



Government of India
जल संसाधन, नदी विकास और गंगा संरक्षणमंत्रालय
Ministry of Water Resources, River Development and Ganga Rejuvenation
केन्द्रीय और वलदुतअनुसंधान शाला
Central Water & Power Research Station
खडकवासला, पुणे - 411 024
Khadakwasla, Pune – 411 024

नविदिा दसुतावेजु
भू-तकनीकी (शैल यांतुरकी)पूरभागके लएि 2 डी और 3 डी
एफईएम सॉफुटवेयर की खरीद हेतु

**TENDER DOCUMENT
FOR**

**Procurement of 2D & 3D FEM software for Geotechnical
Engineering (Rock Mechanics) Division**

कुल पृषुठ : 24
Total Pages : 24

पूरथमदो पृषुठोंको छुडकर मूल दसुतावेजु को वधुिवित हसुताकुषरक्किर जमा करे
**THIS DOCUMENT FROM PAGE 2 ONWARDS SHOULD BE RETURNED IN
ORIGINAL DULY SIGNED**

TENDER NOTICE

Executive Engineer (Civil) CWPRS (Central Water and Power Research Station), Pune for and on behalf of the President of India, invites sealed tenders from eligible suppliers for the supply of following stores:

Sr. No.	Item	Quantity	Earnest Money Deposit in Rupees
1.	Procurement of 2D & 3D FEM software for Geotechnical Engineering (Rock Mechanics) Division [NOTE: "LICENSE" IMPLIES LEGAL RIGHT TO INSTALL, USE, ACCESS, DISPLAY, RUN, OR OTHERWISE INTERACT WITH SOFTWARE PROGRAM]	One perpetual Licensed copy of network version of the software to enable access to at least three users from three different PC terminals.	30,000/- (Rupees thirty thousand only)

Tender forms could be obtained from the office between **0900 hrs and 16:00 hrs upto 28.10.2016** on payment of a non-refundable fee of Rs 575/- plus postal charges of Rs 50/-, if required by post, in cash or in the form of DD drawn in favour of Executive Engineer (Civil), CWPRS payable at Pune. Tender form can also be **downloaded from CWPRS Website : www.cwprs.gov.in** and should be submitted along with tender fee of Rs 575/- in the form of DD drawn in favour of Executive Engineer (Civil), CWPRS payable at Pune. **Bids received without exact EMD and Tender fee and in the form of cheque will be summarily rejected.**

Reputed Firms may send their lowest offers for the same in Sealed Envelopes superscribing Bid for the above mentioned equipment in person / by post so as to reach Executive Engineer (Civil), CWPRS, Pune 411 024 (India) on or before **03.11.2016 upto 14:30 hours, the Bids would be opened at 15:00 hours on 03.11.2016.**

Executive Engineer (Civil)

1.0 DETAILED SPECIFICATIONS OF SOFTWARE :

Please refer **Annexure – I.**

2.0 BRIEF BACKGROUND OF CWPRS

Please refer **Annexure-II.**

3.0 TERMS AND CONDITIONS

A) GENERAL

1. ELIGIBILITY FOR QUOTATION: Although the principal vendor of the software may be of any country, bidding will only be made through their Indian representatives who will further be responsible for installation, customer support and training. The Indian representative should preferably quote the cost of the software in Indian Rupee. However, if the cost is quoted in foreign currency, the same will be converted into equivalent Indian currency as per the prevailing rate on the day of opening the Financial Bid part of the tender. No advance payment will be made to any vendor of the software and the payment will also be made by this office in Indian currency (Rupee) only.

2. ADHERENCE TO ALL THE TERMS AND CONDITIONS: The bidder should adhere to all the terms and conditions. If there is any discrepancy in complying with any term and condition laid down, the bid is liable to be rejected and decision of the competent authority would be binding on the bidder.

3. DUE DATE: The bid received after the due date and time will be rejected.

4. BID CLARIFICATION: The bidder may obtain the required clarification if any, before submitting the bid. No clarification will be sought after opening of the tender.

5. DOCUMENTS REQUIRED: The documents of valid registration, contracts, authorization, dealership certificate for arranging supply of software etc. should be supplied or it is likely that the bids would not be evaluated.

6. UNDERTAKING BY THE SOFTWARE SUPPLIER/ VENDOR: A letter of undertaking from each of the Original Software supplier/ vendor for the software supplier that in case the bidder authorized by them defaults in execution of this tender the Original Software supplier/ vendor will take all steps for successful execution of the tender without any additional cost to the Govt.

7. DETAILS OF TIE-UP WITH ORIGINAL SOFTWARE SUPPLIER/ VENDOR: The bidder to give details of tie-up, in terms of supply, support, servicing and warranty etc. with Original Software suppliers/ vendors. In case of a bidder quoting a product without proof of backing from Original Software suppliers/ vendors their tender will be rejected without giving any notice.

8. **REJECTION OF BID:** The competent authority reserves the right to accept or reject any or all the bids without assigning any reasons therefore.

