

Rehabilitation of Penstock in Kameng HEP using combination of CFRP and GFRP



ISO: 9001, 14001,
& 45001

Bid Document
Part-1: Short & Detail NIB



ISO: 9001, 14001,
& 45001

नॉर्थ ईस्टर्न इलेक्ट्रिक पावर कॉरपोरेशन लिमिटेड

(मिनी रत्न, श्रेणी-I, भारत सरकार का उद्यम)

NORTH EASTERN ELECTRIC POWER CORPORATION LIMITED
(Mini Ratna, Category-I, Government of India Enterprise)

Office of the Executive Director, Contracts & Procurement
Brookland Compound, Lower New Colony
Shillong-793 003, Meghalaya, India

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NIB No. 330 Dated 14-08-2019

DETAIL NOTICE INVITING BIDS (E-TENDER)
(INTERNATIONAL COMPETITIVE BIDDING)

FOR

Rehabilitation of Penstock-II (Partly Underground and partly Over ground) of Kameng Hydro Electric Project (600 MW) located at Kimi, Arunachal Pradesh, India using a combination of Glass Fiber Reinforced Polymer (GFRP) and Carbon Fiber Reinforced Polymer (CFRP)

1. North Eastern Electric Power Corporation Limited (NEEPCO), a leading Mini Ratna Category-I Public Sector Enterprise under the Ministry of Power, Government of India. NEEPCO is building Kameng Hydro Electric Project (600 MW) (KaHEP) at Kimi, Arunachal Pradesh, India. NEEPCO is planning to rehabilitate damaged Penstock #2 of the Project by utilizing a combination of Glass Fiber Reinforced Polymer (GFRP) and Carbon Fiber Reinforced Polymer (CFRP).

North Eastern Electric Power Corporation Limited (NEEPCO), invites online tender at e-procurement portal <https://etenders.gov.in> from prospective bidders fulfilling the Qualifying Requirement under Single-Stage Two-Envelope bidding system through International Competitive Bidding (ICB) route for selecting Contractor for carrying out the work of "Rehabilitation of Penstock-II (Partly Underground and partly Over ground) of Kameng Hydro Electric Project (600 MW) located at Kimi, Arunachal Pradesh, India using a combination of Glass Fiber Reinforced Polymer (GFRP) and Carbon Fiber Reinforced Polymer (CFRP)" at an approximate estimated cost of INR 2350 Million or US\$ 33.81 Million.

2. Scope of work:

The scope of work under this tender covers the following:

- i) Rehabilitation of Penstock #2 of Kameng Hydro Electric Power Project by installation of a FRP system.
- ii) Providing engineering, design, Supply and installation of combination of Glass Fiber Reinforced Polymer (GFRP) and Carbon Fiber Reinforced Polymer (CFRP).
- iii) Furnishing and fabrication of all materials, labor, equipment, and services for the supply, installation and finish of the system utilizing FRP; and post-installation verification testing.



- iv) Services required may include, but are not limited to, inspecting Penstock and ensuring that they are suitable for FRP installation; surface preparation, including removal of the existing coal tar epoxy coating; controlling installation environment conditions; installing the FRP system; post-installation testing; and curing. Detailed specification and work scope are stated in Part-5 of Bid Document.
- v) Providing design and drawing for permanent facilities to be provided in rehabilitated penstock for future inspection and installation of same.

The selected Contractor will furnish all materials, tools, equipment, transportation, necessary storage, access, labor, and supervision required for the proper installation of the FRP composite system. The locations and layout of the Penstock is identified in Part-5 of Bid Document.

The detailed scope of work is described in Part-5 of Bid Document.

3. Bidding Procedure:

The Bidder shall submit Bids under Single Stage Two Envelope bidding system through online as follows:

Techno-Commercial Bid (Envelope No. 1): Shall contain Earnest Money Deposit (EMD), documents in support of Qualifying Requirements and Techno-Commercial Bid.

