingshai, Short Round Road, Shillong – 793001
MePGCL, SHILLONG

SHORT NOTICE INVITING TENDER

NIT No. 1 Dated 14th November 2022

Sealed tender is hereby invited for the following works from reputed and experience Class-I/Class-II contractors of /MePGCL/MePTCL/MePDCL etc. The tenders will be received by the office of the undersigned up to 13:00 hours of 5th December, 2022 and will be opened on the same day at 14:30 hours, in presence of the intending tenderers or their authorized representatives.

NIT can be purchased from the office of the undersigned with effect from the 14th November, 2022, on all working days, during office hours.

Sl No	Name of Works	Estimated Value (Rs)	Earnest Money	Cost of NIT	Time for Completion
1.	Construction of foundation and erection of 33KV switchyard equipment's including civil works and reinforcement of 33KV LA, Earthing along with Earthing & Lightning System of Dam at Ganol 3x7.5 MW SHEP	19.50 Lakhs	1 % of the estimated value for SC/ST contractors & 2 % of the estimated value for others.	Rs 500/-(Rupees Five Hundred) only by demand draft/banker's cheque in favour of the Chief Account Officer, MeECL.	30 (Thirty) days from the date of issue of work order.

Other term, conditions, qualifications, etc may be seen from the detail NIT on purchasing the same from the office of the Superintending Engineer, Generation Circle –II, MePGCL, Shillong.

SUPERINTENDING ENGINEER GC-II

MEGHALAYA POWER GENERATION CORPORATION LIMITED
SHORT NOTICE INVITING TENDER

NIT No. 1

Dated: 14th November, 2022

Sealed tenders are hereby invited for the “Construction for foundation and erection of 33KV switchyard equipment’s including civil works and reinforcement of 33KV LA & Earthing at Ganol Power Station along with Earthing System & Lightning Protection System Dam, GaSHP (3x7.5 MW).” from reputed and experience Class - I contractor’s, possessing license of 33KV level and above, of MePGCL / MePTCL / MePDCL, in two parts bid and will be received by the undersigned up to 13:00 hours of 05.12.2022. The Earnest Money Deposit (EMD) and Qualifying Bids will be opened on the same date at 14:30 hours, in presence of the intending tenderers or their authorized representatives.

The Bid Documents can be available from the office of the undersigned during all working days during office hours on payment of Rs.500.00, vide Bank Draft / Banker’s Cheque, in favour of “Chief Account Officer, MeECL”, Principal Account, payable at Shillong, clearly stating “Request for Bid Documents for the “Construction for foundation and erection of 33KV switchyard equipment’s including civil works and reinforcement of 33KV LA & Earthing at Ganol Power Station along with Earthing System & Lightning Protection System for Dam, at GaSHP (3x7.5 MW).”

Other terms, conditions, qualifications, etc may be obtained from the Bid Document.

SUPERINTENDING ENGINEER (EL) GC – II

NIT NO. MePGCL/SE(El)Gen/Tech-50(F)/Pt- I/2021-22/ (a) Dated: 2022
Copy to:

1. The Director (Generation), MePGCL, Shillong for favour of information.
2. The Chief Engineer (Generation), MePGCL, Shillong for favour of information.
3. The Chief Engineer (PMC), MePDCL, Shillong for favour of information.
4. The Superintending Engineer (Project), Civil, MePGCL, Rongkhon, for information.
5. The Executive Engineer, MIS, MePDCL, Shillong, with a request to upload the NIT and Bid Documents in the MeECL website.
6. The Executive Engineer GED, Rongkhon, for information and necessary action.
7. Notice Board.
8. The Relevant File.

SUPERINTENDING ENGINEER (EL) GC – II

INSTRUCTION TO BIDDER

1.0 GENERAL INSTRUCTIONS

The Meghalaya Power Generation Corporation Limited hereinafter referred to as 'MePGCL'/ 'Owner' will receive Tenders for the "Construction for foundation and erection of 33KV switchyard equipment's including civil works and reinforcement of 33KV LA & Earthing at Ganol Power Station along with Earthing System & Lightning Protection System Dam, GaSHP (3x7.5 MW)". In case the tender submission and opening day falls on a holiday, then the tender will be received and opened on the next working day at the same time.

- 1.1 The tender will consist of two parts. One part of the bid will form the Qualifying Bid, comprising the Earnest Money Deposit (EMD) and Qualifying Requirements and the other part of the bid will form the Price Bid. The Bid shall be submitted in three separate envelopes, clearly marked '**EARNEST MONEY**', '**QUALIFYING REQUIREMENT**' and '**BID PRICE**'.

2.0 COST OF BIDDING

- 2.1 The Bidder shall bear all costs associated with the preparation and submission of Bid and the MePGCL shall in no case be responsible or liable for these costs; regardless of the conduct or outcome of the bidding process.
- 2.2 The Bid shall be submitted along with a non-refundable amount of Rs. 500.00 (Rupees Five Hundred only), by Demand Draft / Banker's Cheque, in favour of "Chief Account Officer, MeECL", Principal Account, payable at Shillong.

3.0 QUALIFYING REQUIREMENTS OF BIDDERS

- 3.1 This Tender is opened to any experienced and reputed Electrical contractor with valid electrical license of 33KV and above for Electrical works, MeECL Class-I Contractor for Civil works, who shall provide satisfactory evidence on the following, that he:
- (i) is a qualified contractor possessing valid registration/ license, who has adequate technical knowledge and practical experience, the evidence of which shall consist of Work Orders, Experience Certificates, Self/Company's profile etc.
 - (ii) does not anticipate change in the ownership during the proposed period of work/ contract (if such a change is anticipated, the scope and effect thereof shall be defined);
 - (iii) has adequate financial stability and status to meet the financial obligation pursuant to the scope of the works. He should submit the audited turnover of the last three year and the yearly turn over should not be less than Rs 5.85 lakhs (Rupees Five Lakhs Eighty Five Thousand) only. (30% of the Approved Estimate).

(iv) The contractor should also submit a list of execution details of similar works, Work Order previously executed by him, for the previous seven years as given hereunder, otherwise, the Bid shall be rejected:

(a) Three completed works costing not less than the amount of Rs 780744.4 being 40% of the estimated cost of Rs. 1951861.00.

Or

(b) Two completed works costing not less than the amount of Rs. 975930.5 being 50% of the estimated cost of Rs. 1951861.00.

Or

(c) One completed works costing not less than the amount of Rs. 1561488.8 being 80% of the estimated cost of Rs.1951861.00.

(v) In support of which, he should submit certified copies of work orders along with his tender and an experience certificate signed by an Officer not below the rank of Superintending Engineer or equivalent. After the tender has been opened, bidders may be required to submit detailed particulars of such works and the manner of their execution and any other information that will satisfy the Owner that, the contractor has an adequate organization including, experienced personnel to execute vigorously the work required to be carried out, according to the specifications.