9. **LOWEST BIDDER (L1):** L1 Software vendor (bidder) shall be decided on the comprehensive total cost of all items in Technical specifications of software Single option with most economical prices for the software meeting specification ONLY will be accepted. Financial evaluation on common platform i.e. the cost incurred by CWPRS in getting the software at their premises (concessional custom duty and insurance) shall be included in arriving at the lowest bidder L1. Exchange rate on the date of opening of financial bid will be considered.

10. **BILL OF QUANTITY:** The quantities of procurement (i.e. number of licenses) are stated in "Bill of Quantity".

11. **VALIDITY OF THE BID:** The bid for the supply of software shall remain open for a period of 180 days from the date of opening of bids. The Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the earnest money if any bidder withdraws his bid before that date or makes any modification in the terms and conditions of the bid which are not acceptable to the department, and to forfeit whole of the earnest money if the bidder, whose bid is accepted, fails to supply software specified in the NIQ (Notice Inviting quotation) (along with changes in scope, if any) in prescribed time or abandons the supply of software in the middle .

12. **AMENDMENTS TO THE BIDS:** The amendments shall be notified in writing or by FAX to all prospective bidders on the address intimated at the time of purchase of the bid document from CWPRS and these amendments will be binding on them.

13. **MODIFICATION AND WITHDRAWAL OF BIDS:** - The bidder may modify or withdraw his bid after submission, provided that the written notice of the modification or withdrawal is received by the purchaser prior to the deadline prescribed for submission of bids. The bidder's modification or withdrawal notice shall be prepared, sealed, marked and dispatched as required in the case of bid submission.

14. **BID OPENING:** -

- a) CWPRS shall open bids in the presence of bidders or their authorized representatives who choose to attend, on due date. The bidder's representatives, who are present, shall sign an attendance register. Authority letter to this effect shall be submitted by the bidders before they are allowed to participate in bid opening (A format is given)
- b) A maximum of two representatives of any bidder shall be authorized and permitted to attend the bid opening.
- c) The bidder's names, Bid prices, modifications, bid withdrawals and such other details as CWPRS, at its discretion, may consider appropriate will be announced at the time of opening.

- d) The date fixed for opening of bids, if subsequently declared as holiday by the CWPRS the revised date of schedule will be notified. However, in absence of such notification, the bids will be opened on next working day, time and venue remaining unaltered.

15. REPLIES TO QUERIES: All the queries may please be replied point to point, so as avoid back reference.

16. PLACEMENT OF ORDER: - CWPRS shall consider placement of orders for commercial supplies only on those eligible bidders whose offers have been found technically, commercially and financially acceptable and whose goods have been type approved/validated by CWPRS.

17. TERMINATION FOR DEFAULT:- CWPRS may, without prejudice to any other remedy for breach of contract, by written notice of default, sent to the software supplier, terminate this contract in whole or in part :-

- a) If the software supplier fails to deliver any or all of the software within the time period(s) specified in the contract, or any extension thereof granted by CWPRS.
- b) If the supplier fails to perform any other obligation(s) under the Contract; and
- c) If the supplier, in either of the above circumstances, does not remedy his failure within a period of 15 days (or such longer period as CWPRS may authorize in writing) after receipt of the default notice from CWPRS.

18. ARBITRATION:-

In case of dispute the decision of the Director, CWPRS, Pune will be binding.

19. Resultant Contract will be interpreted under Indian laws.

20. OTHER TERMS AND CONDITION: Any other conditions not mentioned shall be dealt as per/GFR 2005 and CPWD Works Manual 2010.

The bidder should enclose the latest technical literature, detailing specifications, along with the technical bid. It may please be noted that merely stating “yes” in compliance statement in any column will not be accepted. The actual numbers/description should be re-stated explicitly in all columns of the compliance statement. Normally, the same should also be seen in the technical literature supplied with the bid. In case where the same is not available in the technical literature, the relevant pages of the manual should be submitted. The bids not satisfying the above requirements are liable for rejection without any further correspondence with the bidder concerned.

B. TECHNICAL

1. TERMS OF USE: Central Water and Power Research Station (hereafter referred as 'CWPRS') should be able to use General Purpose Finite Element Software for

research/investigation of industry/ consultancy projects of Central Government Organisations, State Government Organisations, Central/State Public Sector Undertaking/Enterprises and Private Sectors as per prevailing consultancy charges recommended by Government of India from time to time.

2. WHOLE AND STANDARD SOFTWARE: The software should be complete in all respects including library functions/ preprocessors/ post processor/ any auxiliary/supplementary software. The software should be *standard software* having worldwide acclaim.

3.AUTHORIZATION REQUIREMENT: The Supplier should attach Authorization letter from the principal along with the bid document.