Price Bid (Envelope No. 2): Shall contain Price Bid. Price Bids of only those Bidders who qualify in Techno-Commercial evaluation shall be opened.

4. Time of Completion:

The project is time sensitive and shall be completed within 200 days from the date of issue of the Letter of Intent.

5. Earnest Money Deposit:

Earnest Money Deposit shall be INR 40 Million or equivalent US Dollars (considering the rate of exchange for conversion of US Dollars to INR as on the date of issue of NIB).

The EMD shall be paid /deposited as per procedure given in Part-3 of Bid Document. Bids without or insufficient EMD shall be rejected.

6. Qualifying Requirements:

6.1 General Qualifying Requirement:

A bidder who may be an individual or Partnership firm or Limited liability Partnership or Private/ Public Ltd. company shall be a registered entity in their own country.

6.2 Technical Qualifying Requirement:

The bidder on standalone basis or Joint Venture mode or associating sub-contractor(s) should have the successful minimum experience of the following during the past 10 years, ending on the last day of the month previous to the one in which the tenders are invited:

- a. Design of composite structure and FRP lining of pressurized pipe.
- b. Application of FRP on minimum 10,000 m² of surface area out of which at least one project should be for rehabilitation of pressurized encased/buried pipe (from inside) of minimum 2 m dia and minimum 750 m length.



- c. Design, manufacture and erection of scaffolding and its uses during welding/grit blasting or FRP lining.

6.3 Financial Qualifying Requirement:

i) **Minimum Average Annual Turnover (MAAT):**

Minimum Average Annual Turnover of the bidder shall be INR 4700 Million or equivalent US Dollars, in the best three Financial Year out of the last 5(five) Financial years. Other income shall not be considered for arriving at the minimum average annual turnover.

For evaluation purpose, the annual turnover of preceding years shall be brought to the current price level by considering an average inflation rate of 2% per year.

Note: For conversion of US Dollars to INR, the exchange rate as on 31st March of respective financial year shall be considered.

ii) **Liquid Asset:**

The bidder should have liquid assets or / and evidence to availability of unutilised credit facilities of not less than INR 900 Million or equivalent US\$ (considering the rate of exchange for conversion of US Dollars to INR as on the date of issue of NIB). The Certificate of Banker regarding the availability of unutilised credit facilities (Fund based and non-fund based) shall not be dated earlier than 30(thirty) days prior to the latest date for submission of bids.

Liquid Asset = Current Asset – (Inventory + Pre-paid expenses).

iii) **Net Worth:**

The Net worth of the bidder as on last day of the preceding financial year shall not be less than 50% of the Paid-up Share capital.

The Net Worth shall be calculated based on Subscribed and Paid-up Capital + Free Reserves + Unallocated balance surplus amount of Profit and Loss Account less (a) Expenses not written off (b) Loss in Profit & Loss Account if not reduced from Reserves.

Complete Audited Annual Reports along with Audited Balance Sheets, Profit and Loss Account & detailed Schedule and other financial statements for the preceding 5(five) financial years, along with Letter of adequacy and commitment from their Bankers/ Financial Institutions of International repute should be furnished along with their bids for evaluating the above financial criteria. In case where the audited results of the preceding financial years are not available, certified financial statements from a practicing Chartered Accountant / Certified Public Accountant (CPA) will be also considered acceptable.

6.4 Joint-Venture / Consortium Bidders:

Individual Company/Firm, who do not individually fulfil the qualifying requirements indicated above can form Joint-Venture/consortium. In the event of Joint-Venture/Consortium, the role of each partner, along with name of the lead partner, must clearly be indicated in the joint venture/consortium agreement. In no case shall the joint venture/consortium have more than 2(two) partners. One of the partner shall be nominated as the lead partner, and his authorization shall be evidenced by submitting a Power of Attorney signed by legally authorized signatory(s) of both the partners. The lead partner shall be authorized by Joint-Venture/consortium to incur liabilities and receive instructions for and on behalf of the Joint-venture/consortium, and the entire execution of the contract.