(vi) The bidder has adequate financial solvency and liquid assets or availability of credit facilities of not less than Rs. 45.00 Lakhs (Rupees Forty Five Lakhs) only.

(vii) Has adequate skilled manpower and working tools/machineries available to perform the works properly and expeditiously within the time period specified. The evidence shall consist of written details of the strength of employees, list of different tools/equipment's with specifications and present commitments (excluding the work under this Specification) of the Bidder.

(viii) Has established quality assurance system during his field installation activities.

3.2 In addition, the qualifying requirement stated in the accompanying 'General Term & Conditions' shall also apply.

3.3 The above stated requirements are a minimum and the Owner reserves the right to request for any additional information and also reserves the right to reject the Proposal of any Bidder, if in the opinion of the Owner, the qualification data is incomplete or the Bidder, is found not qualified to satisfactorily perform the Contract.

4.0 GENERAL TERMS AND CONDITIONS

4.1 Every bidder must be a MeECL Registered Contractor of the appropriate class for Civil works and reputed Electrical Contractor for Electrical works possessing valid license. Attested copy of Registration, license should be submitted along with the Tender, failing which the Tender is liable to be rejected.

4.2 The MePGCL will not provide construction machinery or tools and plants to the contractor, which may be required for the execution of this work. However, in case of availability of

machinery or tools and plants with the Owner and if required by the contractor, the same may be provided on chargeable basis at the rates fixed by the Owner. For providing such assistance the Departmental hiring charge will be recovered from the bills of the contractor.

- 4.3 Valid GST Certificate, PAN Card and two attested copies of current passport size photographs of the bidders must be submitted along with the tender, without which the tender is liable to be rejected.
- 4.4 Taxes/ Cess will be deducted as per the prevailing Government Orders.
- 4.5 Each bidder should carefully examine the drawings and specifications, visit the site and fully satisfy and acquaint himself, about the nature and location of work, the conditions, quality and quantity of materials required and their availability, the type of equipment and facilities available and general and local condition which affect the work or cost thereof. While working out the quoted rates, the contractor should also consider the cost of all construction materials at site including his cost of carriage from the source of procurement to the construction site subsequent cost of storage thereon, etc.
- 4.6 Forest royalty for any forest products used in the work shall be deducted from the contractor's bill at the rate as applicable to the MePGCL.
- 4.7 Firms submitting tenders should enclose a certified copy of the firm's ownership/ constitution and a certified copy of Power of Attorney authorizing a person to operate the contract and should furnish full addresses of the partners and the persons holding Power of Attorney on behalf of the firm.
- 4.8 All work shall have to be carried out as per relevant I.S. Code of Practice unless otherwise specified by the Engineer at site or covered by the detailed specifications for the works appended herewith.
- 4.9 The bidder shall sign every page of the tender. Every correction in the tendered rates shall bear contractor's initial before submission, failing which the tender is liable to be rejected.
- 4.10 Bidders shall submit a note on the construction methods proposed to be adopted by him in order to ensure the completion of the works under this contract within the period stipulated in this specification. This note should be supported with schedules of Construction Programme. However, the successful bidder may be required to modify the method of construction as advised by the Owner.
- 4.11 The rates quoted shall be valid for items of work for any increase or decrease in quantities as per final design and estimate. The rates should be quoted both in figures and words against each item of the schedule. All corrections should bear the dated initial of the bidder. If there is any discrepancy between the rates quoted in figure and in words, then the rates in words shall prevail.
- 4.12 The contractor must not sublet the work without the prior approval of the Owner.

- 4.13 Valid Labour License must be submitted along with the Tender, failing which the tender is liable to be rejected.
- 4.14 The contractor should furnish a copy of applicable license/ registration or proof of applying for obtaining Labour License, Registration with EPFO, ESIC & BOCW registration.
- 4.15 The contractor should submit the registration with the Meghalaya Building and other Construction Workers' Welfare Board, within 15 days of issue of work order, failing which payment shall not be released.
- 4.16 Non-tribal contractors must submit a copy of the valid trading license along with the tender.
- 4.17 Tribal contractors must submit along with their tenders a copy of the schedule tribe certificate issued by competent authority.
- 4.18 Tenders should be submitted in the specified format in sealed envelopes marked in the upper left-hand corner name of the work along with the full name and address of the Bidder and sent by registered post, if not delivered personally. The Bid shall be signed by a person or persons duly authorized to sign on behalf of the Bidder with Company seal. The Bid shall contain the name, official address and place of business of person(s) authorized to sign the bid. All pages of the Bid including entries or amendments which have been made shall be signed by the authorized signatory. Bid submitted through fax or e-mail shall not be accepted.
- 4.19 The MePGCL does not assume any responsibility for postal delay. The sealed envelope containing the tender and marked as directed above should be enclosed in another envelope properly sealed.
- 4.20 The inner and outer envelopes shall be addressed to the Owner at the following address:
SUPERINTENDING ENGINEER GENERATION CIRCLE – II, MePGCL,
LUMJINGSHAI, SHORT ROUND ROAD, SHILLONG – 793001,
PHONE NO – 0364 2310278
- 4.21 The Bidder shall submit the Qualifying Requirement in One Original and two copies in sealed envelopes (marked 'ORIGINAL' and 'COPY') and superscripted as '**QUALIFYING REQUIREMENT**'. In the event of discrepancy between them, the original shall prevail.
- 4.22 The Bid shall contain no alterations, except those to comply with instructions issued by the purchaser or as necessary to correct errors made by the Bidder, in which case such alterations shall be initialed with date by the person or persons signing the Bid.
- 4.23 In case the bidder proposes deviations to the Bid Document, which may have financial implications on value of the contract, the bidder must indicate the deviations separately indicating the additional financial implication on account of the deviation.
- 4.24 Tenders will be opened in the office of The Superintending Engineer GC-II, MePGCL, Shillong, on the same date after the fixed time or receipt of the tender. The intending bidders or their authorized agents may remain present at the time of opening of tenders if so, desired. The tenders will be received up to **13:00 hours of the 05.12.2022 and will be opened on the same**

day at 14:30 hours. Tenders received later than the time prescribed above (i.e. 13:00 hours of the 05.12.2022) shall not be considered.