4. LICENSE FOR SOFTWARE: One legal licensed copy of network version of the software is required to be supplied. Vendor should mention the minimum configuration of PC for successful running of the software. The license should be perpetual (there should not be any expiry date of the license of the software) inclusive of all required modules for successful running of the software for solving all given sample problems and other example problems mention in the referred manuals. **All modules in the software must be activated simultaneously at the time of installation only.** The certificate of Authenticity / Authorization for supply of software should be provided. The licensing support should include **free up-gradations during warranty period**. The reckoning of "*commencement of warranty period*" will begin from either date of purchase of software or from date of activation/ commissioning of software, whichever is subsequent/later time. The service after sale should be free during warranty period which includes installation on a new personal computer/workstation if required and any assistance desirable during malfunctioning of the installed software.

5.QUANTITY REQUIRED: The number of perpetual license for software is **one**. Cost of perpetual license should be quoted for *network* version to enable access to at least three users from different PC terminals.

6.MATERIALS TO BE SUPPLIED: All original CDs/DVDs/Pen Drive, original software lock(if any), manuals i.e. User's manual / technical manuals/ operation manuals explaining the details of input / output etc. and reference documentation should be supplied. The quotation should include demonstration kit showing typical applications of the software, graphical output etc. and MS Power Point presentation on a CD.

All licensing documentations, license agreement, Invoices, purchase receipts and any other proofs of purchase for software should be supplied in original. Each CD of the software will have a company serial number which will be mentioned in the list of articles supplied by the company on the company letterhead. A complete list of items supplied as accompaniments, may be furnished.

7.HARDWARE LOCK: Hardware lock of the software should functioning permanently and the same should either be replaced free of cost by the supplier in case of any malfunctioning.

8.VERSION OF SOFTWARE: The software should be of latest version. If any upgradation of the software takes place within warranty period, the same up gradation should be incorporated in the supplied software free of cost.

9.INSTALLATION,TESTING: Installation, testing and training for software should be undertaken by the supplier. It would be open to the competent authority to take serious action against the supplier, if timely action is not taken by the supplier. The supplier shall be responsible for successful installation of the software and for establishing connectivity with the existing LAN at CWPRS. Appropriate data for software testing will be provided by CWPRS.

10. TRAINING

- a) The software supplier will provide **free basic training** within thirty days from the receipt and successful installation of the software at CWPRS. All training should be provided at CWPRS, PUNE. The minimum period of basic training will be of five working days and will be related to the tools available in the software. The purpose of basic training will be to acquaint the users with the techniques of using different modules of the software by demonstration of solving sample problems supplied during tendering process with the help of installed software. Copy of the training presentations are required to be made available by the trainer to CWPRS officials participating in the basic training programme.
- b) The software supplier is further required to provide **free advance training** for use of software within sixty days after successful completion of basic training..All training should be provided in CWPRS, PUNE. The minimum period of advanced training will be of ten working days and will be related to actual problem solving by the *participants who will bring specific problems and solve during this training program*. Trainer will provide technical assistance in solving the problems brought by the individuals.
- c) Director, CWPRS is the final authority to decide the number of participants for the basic as well as for the advance training program.

11. WARRANTY: The supplier of software should mention the period of warranty of software. The reckoning of "*commencement of warranty period*" will begin from either *date of purchase of software* or from *date of activation or commissioning of software*, whichever is subsequent/later time. A minimum one year warranty should be given for free upgradation and installation/ rectification of problems likely to be faced by the users.

12. CUSTOMER SUPPORT should be free within the warranty period i.e. at least for one year. [Customer support means problems related to registration, download or activation of software, account, password, compliance error, service pack or any issue with product support].

13. TECHNICAL SUPPORT should be available free within the warranty period i.e. at least for one year. Technical support refers to range of services by which software supplier will provide assistance to users of software to solve specific problems. Technical support may be delivered over the telephone or online by e-mail or a web site or a tool where users can log a call/incident.

14. LIST OF USERS: The address of the users of the quoted software in India may be given. Any relevant document which would support the credibility, competence of the bidder may be submitted.

15. HARDWARE: The detailed hardware configuration of PC's currently available at CWPRS is provided in specification vide Annexure-I.

C) FINANCIAL

1.LICENSING OF SOFTWARE: Cost of perpetual license should be quoted for *network* version to enable access to at least three users from three independent PC terminals with free technical support from the company during warranty period.

2.DISCOUNT FOR SOFTWARE LICENSE: The software will be used at CWPRS for basic / applied research and consultancy work for projects in the broad area of structural and rock engineering. As CWPRS being a premier research organization under the Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India, in the field of applied Science & Technology, the bidder must consider providing discount during bidding to promote growth of science and technology and educational research towards development of our Nation.

3.RATES TO BE QUOTED: All the rates should be quoted in Indian Rupees. The cost to be indicated for each item should be the landed cost inclusive of all taxes, levies, freight, etc. However rate amount of Excise Duty, Custom Duty, Sales tax or any other chargeable levies will be shown separately to make for the landed cost. The benefit of reduction in cost due to decrease in taxes etc. before the delivery will be passed on to the user. Vague terms such as taxes as applicable, subject to US \$ variation etc. shall not be acceptable. The bidder should give certificate to the effect that the quoted prices are the lowest and have not been quoted to any government organization with same configuration of the software on lesser rates than those being offered to CWPRS, neither the supplier will do till the validity of the quotation or the execution of the supply order whichever is later.