6.4.1 In case of Joint-Venture/Consortium, all its partners shall have a legally binding Agreement for joint and several responsibilities. The detailed qualifying criteria of lead partner and other partner are as below:

- i) There shall be 2 (two) partners in the Joint-Venture/Consortium and lead partner's participation should be more than 50%.
- ii) The lead partner of Joint-Venture/Consortium shall meet the following requirements:
 - a. Technical Qualifying Requirement as specified in Clause 6.2(a) or {6.2(b) & 6.2 (c)} above.
 - b. Minimum Average Annual Turnover (MAAT) of not less than percentage participation share in Joint-Venture/Consortium.
- iii) The other partner of Joint-Venture/Consortium shall meet the following requirements:
 - a. Technical Qualifying Requirement as specified in Clause 6.2(a) or {6.2(b) & 6.2(c)} above. In the event, the lead partner fulfills the experience as specified in Clause 6.2(a), the other partner must fulfill the experience as specified in Clause 6.2(b) & 6.2(c) and vice versa.
 - b. Minimum Average Annual Turnover (MAAT) of not less than percentage participation share in Joint-Venture/Consortium.
- iv) Individual Company/Firm or Joint-Venture/Consortium shall collectively satisfy, as a whole, the requirements specified under Clauses 6.1, 6.2 and 6.3 above. However, parties claiming to have past experience by virtue of being a partner of Joint-Venture/Consortium, while executing particular works in the past, shall also have to produce documentary evidence of their role and scope of work in the aforesaid Joint-Venture/Consortium, which only shall be counted for the purpose of assessing experience of this Joint-Venture/Consortium.

6.5 **Bidders associating Sub-Contractor(s)**: In case the Bidder does not have all requisite specific experience and also does not wish to enter into a Joint Venture he can associate sub-contractor(s) for specified activities as brought out below. The criteria to be met by such Bidder shall be as follows:

- (i) In such case, the Bidder himself shall have general experience of successful completion of civil construction work(s) or Hydro-Mechanical work(s), fulfilling any one of the following during the last 10 years, ending on the last day of the month previous to the one in which the tenders are invited:
 - (a) at least 1(one) civil construction work or Hydro-Mechanical work of value not less than INR 1880 Million (or equivalent US Dollars)
 - Or,
 - (b) at least 2(two) civil construction works or Hydro-Mechanical works, each of value not less than INR 1175 Million (or equivalent US Dollars)
 - Or,
 - (c) at least 3(three) civil construction works or Hydro-Mechanical works, each of value not less than INR 940 Million (or equivalent US Dollars).

For evaluation purpose, the value of such work(s) shall be brought to the current price level by considering an average inflation rate of 2% per year.

- (ii) The Bidder himself to fully meet all criteria mentioned under Financial capacity in

clause 6.3.

- (iii) The number of sub-contractors not to exceed two (2) for meeting the Technical experience criteria.
- (iv) The Bidders can propose the subcontractor(s) for any or all 'Technical experience under clause 6.2.
- (v) The proposed sub-contractor(s) shall individually meet fully at least one or more of the Specified Technical criteria for components listed in clause 6.2
- (vi) The Bidder and his proposed sub-contractor(s) should collectively satisfy, as a whole all the specified experience requirements.
- (vii) The Bidder and his sub-contractor(s) should submit separate Joint Deed of Undertaking (JDU) and undertaking by the Sub-contractor as per Format included in the Bid Document.
- (viii) Sub-contractor(s) shall submit Performance Bank Guarantee equivalent to 5% of value of Work sublet in addition to the Performance Bank Guarantee for whole contract submitted by the Bidders on award of Work.
- (ix) In case, design of FRP lining is provided by sub-contractor, the sub-contractor shall provide minimum 5 engineers/ supervisors during lining and trial run of Penstock(Till completion of project), whose self-signed CV along with passport size photograph shall be submitted along with the bid in the format prescribed in Data Sheet-3.
- (x) In the event of award of work to such bidder, all payments shall be made exclusively to the bidder.