- 4.25 The Owner may, at its discretion, extend the deadline for submission of bids by issuing an amendment, in which case all rights and obligation of the Owner and Bidders previously subject to the original deadline, shall thereafter be subject to the new deadline as extended.
- 4.26 If the envelopes are not properly sealed; the Owner shall assume no responsibility for the misplacement or pre-mature opening.
- 4.27 Any Bid received by the Owner after the deadline for submission of bids prescribed by the Owner, shall be returned unopened to the Bidder.
- 4.28 Bids once submitted cannot be modified or withdrawn.
- 4.29 To assist in the examination, evaluation and comparison of bids, the Owner may at its discretion, ask any Bidder for clarification. The request for clarification and the response shall be in writing and no change in price or substance of the Bid shall be sought, offered or permitted except as required to confirm the corrections of arithmetic errors discovered by the Owner during the evaluation of the bids. However, additional price implication of any changes required by the Owner in the offer submitted during the technical evaluation in the bids before the price opening shall be indicated.
- 4.30 The MePGCL reserves the right to accept any tender in whole or in part. The acceptance of the Tender in part only will not affect the liability of the bidders for the due performance of the contract.
- 4.31 The MePGCL is not bound to accept the lowest tender or any tender and may reject any or all tenders without assigning any reason whatsoever and reserves the right to accept/reject the tenders partly or in full and to sub-divide the work as found suitable.
- 4.32 To deal with emergency/accidental eventualities at works site, the Contractor shall make all such arrangements necessary, such as services of an ambulance etc., for Transportation to hospital at his own cost.

5.0 EARNEST MONEY DEPOSIT

- 5.1 The Bidder shall furnish, as part of his Bid, an Earnest Money Deposit (EMD) amounting to Rs. 19519.00 (Rupees. Nineteen Thousand and Five Hundred Nineteen only) for SC/ST which is 1 % of the estimated value and Rs. 39037.00 (Rupees. Thirty Nine Thousand Thirty Seven only) for others which is 2 % of the estimated value.
- 5.2 The Earnest Money Deposit shall be denominated in INR favoring “The Superintending Engineer, GC-II, MePGCL, Shillong”, and shall be in the form a Bank Guarantee / Call Deposit / Term Deposit, acceptable to the Owner, issued by a nationalized/scheduled bank in India, The EMD shall be valid for 180 days, which may be extended on the instruction of the Owner.
- 5.3 Any Bid not accompanied by an acceptable Earnest Money Deposit shall be rejected by the Owner as non-responsive.

- 5.4 The Earnest Money Deposit of unsuccessful bidder(s) shall be returned by the Owner.
- 5.5 The Earnest Money Deposit of successful bidder shall be returned on completion of the contract.
- 5.6 No interest shall be paid by the MePGCL on the Earnest Money Deposit.
- 5.7 The Earnest Money Deposit shall be forfeited:
- a) If a Bidder withdraws or modifies his Bid during the period of bid validity or extension thereof.
 - b) If the Bidder does not accept the correction of his Bid price.
 - c) In case of a successful Bidder, if he rejects the work order or fails to sign the agreement.

6.0 **BID PRICE**

- 6.1 The Bidder shall quote in the appropriate schedule of rates for items of works for any increase/decrease in quantity as per final designed and estimate for the entire scope of works (covered under Tenders Document) under the contract on a **FIRM** price basis, unless otherwise specified. Bidders quoting a system of pricing other than that specified run the risk of rejection.
- 6.2 The Bidder shall also furnish the price break-down in the appropriate schedule of Tenders Form to indicate the following:
- (i) Bidder shall indicate Bid prices in Indian Rupees only.
 - (ii) The Bidder shall include Sales/ Services Tax on Works Contract, or any other similar taxes under the Sales Tax Act, as applicable in their quoted Tenders price and MePGCL would not bear any liability on this account. MePGCL shall, however, deduct such taxes at source as per the rules and issue TDS Certificate to the Contractor.
 - (iii) With regards to Income Tax, surcharge on Income Tax and other corporate taxes, the Bidder shall be responsible for such payment to the concerned authorities.
 - (iv) 1% Labour Cess shall be deducted from each running and final bills.
- 6.3 The Bidder shall submit the Bid price in One Original and two copies in sealed envelopes (marked 'ORIGINAL' and 'COPY') and superscripted as "**BID PRICE**". In the event of discrepancy between them, the original shall prevail.
- The Bid price will be return unopened to tenderers who failed to qualify in the Qualifying Requirements.
- 6.4 The price bids shall be checked by the Owner for any arithmetical error in computation and summation. Errors shall be corrected by the Owner as follows:
- (i) Where there is discrepancy between amounts in figures and in words, the amounts in words shall prevail, and
 - (ii) Where there is discrepancy between the unit rate and the total amount derived from the multiplication of unit rate and the quantity, the unit rate as quoted shall govern unless in the opinion of the Owner, there is an obviously gross misplacement of decimal point in the unit rate, in which case, the line item total as quoted shall govern and unit rate shall be

corrected.

(iii) In case prices for some items are given by a Bidder as lump sum where unit rates are required, the Owner reserves the right to arrive at unit rate on the basis of dividing the entered lump sum by the specified quantity.

6.5 The amount stated in the Price Schedule shall be adjusted by the Owner in accordance with the above procedure for the correction of errors and shall be considered as binding upon the bidder. If the bidder does not accept the corrected amount of bid, his bid shall be rejected and the Earnest Money Deposit (EMD) shall be forfeited.

7.0 AWARD CRITERIA

The Owner shall award the Contract to the Bidder whose Bid has been determined to be substantially responsive and has been determined as successful bidder, provided further that the requisite assessment of the Bidder has been made to perform the Contract satisfactorily.

8.0 SIGNING OF CONTRACT

8.1 Within 14 (fourteen) days from the date of letter of award, the Bidder or his authorized representative shall attend the office of The Superintending Engineer, GC-II, MePGCL, Shillong, for signing of the Agreement in F-2 form.

8.2 Wherever there is any variation in between the conditions of the F-2 Form and the conditions of Bid Document, the conditions of Bid Document shall prevail. However, other conditions of the F-2 Form about which nothing is mentioned in the Bid Document shall form a part of this contract.

8.3 Failure on the part of the successful Bidder to comply with the above requirement shall constitute sufficient grounds for the annulment of the award and forfeiture of the Earnest Money Deposit (EMD), in which event the Owner may make the award to the next lowest evaluated Bidder or call for new Bids.

9.0 OWNER'S RIGHT TO VARY QUANTITIES

The Owner reserves the right to increase or decrease the quantity of goods valuing up to 15% of the Contract price including services, without any change in unit rates or other terms and conditions, during the execution of the contract. Any increase or decrease of quantity of items would be properly justified and approval of the Owner is required to be obtained.

10.0 TERMS OF PAYMENT

The payments under the contract shall be made as per the general conditions of contracts of the bidding documents and the terms of payment under the contract shall be made as follows:

10.1 Progressive payment:

85% (eighty five percent) of the construction price component shall be paid on progressively monthly basis at unit rates (quoted in the schedule of BPS) based on quantum of work done and certification by MePGCL's representative.

10.2 Balance payment:

The balance of 15% (fifteen percent) of the construction price component shall be paid on successful completion and taking over by MePGCL and on completion of the guarantee period.

10.3 Invoices for verification / payment etc shall be submitted to the office of the Executive Engineer, GED, MePGCL, Rongkhon, Meghalaya.