4. DISCREPANCY IN RATES: The rates quoted shall be written in ink, both in figures and in words, if there is any discrepancy in the rates quoted in figures and words, the lower one rate quoted would be considered.

5. CUSTOM DUTY AND EXCISE DUTY EXEMPTION: Custom and Excise duty exemption certificates will be supplied by CWPRS, if applicable, under notification No

10/97 and 51/96. Octroi duty is not required as CWPRS is out of Pune Municipal Corporation limits. [The “Octroi” means a local tax levied on articles on their entry into a local body/ city.]

6. **DELIVERY OF SOFTWARE:** The indigenous software is to be delivered at CWPRS, Pune. In the event of software/ being supplied by road-transport under specific instructions to this effect, Octroi Exemption Certificate is not required as CWPRS is out of Pune Municipal Corporation limits.

7. **TERMS OF PAYMENT:-** 90% of payment excluding security deposit will be made after receipt, successful installation of the software and completion of basic training. The remaining 10% payment (excluding security deposit) will be made after successful completion of the advance training as detailed earlier. No payment will be made for software rejected at CWPRS on testing.

8. **SECURITY DEPOSIT: -** Successful contractor/suppliers will have to deposit security deposit at the rate of **10% of the total Supply Order in the form of FDR**, from Nationalized/Scheduled Bank drawn in favour of Executive Engineer (Civil), CWPRS, Pune-24 within 20 days of the receipt of acceptance of tender along with acknowledgement copy of supply order, failing which CWPRS will deduct from his bill.

If the firm fails or neglects to observe or perform any of the obligations under the contract, it shall be lawful for CWPRS to forfeit, either in whole or in part, the security deposit furnished by the firm. Save as aforesaid, if the firm duly performs and completes the contract in all respect and presents absolute **“NO DEMAND CERTIFICATE”** in the prescribed form and returns in good conditions, the specifications, drawing and samples or other property belonging to CWPRS, CWPRS shall refund the security deposit to the firm after deducting all costs and other expenses that CWPRS may have incurred and all dues and other moneys including all losses and damages which CWPRS is entitled to recover from the firm.

9. **INCIDENTAL CHARGES:** All other incidental charges (i.e. charges which are not budgeted or specified), if any may be indicated.

10. **DELIVERY PERIOD:** Delivery period shall be clearly indicated and then adhered to after receipt of supply order from CWPRS.

11. **DELAYS IN THE SUPPLIERS’S PERFORMANCE:-**

a) Delivery of the software and performance of the services shall be made by the Supplier in accordance with the time schedule specified by CWPRS in its supply order. Also In case the supply is not completed in the stipulated delivery period, as indicated in the Supply Order, CWPRS reserves the right either to short close/cancel this Supply order and/or recover liquidated damage charges. The cancellation/short closing of the order shall be at the risk and responsibility of the supplier and CWPRS reserves the right to purchase balance unsupplied item at the risk and cost of the defaulting vendors.

b) Delay by the Supplier in the performance of its delivery obligations shall render the Supplier liable to any or all of the following sanctions: forfeiture of its performance security as per CPWD Works Manual 2007 and imposition of liquidated damages and/or termination of the contract for default as defined under clause 15 below.

c) If at any time during the performance of the contract, the supplier encounters condition impeding timely delivery of the software and performance of service, the Supplier shall promptly notify to CWPRS in writing the fact of the delay, its likely duration and its cause(s). As soon as practicable after receipt of the supplier's notice, CWPRS shall evaluate the situation and may at its discretion extend the period for performance of the contract (by not more than 20 weeks)

12. FORCE MAJEURE:- If, any time, during continuance of this contract, the performance in whole or in part by either party of any obligation under this contract is prevented or delayed by reasons of any war or hostility, acts of the public enemy, civil commotion, sabotage, fires, floods, explosions, epidemics, quarantine restrictions, strikes, lockouts, server failures, software glitches (failure of computing device due to undetected malfunction, bug, virus, operator error, hacking, random program malfunction etc.), disputes with copyright owners, licensor labor disputes or act of God (hereinafter referred to as events) provided notice of happenings of any such eventually is given by either party to the other within 21 days from the date of occurrence thereof, neither party shall by reason of such event be entitled to terminate this contract nor shall either party have any claim for damages against other in respect of such non-performance or delay in performance, and deliveries under the contract shall be resumed as soon as practicable after such an event come to an end or cease to exist, and the decision of CWPRS as to whether the deliveries have been so resumed or not shall be final and conclusive. Further that if the performance in whole or part of any obligation under this contract is prevented or delayed by reasons of any such event for period exceeding 60 days, either party may, at its option, terminate the contract.