Authenticated documentary evidence in support of qualifying requirements, as mentioned under Clause 6.1 and 6.2 above, shall be submitted in Techno-Commercial Bids. The documents particularly pertaining to Clause 6.2(b) should be in the form of Certificate of Clients/ Owner. Bids submitted without fulfilling the qualifying requirements shall be outright rejected.

Notwithstanding above, NEEPCO shall have the right to seek any other information / testimonies, as may be required and non-submission / refusal to submit these shall result in disqualification.

6.6 All the Bidders shall enter into an Integrity Pact with the Owner at the time of submission of Techno-Commercial Bids. For this, the Owner has appointed the following two persons, who each shall act as an Independent External Monitor (IEM) for overseeing the compliance of obligations by the parties under the Integrity Pact. The Contact Addresses of IEM are as under:

- (i) Shri S. Manoharan, IAS (Retd.)
"Raagamaalika" House New No.-4 (Old No.-14)
Thirumurugan Street,
Kalakshetra Colony, Besant Nagar,
Chennai-600 090.
Mobile No.: +91-8754483098
- (ii) Sri Ardhendu Sen, IAS (Retd.)



House No. J-1229, Palam Vihar,
Gurgaon-122017, Haryana,
Mobile No.: +91-8800633366

7. Interested Bidders, who fulfil the qualifying requirements as mentioned under Clause 6 above, may download the Bid Document from <https://etenders.gov.in> on Bidder registration in the portal.
8. In consideration of the magnitude of work involving estimated cost of INR 2350 Million, emergent and specialised nature of work involving public safety, no relaxation eligible to Startups and Micro & Small Enterprises (MSEs) on Prior Experience & Prior Turnover Criteria including other preferences shall be applicable to this tender.
- 8.1 Conditions for Local suppliers as per Public Procurement (Preference to Make in India), Order 2017 of Ministry of Commerce and Industry, Department of Industrial Policy and Promotion, Government of India shall be as per Clause 3(vi), Part-3 (Instruction to Bidders) of Bid Document.
9. The detailed scope of works and other terms and conditions are elaborated in the bid document. For any clarification related to terms and conditions of Bid Document, bidders are requested to send their queries online at <https://etenders.gov.in> under "Seek Clarifications" within the timeline stipulated in the system.

10. Participation in Bids

10.1 Registration for Participation in Bids

- a. Bidders are required to enroll on the e-Procurement module of the Central Public Procurement Portal (URL: <https://etenders.gov.in/eprocure/app>) by clicking on the link "Online bidder Enrolment" on the CPP Portal which is free of charge.
- b. As part of the enrolment process, the bidders will be required to choose a unique username and assign a password for their accounts.
- c. Bidders are advised to register their valid email address and mobile numbers as part of the registration process. These would be used for any communication from the CPP Portal.
- d. Upon enrolment, the bidders will be required to register their valid Digital Signature Certificate (Class III Certificates with signing key usage) issued by any Certifying Authority recognized by CCA India (e.g. Sify / nCode / eMudhra etc.), with their profile.
- e. Only one valid DSC should be registered by a bidder. Please note that the bidders are responsible to ensure that they do not lend their DSC's to others which may lead to misuse.
- f. Bidder can then log in to the site through the secured log-in by entering their user ID / password and the password of the DSC / e-Token.

Bidders are requested to get themselves enrolled on the e-Procurement Portal (URL: <https://etenders.gov.in/eprocure/app>) well in advance and no extra time will be considered for submission of bids for the delay in enrolling on the e-Procurement portal.

For Registration and other e-procurement portal related queries, bidders may contact NIC at

- (i) Mr. Akash Thadani
Database Administrator,



National Informatics Centre, Meghalaya State Centre, Shillong
Mobile No. 08787522181
Email Id: akashthadani1@gmail.com

10.2 Bid Fee:

Bidders shall have to pay BID FEE (non-refundable) of INR 23,600.00 (Rupees twenty three thousand six hundred only) including 18% GST or US\$ 339.52 (US Dollar three hundred thirty nine point five two) only for participation in this instant NIB. Applicable bank charges shall be borne by the bidder.