11.0 EMPLOYMENT OF LABOUR

11.1 The Contractor shall employ, for the works, regular skilled employees with experience for this particular work. No female labourer shall be employed after dark. The 2015 Amendments to the Child Labour (Prohibition and Regulation) Amendment Bill, 2012 shall govern the admissible age of labour engaged.

11.2 All traveling expenses including provisions of all necessary transport to and from site, lodging allowances and other payments to the Contractor's employees shall be the sole responsibility of the Contractor.

11.3 The number of hours of work at the site shall be decided by the Owner and the Contractor shall adhere to it. Working hours will normally be 8 (eight) hours per day, six days per week.

11.4 The Contractor's employees shall wear identification badges while on work at site.

11.5 In case the Owner becomes liable to pay any wages or dues to Labour or any Government agency under any of the provisions of the Minimum Wages Act, Workmen Compensation Act, Contract Labour Regulation Abolition Act or any other law due to acts of omission of the Contractor, the Contractor shall be liable for such payment and the same shall be recovered from the Contractor's bills.

11.6 The Contractor shall be responsible for the safety of his employees at work site and shall issue safety equipments like helmets, etc.

12.0 SURPLUS MATERIALS

12.1 On completion of the works, all surplus materials supplied by the Owner, for erection, that remain unutilized shall be returned to the Engineer by and at the expense of the Contractor in the Owner's store(s), except for the wastage allowed for various line materials in accordance with provision of the relevant clause.

12.2 The Contractor, within 2 (two) months from the taking over of the works, shall return and account for the surplus materials, failing which necessary recoveries will be made from the outstanding bills of the Contractor.

13.0 GUARANTEE

13.1 The Contractor shall warrant that the work executed will be free from defects in materials/workmanship for a period of 12 (twelve) calendar months commencing immediately upon the satisfactory commissioning. The Contractor's liability shall be limited to the repairing/renewing of any defective portion of the work arising solely from faulty materials and / or workmanship.

No repairs or replacement shall normally be carried out by the Owner when the line is under the supervision of the Contractor's supervisory Engineer.

- 13.2 In the event of any emergency where in the judgement of the Owner, delay would cause serious loss or damages, repairs or adjustment may be made by the Owner or a third party chosen by the Owner without advance notice to the Contractor and the cost of such work shall be paid by the Contractor. In the event such action is taken by the Owner, the Contractor will be notified promptly and he shall assist wherever possible in making necessary corrections. This shall not relieve the Contractor of his liabilities under the terms and conditions of the Contract.
- 13.3 If it becomes necessary for the Contractor to replace or renew any defective portions of the works, the provisions of this clause shall apply to point of the works so replaced or renewed until the expiry of 12 (twelve) months from the date of such replacement or renewal. If any defects are not remedied within a reasonable time, the Owner may proceed to do the work at the Contractor's risk and cost, but without prejudice to any other right, when the Owner may have against the Contractor in respect of such defects.
- 13.4 The cost of any rectification rendered necessary during the maintenance period due to defective work carried out by the Contractor, the same shall be borne by the Contractor.
- The acceptance of the completed work by the Owner shall in no way relieve the Contractor of his obligations under this clause.

14.0 LIQUIDATED DAMAGES FOR DELAY IN COMPLETION

If the Contractor fails to perform the work within the specified period given in the letter of award or any extension granted thereof, with respect to successful completion, the contractor shall pay to the owner as liquidated damages and not as penalty, a sum of 0.5% (half percent) of the contract price for each calendar week of delay or part thereof. However, the amount of liquidated damages for the contract shall be limited to a maximum of 5 % (five percent) of the total contract price.

15.0 ARBITRATION

Settlement of any dispute arising during the execution of the contract shall be Shillong jurisdiction. The laws applicable to the contract shall be the laws in force in India. The courts of Shillong shall have exclusively jurisdiction in all matters arising under this contract.

16.0 PERIOD OF CONTRACT

The time for completion of the work shall be within 30 days from the date of issue of final work order.

17.0 FORCE MAJEURE

- 17.1 Force majeure is herein defined as any cause which is beyond the control of the contractor or the owner as the case may be, which they could not foresee or with a reasonable amount of diligence could not have foreseen and which substantially affect the performance of the contract, such as:

- (i) Natural phenomena, including but not limited to floods, droughts, earthquakes and epidemics;
 - (ii) Acts of any government, domestic or foreign, including but not limited to war, declared or undeclared, priorities, guarantees and embargo.
- 17.2 Provided either party shall within 15(fifteen) days from the occurrence of such a cause notify the other in writing of such causes.
- 17.3 Neither party shall be liable to the other party for loss or damage sustained by the other party arising from any event referred to in clause or delays arising from such event.
- 17.4 The owner or its authorized representative on receipt of notification shall ascertain the facts and extent of the delays and suitably extend the time for completing the work or stage of work, wherein in its judgment the findings of facts justify such an extension. The period of extension of time shall be determined by the owner or his authorized representative after taking into consideration the nature of the work delayed and practicability of its execution during the period of extension. Although the time for completion of a work shall be suitably extended, such extension shall not result in any financial claim of the contractor against the owner on any account whatsoever.

18.0 PROLONGED DELAY

If at any time it appears that the Contractor is unable to adhere to the prescribed time schedule and the delay is not due to, a cause for which the MePGCL is responsible/Force Majeure, or if the aggregate of the liquidated damages levied in terms of the provisions under clause-14, thereof has reached a maximum of five percent of the contract price, then the MePGCL may at its discretion, by further notice to the contractor either:

- (i) require the Contractor to complete the works,
Or
- (ii) may itself complete the works at the Contractor's risk and cost, provided that it does so in a reasonable manner,
Or
- (iii) Terminate the contract.

If the MePGCL terminates the contract, it shall be entitled to recover from the Contractor any loss it has suffered.

19.0 Miscellaneous

All tender shall be strictly prepared and submitted in accordance with the above instructions and terms & conditions.

SUPERINTENDING ENGINEER (EL) GC – II

SUPERINTENDING ENGINEER GENERATION CIRCLE - II
LUMJINGSHAI, SHORT ROUND ROAD, SHILLONG – 793001,
PHONE NO – 0364 2310278

BID PROPOSAL SHEET

TENDER

FOR

**CONSTRUCTION OF FOUNDATION AND ERECTION FOR 33KV SWITCHYARD
EQUIPMENTS INCLUDING CIVIL WORKS AND REINFORCEMENT OF 33 KV
LA & EARTHING ALONG WITH EARTHING & LIGHTNING SYSTEM OF DAM
AT GANOL 3 x 7.5 MW SHEP**