Provided, also that if the contract is terminated under this clause, CWPRS shall be at liberty to take over from the Supplier at a price to be fixed by CWPRS, which shall be final, all unused, undamaged and acceptable software/materials, bought out components and stores in course of manufacture which may be in possession of the supplier at the time of such termination or such portion thereof as CWPRS may deem fit, except such software/materials, bought out components and stores as the supplier may with the concurrence of CWPRS elect to retain.

13. LIQUIDATED DAMAGES: - The supplier shall carry out supply and installation of software/equipment, associated peripherals according to the delivery and installation schedule stipulated in the Supply order. The time frame and the date of delivery and installation mentioned in the delivery schedule shall be deemed to the essence of the Supply order and delivery must be completed not later than the date specified therein. In the event of failure of the supplier to deliver and install the said equipment supply of software /equipment, associated peripherals within the stipulated time, the Government of India shall at their option be entitled to recover from the Supplier as agreed liquidated damages, and not by way of penalty, a sum of **1% (One percent)** of the price of agreed total cost of supply of software /equipment, associated peripherals as aforesaid for every

week or part thereof, during which the delivery and installation of software /equipment, associated peripherals may be in arrears. The suppliers liability for delay shall not exceed **5% (Five per cent)** of the ordered price. Such damages shall be in full satisfaction of the Suppliers liability for the delay. If the delay is longer than **10 weeks** the Govt of India shall, except as provided hereinafter, be entitled to cancel the order in full or in part at their sole discretion without any financial repercussions on Govt of India.

14. RISK AND EXPENSE CLAUSE:- In case any item is not supplied or rejected and the supplier is unable to provide replacement the total supply order will be deemed as rejected. In such an event CWPRS will be at liberty to procure the same from another source and in case the cost of the item is higher than the present ordered cost, the extra cost shall be recovered from the contractor through deductions from bills pending or by means of deposit of the same by the suppliers in the Govt treasury.

15. CERTIFICATION AND SIGNING OF BID DOCUMENTS: All certificates and brochure submitted with the bid must bear the stamp of the company and these should be self certified by the authorized signatory on each page. CWPRS shall not take cognizance of documents that do not fulfill these conditions.

4.0 MANNER OF SUBMISSION OF BIDS

Bidders may please note that they have to submit their bids in two separate envelopes marked as **Envelope "A" for Technical Bid and Envelope "B" for Financial Bid**. The technical bid should not contain any financial information. Envelope should be sealed with red gum lac (extraction from Laccifer lacca) etc.

Documents to be enclosed in Envelopes 'A' & 'B' are given below:

Documents to be enclosed along with Bids:-

TECHNICAL BID In Envelope 'A'(Note: Technical Specifications are given in annexure-I.)

1. Bidder covering letter

2. Tender form fee of Rs 500/- drawn in the form of DD drawn in favour of Executive Engineer (Civil), CWPRS, Pune. **Bids received without exact Tender Form fee will be summarily rejected.**

3. EARNEST MONEY DEPOSIT: Rs 30,000/- (Rupees thirty thousand only) in Indian Rupees or equivalent foreign currency in case of foreign supply in the form of Demand Draft/Fixed Deposit Receipt on any Scheduled Bank drawn in favour of Executive Engineer (C), CWPRS, Khadakwasla, Pune - 411024 should be enclosed. No interest will be paid on the amount of EMD. Exemption from payment of EMD will be granted wherever applicable on submission of necessary valid documents along with the tender.

4. Technical bid with printed literature on all the items quoted giving specifications, details & accessories clear mention should be made of deviation in specification between the printed literature & quoted equipment, without this, bid is liable to be rejected. The bidder shall ensure that all the mentioned specifications are reflected in the technical literature / pamphlets accompanying the bid. If any specifications / parameters are not reflected in the technical literature, copies of relevant pages of technical manual should be enclosed. Without complete information, bid is likely to be rejected with no further communication.

5. Technical compliance statement with the signature of the bidder should be attached. Without this the bid is liable to be rejected.

6. A list of customers to whom similar supply in India has been made including the cost & the present status.

7. Dealership/Agency certificate from the owner/ company developing, marketing and providing support / for supply through dealers/Agents. A letter of undertaking from each of the company developing, marketing and providing support for equipment that in case the bidder authorized by their defaults in execution of this tender the OEM (C) will take all steps for successful execution of the tender without any additional cost to the Govt.

8. The detail of tie-up in terms of supply, support, servicing & warranty etc. with company developing, marketing and providing support. Any other information that will establish credibility, reliability/capability of the suppliers to undertake the proposed supply.

9. Bid document from page 2 onwards in original duly signed by the bidder should be used for bidding

10. Copy of Agency agreement entered into with principals indicating the nature of after sales services of Indian Agents, precise relationship & mutual interest in the business.

FINANCIAL BID In Envelope 'B'

The cost quoted should be inclusive of followings

[(A)+(B)+(C)+(D)+(E)+(F)+(G)+(H)+(I)+(J)]:

(A) Cost of perpetual license fees.

(B) HPC (High-Performance Computing) ability computing to enable parallel processing with multi-core processors, if given by software Company.

(C) Customer Support.