The bidder shall make the payment to NEEPCO through SB Collect or NEFT/RTGS. Bidders shall clearly indicate the NIB No. against which the bid fee is paid.

Particulars of NEEPCO bank account is given below.

- Name of the Bank : SBI, Main Branch, Shillong, Meghalaya, India
- Name of Beneficiary's Account: North Eastern Electric Power Corporation Ltd.
- Bank A/c No: 10881522463
- Type of A/c : Cash Credit A/c
- IFS Code: SBIN0000181

The bidders preferring to make the payment through "SB-COLLECT" of State Bank of India shall follow the steps given at Clause 10.3 below. The system generated receipt shall also be uploaded while submitting the bid in the e-tendering portal as per bid document and also indicate their GSTIN, SAC Code 9984 and NEEPCO Shillong GST NO. 17AAACN9991J1ZT.

10.3 The procedure/steps for payment by SB-COLLECT of State Bank of India (for payment of EMD & Bid Fee):

Procedure for payment of Bid fee:

The bidder shall make the payment through "SB-Collect" of State Bank of India as per procedures/steps elaborated as below. The system generated receipt shall also be uploaded while submitting the bid in the e-tendering portal as per bid document.

- The procedure/steps to be followed for payment of BID FEE, EMD etc. by SB-COLLECT of State Bank of India:

Step-1	The bidder shall visit url/web page https://www.onlinesbi.com/prelogin/institutiontypedisplay.htm on any internet browser.
Step-2	State Bank Collect page will appear. Select "ALL India" for "State of Corporate/Institution". Select "PSU" for "Type of Corporate/Institution". Click "GO".
Step-3	In the new screen, select PSU Name as "North Eastern Electric Power Corporation Limited" and Submit.



STEP-4	In the new screen, select Payment Category as " SHILLONG- PARTIES " in this case.
STEP-5	<p>New Screen will appear, here the bidder has to fill all the required information for the payment as under:</p> <ul style="list-style-type: none"> i) Under Name of Payer : The Bidder is to filled up his Company/ Firm Name and Address. ii) Under Short Details of Payment : The Bidder shall indicate BID FEE or EMD as applicable and the NIB No. (Example: for payment of EMD against NIB No. XX dated DDMMYYYY, the bidder has to fill under this option as "EMD for NIB No. XX dated DDMMYYYY). iii) Under Type of PAYER : The Bidder is to select VENDOR. iv) Under CIN in case the Payer is a company : The bidder is to fill up his CIN in case of a company, otherwise may be kept blank. v) Under Payment amount : The bidders is to fill up the amount as per Bid Condition. vi) Subsequent information for Name, Date of Birth/Incorporation, Mobile Numbers are to be filled as required. vii) Fill Captcha. viii) Then Submit.
STEP-6	In the new screen, check the details and click " CONFIRM ", if correct.
STEP-7	<p>The Multi Option Payment System will be available for making the payment.</p> <p>The Bidder may select option as per convenient and make the payment.</p>
STEP-8	<p>After successful payment, the system will generate receipt.</p> <p>The receipts may also be generated from Reports - i.e. SB Collect (Request Report/ Download Report).</p> <p>This system generated receipt shall be downloaded and send it to Chief General Manager (C), i/c Contracts & Procurement Department, NEEPCO Ltd., Lower New Colony, Shillong, Meghalaya, India-793003, at e-mail ID: contract_neepco@yahoo.com.</p> <p>The system generated receipt shall be uploaded while submitting the bid in the e-tendering portal and also submit in offline mode as per bid document.</p>

11. Submission and Opening of Bids

11.1 Bidders shall prepare and submit their bids online in <https://etenders.gov.in> as per timeline mentioned in Clause 13 below. Submission of online bids is mandatory for consideration of the bids by NEEPCO.