REINFORCEMENT OF 33KV LA EARTHING FOR 33KV SWITCHYARD AT GANOL POWER HOUSE					
Sl. No	ITEMS OF WORK	UNIT	QTY	RATE	AMOUNT
1	Supplying of CI earthing Pipes (6X3) of ISI standard. Size of CI earthing pipe: 6X3	Nos	3		
2	Supplying G.I Flate (50mmX5mm) from the earthing Pipe to the equipment or main earth conductor. Total Length=18.0m Weight of G.I Flat @0.98kg/m Total Weight 19.0mX0.98kg/m	kg	17.64		
3	Supplying Nuts & Bolts of size 5/8"4"	kg	1		
4	Supplying Bentonite Clay for filling into the Earth Pit (Quantity as per Annexure-I/Sl.No 2=2.0 CumX593 kg/cum=1186 kg	kg	1186		
5	Labour Charge for Cutting, fabricating, brazing, etc 1. Skilled Fitter: 1X3=3 mandays 2. Unskilled Fitter: 2X3=6 mandays	m/days m/days	3 6		
6	Cost of welding of earthing materials	LS			
7	Cost of making 1no.of earth pit (As in Annexure-I)				
8	Sundries	LS			
	Total				
	GST on Sl No 1 to 4				
	Grand Total				

FOUNDATION AND ERECTION OF 33KV VACCUM CB AT GANOL POWER HOUSE									
SITE									
Sl/Iter	Description of Work	No	Length	B/W	Height	Total	Unit	Rate	Amount
1	Earth work in Excavation upto a depth of 2m								
	(a) In ordinary soil	1	X 1.10	X 1.10	X 1.10	= 1.331	m ³		
	Leg foundation					Total =1.331	m ³		
2	Providing and laying c.c in prop. 1:4:8.....complete								
	Leg foundation	1	X 1.00	X 0.10		= 0.10	m ³		
						Total = 0.10	m ³		
3	Supplying, fitting and fixing in position reinforcement bars.....								
	16mm dia leg	1	X 12	X 1.10	X 1.59	= 20.99	kg		
	Stirrups 8 mm dia	1	X 11	X 3.90	X 0.39	= 16.73	kg		
						Total = 37.72	kg		
						Total =0.38	qtls		
4	Providing form work of ordinary timber planking og thickness not les than 25 mm.....								
	Leg	1	X 4	X 1.00	X 1.10	= 4.40	m ²		
						Total = 4.40	m ²		
5	Providing and laying concrete in reinforcement.....								
	a) M15 Or prop 1:2:4 leg	1	X 1.00	X 1.00	X 1.20	= 1.20	m ³		
						Total = 1.20	m ³		
6	Extra lead per km truck carriage for sand, gravel, etc beyond the initial lead of 8 km								
	Item No	Quantity	Stone		Sand				
	2	0.10	0.096 m ³		0.048				
	5	1.20	1.056 m ³		0.528				
	Total		1.152 m ³		0.576				
	(A) Stones/Chips :- Quarry at Benabazar 55.0 km away from work site								
	Total:- 55.0 km-8.00 km =47.00 km								
	Quantity of carriage for stones/chipss =1.152 m ³								
	(B) Sand:- Quarry at Damalgrege 14.00km away from work site								
	Total :- 28.00 km- 8.00 km = 20.00 km								
	Quantity of carriage for stones/chips = 0.532 m ³								
7	Total								
8	GST								
9	Total (7+8)								
10	Cost of erection of 33 KV CB per set								
11	GST on 9								
12	Total (9+10)								
13	Grand Total (9+12)								

FOUNDATION AND ERECTION OF 33KV CT AT GANOL POWER HOUSE SITE									
Sl No	Description of Work	No	Length	B/W	Height	Total	Unit	Rate	Amount
1	Earth work in Excavation upto a depth of 2m								
	(a) In ordinary soil	3	X 0.80	X 0.80	X 0.70	= 1.344	m ³		
	Leg foundation					Total =1.344	m ³		
2	Providing and laying c.c in prop. 1:4:8.....complete								
	Leg foundation	3	X 0.70	X 0.70	X 0.10	= 0.147	m ³		
						Total = 0.147	m ³		
3	Supplying, fitting and fixing in position reinforcement bars.....								
	16mm dia	3	X 12	X 0.80	X 1.59	= 45.79	kg		
	leg								
	Stirrups 8 mm dia	3	X 11	X 2.70	X 0.39	= 34.75	kg		
						Total = 80.54	kg		
						Total =0.81	qtls		
4	Providing form work of ordinary timber planking og thickness not les than 25 mm.....								
	Leg	3	X 4	X 0.70	X 0.80	= 6.72	m ²		
						Total = 6.72	m ²		
5	Providing and laying concrete in reinforcement.....								
	a) M15 Or prop 1:2:4								
	leg	3	X 0.70	X 0.70	X 0.80	= 1.176	m ³		
						Total = 1.176	m ³		
6	Extra lead per km truck carriage for sand, gravel, etc beyond the initial lead of 8 km								
	Item No	Quantity		Stone		Sand			
	2	0.147		0.141 m ³		0.071			
	5	1.176		1.035 m ³		0.517			
	Total			1.176 m ³		0.588			
	(A) Stones/Chips :- Quarry at Benabazar 55.0 km away from work site								
	Total:- 55.0 km-8.00 km =47.00 km								
	Quantity of carriage for stones/chipss =1.176						m ³		
	(B) Sand:- Quarry at Damalgrege 28.00km away from work site								
	Total :- 28.00 km- 8.00 km = 20.00 km								
	Quantity of carriage for stones/chips = 0.588						m ³		
7	Total								
8	GST								
9	Total (7+8)								
10	Cost of erection of 33 KV CT per set								
11	GST on 9								
12	Total (9+10)								
13	Grand Total (9+12)								

FOUNDATION AND ERECTION OF 33KV ISOLATOR AT GANOL POWER HOUSE SITE									
Sl/Item No	Description of Work	No	Length	B/W	Height	Total	Unit	Rate	Amount
1	Earth work in Excavation upto a depth of 2m (a) In ordinary soil Leg foundation	2	X 1.30	X 0.50	X 0.80	= 1.040	m ³		
					Total	=1.040	m ³		
2	Providing and laying c.c in prop. 1:4:8.....complete Leg foundation	2	X 1.20	X 0.40	X 0.10	= 0.096	m ³		
					Total	= 0.096	m ³		
3	Supplying, fitting and fixing in position reinforcement bars..... 16mm dia leg Stirrups 8 mm dia	2	X 12	X 0.90	X 1.59	= 34.34	kg		
		2	X 11	X 3.10	X 0.39	= 26.60	kg		
					Total	= 60.94	kg		
					Total	=0.61	qtls		
4	Providing form work of ordinary timber planking og thickness not les than 25 mm..... Leg	2	X 2 X 1.20	X 0.90	= 4.32	m ²			
		2	X 2 X 0.40	X 0.90	= 1.44	m ²			
					Total	= 5.76	m ²		
5	Providing and laying concrete in reinforcement..... a) M15 Or prop 1:2:4 leg m ³	2	X 1.20	X 0.40	X 0.90	= 0.864	m ³		
					Total	= 0.864	m ³		
6	Extra lead per km truck carriage for sand, gravel, etc beyond the initial lead of 8 km Item No Quantity Stone Sand 2 0.096 0.092 m ³ 0.046 5 0.864 0.760 m ³ 0.517 Total 0.852 m ³ 0.426 (A) Stones/Chips :- Quarry at Benabazar 55.0 km away from work site Total:- 55.0 km-8.00 km =47.00 km Quantity of carriage for stones/chipss =0.853 m ³ (B) Sand:- Quarry at Damalgrege 28.00km away from work site Total :- 28.00 km- 8.00 km = 20.00 km Quantity of carriage for stones/chips = 0.426 m ³								
7					Total				
8					GST				
9					Total (7+8)				
10					Cost of erection of 33 KV PT per set				
11					GST on 9				
12					Total (9+10)				
13					Grand Total (9+12)				