(D) Technical Support.

(E) Free basic training (during warranty period).

(F) Advanced Training (during warranty period).

(G) Installation of Software.

(H) Hard copies of Manuals.

(I) Soft Copy of Manuals on CD in 'pdf' format.

There should be a separate marking on each of the two envelopes viz. "A-Technical Bid" and "B-Financial Bid". The two envelopes duly sealed should be put in one large envelope and the same should be submitted duly written at the top " Bid for supply of Sub - Bottom Profiling System (One Number) ”.

The bid should be submitted to:

Executive Engineer (Civil) (Room No. 208)

Central Water and Power Research Station

P.O. Khadakwasla Research Station

Pune - 411024, India Fax : 91- 020 -24381004

Phones : 91 - 020- 24103220/

91 - 020- 24103267

5.0 MODE OF OPENING OF BIDS AND EVALUATION:

Bids received up to the due date and time will be opened as far as possible on the date and time specified by the Executive Engineer (Civil), Central Water and Power Research Station, Khadakwasla, Pune – 411 024 and in the presence of the interested bidders or their representatives.

a) In the event of the due date being declared as closed holiday or any other reason bids would be opened on next working day.

b) Initially, only **Envelope “A”** will be opened and technical evaluation will be done on the basis of information given in that envelope only.

2. TECHNICAL EVALUATION: The software should comply with the detailed specifications. Technical evaluation of the bid will be done strictly on the basis of compliance of quoted software as enclosed with this bid document. The bidder should write 'yes', if complied or 'no', if not with each and every item of detailed specifications. If not complied, the deviations must be clearly brought out by giving the actual details.

The technical bid will be evaluated based on software capability to solve “types of problems” mentioned in the “*Specifications for License to use General Purpose Finite Element Software* Including The 2D & 3D FEM software packages including pre-processor for grid-generation and post processing packages should be suitable for following types of problems with the data provided by CWPRS.

- I. 2D/3D linear/non linear stress analysis with restart and intermediate model changing facility.
- II. 2D/3D stress analysis of underground openings by simulating realistic excavation interaction effect during construction of underground openings.
- III. 2D/3D linear and nonlinear stress analysis for considering the effect of other type of structures.
- IV. Dynamic analysis considering stress status of ground.
- V. 2D/3D Stress-Slope Analysis
- VI. 2D/3D Tunnel intersection problems.
- VII. 2D/3D rock bolt/pile raft foundation problems

The types of problem chosen for demonstration and the successfulness of the application will be decided by CWPRS. In case group of software are able to solve equal number of problems, technical bid would be evaluated based on the "Weightage factor and rating in a scale of 10" given with the type of problems in the "*Specifications for License to use General Purpose Finite Element Software Including The 2D & 3D FEM software packages including pre-processor for grid-generation and post processing packages* The "Weightage factor of problems" is related to significance of problems and projects carried out by CWPRS.

- c) After ascertaining that the supplier has fulfilled all the technical specifications for the software, a short list will be prepared.
- d) The financial bid in **Envelope "B"** of the short-listed suppliers will be opened by Executive Engineer (Civil) in presence of the interested bidders or their representatives on the date which will be duly informed to the shortlisted bidders.
- e) The evaluation of financial bid will be based on the consolidated offer consisting of installation, testing, training, software support, and any other costs quoted for successful implementation of the software.
- f) To facilitate evaluation and comparison, the CWPRS will convert all bid prices expressed in the amounts in various currency, into Indian Rupees at the selling exchange rate established by Nationalized Bank in India on the day of opening of the financial bid.
- g) CWPRS will award the contract to the successful Bidder whose financial bid has been determined as the lowest.
- h) The financial bids (Envelope-B), which were not considered, would be returned along with EMD to the respective bidders.
- i) Executive Engineer (Civil), CWPRS, Pune will notify the successful bidder in writing, by registered letter that his bid has been accepted.

j) In case of any ambiguity in the interpretation of any of the clauses in Tender Document, Executive Engineer (Civil), CWPRS, Pune's interpretation of the clauses shall be final and binding on all parties.

k) In case of any dispute, the judicial jurisdiction will be Pune, India only.

The right to reject any or all bids is reserved with the competent authority without assigning any reason.

All decisions taken by CWPRS, Pune, regarding the processing of this tender and award of supply order shall be final and binding on all the parties concerned.

(EXECUTIVE ENGINEER (CIVIL))
CW&PRS, PUNE – 24 (INDIA)

BILL OF QUANTITY

Sl. No.	Description of Stores	Quantity	Rate (in figures & words)
01	<p>Procurement of 2D & 3D FEM software with permanent license for the rights to use for Geotechnical Engineering (Rock Mechanics) Division</p> <p>(WITH ONE YEAR ANNUAL MAINTENANCE IN ADDITION TO FREE WARRANTY PERIOD)</p> <p>[Note: The software should have facility for parallel processing capabilities.]</p>	One Licensed copy of network version of the software to enable access to Three users from Three different PC terminals	

Supplier may please quote the rate on this sheet and return it in original.