Besides online submission, the following documents are required to be compulsorily submitted physically (offline mode) as stipulated at Clause 10.1(iv), Part-3 (ITB) of Bid Document:



- a. **Earnest Money Deposit (EMD) in the form of Bank Guarantee or e-receipt of money paid through SB-COLLECT of State Bank of India/ NEFT/RTGS, in original, as provided at Clause 15, Part-3 of Bid Document;**
- b. **Power of Attorney (as per format provided at Form-D, Part-6 of Bid Document), in original.**
- c. **Joint-Venture/Consortium Agreement Form (as per format provided at Form-E, Part-6 of Bid Document), in original**
- d. **Joint Deed of undertaking by Bidder and sub-contractor (as per format provided at Form-H, Part-6 of Bid Document), in original.**
- e. **Undertaking by Sub-contractor (as per format provided at Form-I, Part-6 of Bid Document), in original.**
- f. **INTEGRITY PACT (two original copies of Integrity Pact duly signed by authorized signatory who signs the Bid) in the format enclosed at Appendix-A of Part-3.**

These above mentioned documents shall be submitted by hand or by registered Post/ Courier in a sealed envelope superscripted as "Hard Copy of documents against NIB No 330 Dated 14-08-2019 for the work of Rehabilitation of Penstock-II (Partly Underground and partly Over ground) of Kameng Hydro Electric Project (600 MW) located at Kimi, Arunachal Pradesh, India using a combination of Glass Fiber Reinforced Polymer (GFRP) and Carbon Fiber Reinforced Polymer (CFRP)" at the following address within the scheduled date and time mentioned under Clause 13 below.

The Chief General Manager (C),
i/c Contracts & Procurement,
North Eastern Electric Power Corporation Ltd.,
Brookland Compound, Lower New Colony,
Shillong – 793 003,
Meghalaya, India.
Ph: 0364-2227784, E-mail: contract_neepco@yahoo.com

12. Bid validity: 180 (one hundred eighty) days from the date of opening of Techno-Commercial Bids.

13. Tender timeline:

a)	Date of commencement of downloading of Detailed Bid Document from https://etenders.gov.in	w.e.f. 12:00 Hours of 16-08-2019
b)	End date and time for downloading of Detailed Bid Document	Upto 14:00 Hours of 13-09-2019
c)	Last date & time of receipt of queries from prospective bidders	Upto 14:00 Hours of 27-08-2019
d)	Pre-Bid meeting with the intending bidders:	On 02-09-2019 at 11:00 Hours (Indian Standard Time) at NEEPCO Office, Shillong
e)	Last date & time for submission of online bids	Upto 14:00 Hours of 14-09-2019



f)	Last date & time for receipt of offline documents to be submitted as per bid conditions	Upto 14:00 Hours of 20-09-2019
g)	Date & time for opening of Techno-Commercial bids online	At 14:00 Hours on 16-09-2019
h)	Date & time for opening of Price bids online	Date & time shall be intimated separately to those Techno-Commercially qualified bidders, who qualify in Techno-Commercial evaluation.

In the event the last date specified for submission of offline documents and date of online opening of Techno-Commercial bids is declared as a closed holiday for NEEPCO, the last date for submission of offline documents and date of online opening of Techno-Commercial bids will be the following working day at the appointed times.

14. Bidders are requested to visit <https://etenders.gov.in> and NEEPCO website www.neepco.co.in, regularly for any subsequent notice of Clarification/Amendment/Corrigendum to this Notice Inviting Bid.
15. Submission of bids shall not automatically construe qualification for evaluation. NEEPCO reserves the right to reject any or all bids, or to annul the bidding process and reject all the bids for any justified and genuine grounds without thereby incurring any liability to the affected bidders, nor does it have any obligation to inform the bidders of the ground for the action of NEEPCO.

(S. Goswami)
Chief General Manager (C),
i/c Contracts & Procurement