FOUNDATION AND ERECTION OF 33KV LA AT GANOL POWER HOUSE SITE									
Sl/Item	Description of Work	No	Length	B/W	Height	Total	Unit	Rtae	Amount
1	Earth work in Excavation upto a depth of 2m								
	(a) In ordinary soil	3	X 0.80	X 0.80	X 0.70	= 1.344	m ³		
	Leg foundation								
					Total	=1.344	m ³		
2	Providing and laying c.c in prop. 1:4:8.....complete								
	Leg foundation	3	X 0.70	X 0.70	X 0.10	= 0.147	m ³		
					Total	= 0.147	m ³		
3	Supplying, fitting and fixing in position reinforcement bars.....								
	16mm dia	3	X 12	X 0.80	X 1.59	= 45.79	kg		
	leg								
	Stirrups 8 mm dia	3	X 11	X 2.70	X 0.39	= 34.75	kg		
					Total	= 80.54	kg		
					Total	=0.81	qtls		
4	Providing form work of ordinary timber planking og thickness not les than 25 mm.....								
	Leg	3	X 4	X 0.70	X 0.80	= 6.72	m ²		
					Total	= 6.72	m ²		
5	Providing and laying concrete in reinforcement.....								
	a) M15 Or prop 1:2:4								
	leg	3	X 0.70	X 0.70	X 0.80	= 1.176	m ³		
					Total	= 1.176	m ³		
6	Extra lead per km truck carriage for sand, gravel, etc beyond the initial lead of 8 km								
	Item No	Quantity	Stone		Sand				
	2	0.147	0.141 m ³		0.071				
	5	1.176	1.035 m ³		0.517				
	Total		1.176 m ³		0.588				
	(A) Stones/Chips :- Quarry at Benabazar 55.0 km away from work site								
	Total:- 55.0 km-8.00 km =47.00 km								
	Quantity of carriage for stones/chipss =1.176 m ³								
	(B) Sand:- Quarry at Damalgrege 28.00km away from work site								
	Total :- 28.00 km- 8.00 km = 20.00 km								
	Quantity of carriage for stones/chips = 0.588 m ³								
7					Total				
8					GST				
9					Total (7+8)				
10					Cost of erection of 33 KV PT per set				
11					GST on 9				
12					Total (9+10)				
13					Grand Total (9+12)				

CONSTRUCTION OF 500 KVA STATION SERVICE TRANSFORMER PAD AT GANOL								
POWER HOUSE AREA								
Item No	Description of Items	No	L	B	H	Quantity	Rate	Amount
1.	Earthwork in excavation upto a depth of 2m below the existing ground level for foundation trenches of foundation, footings of coloumn/walls, retaining walls, septic tank etc. including bailing cut watr where necessary and removal of surplus earth will all leas and lifts as directed and specified for the following classification of soils							
	(a) All kinds of soil (ordinary soil/hard soil/dense soil)							
		1	1	2	2	0.2	0.8	
Total						0.8 Cum		
2.	Shuttering/Framework							
	Centering and shuttering including stutting, propping,etc. and removal of form for heights complete and as directed by engineer in charge							
	Coloumns, Pillars piers, Abutments Posts and strutd (Using Steel)							
		1	4	2	0.2		1.6	
Total						1.6 Sqm		
3.	Plain concrete works with coarse aggregate of sizes 13mm to 32mm in foundation bed for footing steps, walls, brick works etc. as directed and specified including dewatering if necessary and curing complete (shuttering where necessary shall be measured and paid seperately							
	b) In Prop 1:3:6 (1 Cement 3 coarse sand 6 agg 20mm nominal Size)							
		1	1	2	2	0.2	0.8	
Total						0.8 Cum		
4.	Reinforced Cement Concrete							
	Reinforced Cement Concrete Providing and laying in position specified grade of reinforced cement concrete, excluding the cost of centering shuttering, finishing and reinforcement all works upto plinth level							
	b) M20 or 1:1:5:3							
		1	1	2	2	0.2	0.8	
Total						0.8 Cum		

MAKING OF EARTH MAT FOR 33 KV SWITCHYARD AT GANOL POWER HOUSE SIITE					
Sl.No	Items of work		Unit	Rate	Amount
1	Excavation foe earth matting including laying welding, backfilling, etc, Total Area = 18.0 X 6.0 =	108	m^2		
2	Supplying Grounding M.S Rod, 20mm diameter, 3.0 m long 3mX 6 Nos =18 Rm Total Weight of M.S Rod @ 2.466kg/Rm	44.388	kg		
3	Supplying Galvanized M.S Flat, for main earth conductor, (50X5)mm For Earthmat 18RMX 4 nos of flats=	72 60	kg		
	6 RMX 10 Nos of flats=	132			
	Total = Total weight of flat @ 2.40 kg/RM =	316.80			
4	Supplying Galvanized G.I Flat, for main earth conductor, (50X5)mm For 33 KV Terminal Equipments		kg		
	GI Flat for 33KV CB Structure == 2X2X1.5=	6.00			
	GI Flat for 33KV CT Structure == 2X3X1.5=	9.00			
	GI Flat for 33KV PT Structure == 2X3X1.5=	9.00			
	GI Flat for 33KV Iso Structure == 8X1X1.5=	12.00			
Total=	36.00				
Total weight of Filat @ 2.40 kg/RM=	86.40				
5	Total				
6	GST				
7	Grand Total				