EXECUTIVE ENGINEER (CIVIL)

SPECIFICATIONS

Pricing, Licensing and Support

- The cost quoted should be inclusive of everything (viz. cost of perpetual license fees + Customer Support + Technical Support + Basic Training (during warranty period) + Advanced Training (during warranty period) + Installation of Software + Hard copies of Manuals + Soft Copies of Manuals on CD in *pdf* format + cost of one year AMC [annual maintenance charges] + cost of any third party software or auxiliary software essential as a tool for the basic software.)
- The cost of license fees should be quoted with the version of software.
- The serial or key number of license should be provided.

The Supplier should also attach Authorization letter.

1.0 GENERAL PURPOSE FEM SOFTWARE :

2D & 3D FEM software is required for underground opening analysis e.g. for underground excavations, tunnels and support design, surface excavation, Construction Stage Analysis, Stress-Slope Analysis, Dynamic Analysis, Slope Stability Analysis and embankments analysis etc. FEM software should base on state-of-the-art, finite element and graphical technology. Geometrical modeling and meshing features are complemented by powerful analysis capabilities and a fast multi-frontal solver.

The FEM software should have pre-processor features for creation of both two and three dimensional geometries, automatic creation of mesh and post-processing features to handle very large datasets, visualization of results such as plotting graphical output, animation of stages, quick identification of high stressed zones/damages for understanding, examination and comparison of results and making technical presentations. For static/dynamic analysis problems, identification of damaged zone and plotting of peak summary results for principal stresses, displacements and direct stresses should be possible. It should have compulsorily single integrated graphical user interface for pre-processor, solver and post processor in a 'single window'. A common pre-processor and post-processor for FEM software is preferred.

Note: License provided by the vendor should be perpetual and will allow CWPRS to use this software for use in the area of applied and basic research for Industry/ Consultancy projects of Central Government, State Government's, Central/State/Public sector enterprises and Private sectors on 'no-loss-no-profit' basis.

1.1 Types of sample Problems

The 2D & 3D FEM software packages including pre-processor for grid-generation and post processing packages should be suitable for following types of problems.

- i. 2D/3D linear/non linear stress analysis with restart and intermediate model changing facility.
- ii. 2D/3D stress analysis of underground openings by simulating realistic excavation interaction effect during construction of underground openings.
- iii. 2D/3D linear and nonlinear stress analysis for considering the effect of other type of structures.
- iv. Dynamic analysis considering stress status of ground.
- v. 2D/3D Stress-Slope Analysis
- vi. 2D/3D Tunnel intersection problems.
- vii 2D/3D rock bolt/pile raft foundation problems

1.2 Other conditions

- The software shall be menu driven and user friendly.
- The software should possess in-built geometry creation and meshing facility using types of elements such as 2D/3D truss, beam, plane, solid, interface, etc. for carrying out linear and non linear analysis.
- The software to be quoted by the vendor should be of latest version and should be automatically upgraded free of cost for any newer version released by the vendor within a period of one year from the date of installation.
- The license of the software shall be perpetual.
- Two hard copy versions of user reference manuals must be supplied free of cost along with the software.
- Two copies of manual comprising of solved example problems should also include sample problems mentioned vide SI.No.1.1
- The solver should have “full process automation” capabilities through JAVA scripting or any other macros.
- network version of the software to enable access to Three users from Three different PC terminals

1.21 Pre-processor and Post-processor

- The software should have a pre-processor which can create complex two/three dimensional geometries and create automatic user defined mesh considering single/mixed types of elements such as beam, truss, plane, solid, interface, pre-stressed elements, steel reinforcement etc. The mesh such generated should automatically conform to the geometry of the structure for next level of operation without termination of process.
- The pre-processor should have fully parallel Polyhedral, tetrahedral meshing technique which generates large number of meshes split over multiple processors resulting in significant time reduction.
- The pre-processor should have extensive library of meshing elements for various kinds of analyses; enable generation of robust meshes in one, two, and three-dimensional geometries for analyzing simple to complex geometries; quality checks to ascertain the status of the generated mesh; auto-mesh features should be supported for 2D and 3D

models; structured, swept, and free meshing techniques for quick & efficient discretization of complex domains; editing tools for handling native and imported meshes as well re-meshing to replace distorted mesh elements and interpolation of field variables (from the old mesh to the new mesh); macros for repetitive tasks; boundary layer capabilities; full mesh size control on surfaces, volumes and arbitrary zones etc.

- The software should have post-processor for visualizing the results viz. graph plotting, contours of various parameters, animation etc. Post-processor should have capacity to show results in 2D/3D graph depending on the requirement. The post-processor should directly read commonly used file formats. It should have ability to rotate and animate even the largest models with real-time feel.
- The software should have facility for plotting summary of all types of analysis results such as peak principal stresses, displacements and direct stresses or coupling with other programs for pre/post processing which is required for solution data export and third party graphics.
- It should have built-in library or facility to assign analytical and/or tabular user-defined functions for boundary conditions, fluid properties and other field variables.
- The facility for displaying stage wise animation and saving of those animations in .gif or .mov format

1.22 Solver

The solver should be capable of carrying out all types of General, Linear, and Nonlinear stress Analysis problems. The solver should handle non linear behaviour of material and identify damages in the underground structures. The solver should be time efficient and carry out analysis in parallel mode.