CONSTRUCTION OF CABLE TRENCH AT 33KV SWITCHYARD AT GANOL POWER HOUSE SITE									
Sl/Item No	Description of Work	No	Length	B/W	Height	Total	Unit	Rate	Amount
1	Earth work in Excavation upto a depth of 2m (a) In ordinary soil Leg foundation	1	50	0.9	0.65	= 29.25	m ³		
						Total = 29.25	m ³		
2	Providing brick soiling in foundation and under floor with stone/best quality picked..... if necessary dewatering complete (C) Stone soiling of thickness 100mm	1	50	0.90		= 45.00	m ³		
						Total = 445.00	m ³		
3	Plain cement concreet works with coarse aggregate of size 13mm to 32mm in foundation bed..... and curing complete	1	50	0.9	0.10	= 4.50	m ³		
						Total = 4.50	m ³		
4	Supplying, fitting and fixing in position reinforcement bars..... 12mm dia @ 120 C/C both ways Slab wall	50 50 2 2	9 10 9 417	0.50 0.70 50.00 0.40	0.89 0.89 0.89 0.89	= 200.25 = 311.50 = 801.00 = 296.67	kg kg kg kg		
						Total = 1609.42			
						Total = 16.09	qtls		
5	Providing form work of ordinary timber planking of thickness not less than 25 mm.... Slab wall	50 50 1	2 2 2	0.50 0.70 50	0.15 0.15 0.40	= 7.50 = 10.50 = 40.00	m ³ m ³ m ³		
						Total = 58.00	m ³		
6	Providing and laying concrete in reinforcement a) M15 or prop 1:2:4 Slab Wall Floor	50 2 1	0.70 50 50	0.50 0.40 0.70	0.15 0.10 0.15	= 2.63 = 4.00 = 5.25	m ³ m ³ m ³		
						Total = 11.875	m ³		
7	10mm thick Cement plaster in single coat.... Complete as directed Wall Total = 40.00	2	50.00	0.40		= 40.00	m ³ m ³		
8	Extra lead per km truck carriage for sand, gravel, etc beyond the initial lead of 8 km Item No Quantity Stone Sand 2 45.00 4.500 m ³ 3 4.50 4.320 m ³ 2.160 m ³ 6 11.88 10.459.00 m ³ 5.225 m ³ 7 40.00 0.487 m ³ Total 19.270 m ³ 7.872								
	(A) Stones/Chips :- Quarry at Benabazar 55.0 km away from work site Total:- 55.0 km-8.00 km =47.00 km Quantity of carriage for stones/chipss = 19.270 m ³								
	(B) Sand:- Quarry at Damalgregre 14.00km away from work site Total :- 28.00 km- 8.00 km = 20.00 km Quantity of carriage for stones/chips = 7.82 m ³								
9	Providing MS angle for Control Cable Tray 45mm X 45 mm X 6 mm @ 3.8 kg/m (GST exclusive) 0.60 X 2.00 X 50.00 X 3.80 = 228.00								
10	Total								
11	GST								
12	Grand Total								

CONSTRUCTION FOR PROVIDING EARTHING SYSTEM AT DAM (3 x 7.5 MW).

Sl. No.	Particulars of Items	Qty	Unit	Rate (in ₹)	Amount (in ₹)	Remarks
1	Supply fitting and fixing of MFE 50, G.I. Chemical Earthing Electrode filled with CMM and Back Fill Compound (BFC)					For DG set
	(b) Diameter: 58mm Length: 2m	3	each			
2	Supply fitting and fixing of MFE 80, G.I. Chemical Earthing Electrode filled with CMM and Back Fill Compound (BFC)					(i) C/Room Panels - <u>2 nos.</u> (ii) Power Packs, SLG Gantry & Intake - <u>3 nos</u>
	(a) Diameter: 88mm Length: 2m	5	each			
3	(i) MS Flats:					<u>Qty of MS Flats:</u>
	50 x 5 mm (Wt. = 1.96 kg/m)	588.00	kg			For laying underground (0.5m) from earth pit to Control Room Bldg
	Reqd. length = 300m					= 150 m x 2
	Weight = 300 x 1.96 = 588.00 kg					= 300 m
	(ii) GI Flats:					<u>Qty of GI Flats:</u>
	20 x 5 mm (Wt. = 0.79 kg/m)	537.20	kg			(i) For C/Room Panels = 120m
	Reqd. length = 680m					(ii) For DG set = 90 m
	Weight = 680 x 0.79 = 537.20 kg					(iii) For Intake = 200 m
	(iii) SUNDRIES, viz. bolts, clamps, etc.	-	LS			(iv) SLG Gntry = 70 m
						(v) D/Pump = 60 m
	Amount				(vi) P/Packs = 140 m	
	GST @ 18%				<u>Total Length = 680m</u>	
	Grand Total of Sl.No.3					
Total			(in ₹)			
			say, (in ₹)			

CONSTRUCTION OF EARTH PIT BRICK WALLS WITH RCC COVER AS SHOWN IN DIAGRAM

S.I No.	Description of work		Length	B/W	Depth/ Height	Total quantity	Unit	Amount
1	Earth work in excavation by manual means up to a depth of 2m below the existing ground level for foundation trenches of foundations, footings of column/walls, retaining walls, septic tank, etc. including bailing out water where necessary and removal of surplus earth with all leads and lifts as directed and specified for the following classification of soils. (b) In ordinary rock (soft rock/ medium rock/ hard shale)							
	Earth Pit	1	x 0.50	x 0.50	x 2.00	= 0.50	m ³	
						Total 0.50	m³	
2	Extra over item no. 2.1 & 2.2 above for each 1m depth or part thereof beyond the initial depth of 2m							
	Earth Pit	1	x 0.50	x 0.50	x 0.50	= 0.13	m ³	
						Total 0.13	m³	
3	Earthwork in filling (excluding rock) in trenches, plinth, sides of foundation etc in layers not exceeding 20cm thick including breaking of clods, consolidating each layer by ramming and watering, lead up to 50m and lift up to 1.5m (a) with available excavated earth							
	Earth filling	1	x 0.50	x 0.50	x 2.50	= 0.63	m ³	
						Total 0.63	m³	
4	PCC works in foundation bed & footing steps, walls, brick works etc below plinth level as directed and specified including watering if necessary, and curing complete. b) In prop 1:3:6							
		1	x 0.65	x 0.65	x 0.10	= 0.042	m ³	
						Total 0.042	m³	
5	Brick work with common burnt clay modular 1st class bricks in foundation and in plinth (b) Cement Mortar 1:6							
		2	x 0.50	x 0.50	x 0.10	= 0.05	m ³	
		2	x 0.30	x 0.50	x 0.100	= 0.03	m ³	
						Total 0.08	m³	
6	Supplying, fitting and fixing in position reinforcement bars up to 1st floor level, conforming to relevant IS Code for RCC work/RB walling including straightening, cleaning, cutting and bending proper shapes and length as per details, supplying and binding with 20G annealed black wire and placing in position with proper blocks, supports, chairs, spacers, etc, complete. (b) High Yield Strength Deformed Bars or Tor Bars							
	12Ø @ 100mm C/C	2	x 6	x 0.48	x 0.89	= 5.13	kg	
						= 0.05	quintal	
7	Providing and laying in position specified grade of RCC, excluding the cost of centering, shuttering, finishing and reinforcement. All work up to plinth level. (a) M15 or Prop 1:2:4							
		1	x 0.5	x 0.50	x 0.10	= 0.03	m ³	
8	12mm cement plaster of mix (a) 1:4							

	Top	1 x 0.50 x 0.500	= 0.25 m ²
		2 x 0.50 x 0.100	= 0.10 m ²
		2 x 0.30 x 0.100	= 0.06 m ²
	Side	4 x 0.30 x 0.50	= 0.60 m ²
		Total	1.01 m²

S.I No.	Description of work		Length	B/W	Depth/Height	Total quantity	Unit
1	Extra for Carriage						
	<i>Items of Work</i>	<i>Qty</i>	<i>Coefficient</i>	<i>Stone</i>	<i>Sand</i>	<i>Bricks</i>	
2	PCC 1:3:6	0.042 cum	Stone = 0.94 cum Sand = 0.47 cum	0.04 cum	0.02 cum		
3	Cement Mortar 1:6	0.08 cum	Sand = 0.33 cum Bricks = 389 nos		0.03 cum	32 nos.	
4	RCC 1:2:4	0.03 cum	Stone = 0.88 cum Sand = 0.44	0.02 cum	0.01 cum		
5	Cement Plaster 1:4	1.01 sqm	sand = 1.952		0.02 cum		
			Total	0.06 cum	0.08 cum	0.03	

1	Carriage of Stone aggregates Distance of stone quarry from Pipulbari to work site = 59.00 km (59.00 - 5.00) = 54.00 = 54.00 x 0.06 = 3.24 cum/km
2	Carriage of Sand Distance of sand quarry from Damalgre to work site = 36.50 km (36.50 - 5.00) = 31.50 = 31.50 x 0.08 = 2.52 @ cum/km
3	Carriage of Bricks Distance of brick quarry from Damalgre to work site = 36.50 km (36.50 - 5.00) = 31.50 = 31.50 x 0.04 = 1.01 @ cum/km

	Total	=
	No. of Earth Pits	=
	Grand Total	=
	say,	

**LABOUR COST FOR THE ERECTION WORKS OF MS FLATS & GI FLATS FOR THE
EARTHING SYSTEM OF DAM,
GASHP (3 X 7.5 MW)**

<i>Sl. No.</i>	<i>Particulars of Labour</i>	<i>No. of days</i>	<i>Rate per Manday (in ₹)</i>	<i>Amount (in ₹)</i>
1	Highly Skilled Labourer - 1 nos.	15 x 1 = 15		
2	Head Welder - 1 nos.	15 x 1 = 15		
3	Fitter (1st Class) - 2 nos.	15 x 2 = 30		
4	Un-Skilled Labour - 4 nos.	15 x 4 = 60		
	Total =			

CONSTRUCTION FOR PROVIDING LIGHTNING PROTECTION SYSTEM AT DAM, GASHP (3 X 7.5 MW)						
Sl. No.	Particulars of Items	Qty	Unit	Rate (in ₹)	Amount (in ₹)	Remarks
1	Supplying, fitting and fixing of Copper lightning Arrester with 5 nos. Finger at the top and copper base plate at the bottom complete.	5	each			Location: i) Control Room Bldg = 4 ii) DG Room = 1
	b) With 5ft high copper rod					
2	Supply fitting and fixing of Copper coated Chemical Earthing Electrode filled with CCM and Back Fill Compound (BFC)	4	each			
	(c) Diameter: 75mm Length: 2m					
3	Supplying fixing connection testing of 8 SWG wire along the wall, columns etc. with necessary clamping as required					Wire Requirement: i) C/Room Bldg = 180m ii) DG Room = 100m
	(a) with Copper wire					
4	Supplying and laying of 15mm x 5mm GI/Copper Strip at 0.50m, below ground	160	per mtr			For laying below ground.
	(a) with 25mm x 5mm Copper strip					
	Total		(in ₹)			

CONSTRUCTION OF EARTH PIT BRICK WALLS WITH RCC COVER AS SHOWN IN DIAGRAM								
S	Description of work		Leng	B/W	Depth/	Total	Unit	Amount

No.			th		Height	quantity			
1	Earth work in excavation by manual means up to a depth of 2m below the existing ground level for foundation trenches of foundations, footings of column/walls, retaining walls, septic tank, etc. including bailing out water where necessary and removal of surplus earth with all leads and lifts as directed and specified for the following classification of soils.								
	(b) In ordinary rock (soft rock/ medium rock/ hard shale)								
	Earth Pit	1	x	0.50	x	0.50	x	2.00	= 0.50 m ³
									Total 0.50 m ³
	@	₹	per m ³						
2	Extra over item no. 2.1 & 2.2 above for each 1m depth or part thereof beyond the initial depth of 2m								
	Earth Pit	1	x	0.50	x	0.50	x	0.50	= 0.13 m ³
									Total 0.13 m ³
	@	₹	per m ³						
3	Earthwork in filling (excluding rock) in trenches, plinth, sides of foundation etc in layers not exceeding 20cm thick including breaking of clods, consolidating each layer by ramming and watering, lead up to 50m and lift up to 1.5m								
	(a) with available excavated earth								
	Earth filling	1	x	0.50	x	0.50	x	2.50	= 0.63 m ³
									Total 0.63 m ³
	@	₹	per m ³						
4	PCC works in foundation bed & footing steps, walls, brick works etc below plinth level as directed and specified including watering if necessary, and curing complete.								
	b) In prop 1:3:6								
		1	x	0.65	x	0.65	x	0.10	= 0.04 m ³
									Total 0.04 m ³
	@	₹	per m ³						
5	Brick work with common burnt clay modular 1st class bricks in foundation and in plinth								

Carriage												
	Items of Work	Qty	Coefficient			Stone	Sand	Bricks				
2	PCC 1:3:6	0.042 cum	Stone = 0.94 cum			0.04 cum	0.02 cum					
			Sand = 0.47 cum									
3	Cement Mortar 1:6	0.08 cum	Sand = 0.33 cum				0.03 cum	32 nos.				
			Bricks = 389 nos									
4	RCC 1:2:4	0.03 cum	Stone = 0.88 cum			0.02 cum	0.01 cum					
			Sand = 0.44									
5	Cement Plaster 1:4	1.01 sqm	sand = 1.952				0.02 cum					
			Total			0.06 cum	0.08 cum	0.03				
6	Carriage of Stone aggregates											
Distance of stone quarry from Pipulbari to work site = 59.00 km												
	(59.00 - 54.00) =											
	=	54.00	x	0.06	=	3.24	@ ₹	=				
						cum/km						
7	Carriage of Sand											
Distance of sand quarry from Damalgre to work site = 36.50 km												
	(36.50 - 31.50) =											
	=	31.50	x	0.08	=	2.52	@ ₹	=				
						cum/km						

8	Carriage of Bricks													
	Distance of brick quarry from Damalgre to work site = 36.50 km													
	(36.50 - 31.50) =													
	=	31.50	x	0.04	=	1.01	@	₹	=					
						cum/k m								
			Total									=		
			No. of Earth Pits									=		
			Grand Total									=		
			say,											