General, Linear, and Nonlinear Analyses

Static stress/displacement analysis, Dynamic stress/ displacement analysis, slope analysis.

Linear/nonlinear static stress/displacement analysis, Eigen value Dynamic stress/displacement analysis, Natural frequency extraction, Complex eigen value extraction, Transient response via modal superposition, Response spectrum analysis.

Analysis Controls

General solution controls, Solver controls, Adaptive mesh domain.

1.3 Hardware Requirements

The software to be compatible with the machine with following configurations

OEM	HP
Processor/CPU	Intel Core 2 Duo Processor, 2.2 GHz, 4 MB L3 cache or higher
Memory	2GB DDR2/DDR3
HDD	500 GB SATA HDD at 5400 rpm
Networking features	Integrated 10/100/1000
Operating System	Microsoft Windows 7 Professional 32/64 bit
OS Certifications :	Windows 7 or 8
Power Supply	230V +/- 10% single phase, 50 Hz AC

- The licensing support should include free up-gradations during warranty period and one year AMC. The reckoning of “*commencement of warranty period*” will begin from either date of purchase of software or from date of activation/ commissioning of software, whichever is subsequent/ later time. The service after sale should be free during warranty period which includes installation on a new personal computer.
- Supply of all original diskettes or CDs, all original manuals and reference documentation should be supplied. All licensing documentations, license agreement, Invoices, purchase receipts and any other proofs of purchase for software should be supplied. Each CD provided of the software will have a company serial number of the software copy given on the company letterhead.
- The licensing cost should be quoted for perpetual licence (with free up gradations of software during warranty period and AMC period) along with authentication letter from their principal.
- The supplier of software should mention the period of warranty of software.
- Technical support should be available free within warranty period. It should not be fee-based service within the warranty period and during AMC period. [Technical support refers to range of services by which software supplier will provide assistance to users of software. Technical support may be delivered in person, or over the telephone or online by e-mail or a web site or a tool where users can log a call/incident].
- Customer support should be free within warranty period. [Customer support means problems related to registration, download or activation of software, account, password, compliance error, service pack or any issue with product support].
- The software supplier will provide free basic training. All training should be provided in CWPRS, PUNE. The minimum period of basic training will be of three working days and will be related to the tools available in the software. Soft Copy of the training presentations will be made available by the trainer to CWPRS.
- The software supplier may provide advance training for use of software after purchase. All training should be provided in CWPRS, PUNE. The minimum period of advanced

training will be of three working days and will be related to actual problem solving by the *participants who will bring their own problems and solve during this training program*. Trainer will provide technical backup and help in solving the problems brought by the individuals. The advanced training program will be conducted after three months (or alternatively specified by CWPRS) from date of installation of the software in CWPRS. Vender should take this in to consideration while quoting the cost.

- Director, CWPRS will have full authority to decide the number of participants for the basic as well as for the advance training program.

1.4. Quantity Required

The total number of perpetual license for software is one.

1.5 Evaluation of bid

The bid will be evaluated in two stages i.e. Technical Bid and Financial Bid. The technical bid will be evaluated based on software capability to solve "*types of problems*" mentioned in the preceding paragraph. The vendor has to compulsorily demonstrate the successful application of the software supplied to CWPRS in at least "*five types of problems*" mentioned in this specification. The types of problems chosen for solving, demonstration and the successful application towards solving the problems provided will be decided by CWPRS. In case group of FEM software are used to solve equal number of problems, technical bid would be evaluated based on the application of single software package consisting of different packages club together to handle all types of problems. Vendors qualified after successful completion of Technical Bid will only be considered suitable for Financial Bid.

1.6 Terms and conditions: All other terms and conditions applicable as per Bid document and Government of India general procurement rules

1.7 Payment: As per bid document

The vendor has to compulsorily demonstrate the successful application of the software proposed to be supplied to CWPRS by solving the above mentioned *problems*. In case,group of FEM softwares are used to solve equal number of problems, technical bid would be evaluated based on the application of single software package consisting of different packages club together to handle all types of problems. Vendors who can successfully demonstrate the solving of the above mentioned sample problems to the satisfaction of CWPRS Officials will be only treated for successful completion of Technical bid.Vendors qualified after successful completion of Technical Bid will only be considered suitable for Financial Bid.

Brief Background of CWPRS

The Central Water and Power Research Station (CWPRS), Pune, is the premier hydraulic research institute in India working under the Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India, CWPRS deals with various types of rock structure problems and modeling of flow in hydraulic structures of river valley projects (e.g. spillways and weirs), reservoir appurtenances structures, outlet works (e.g. intake structure, conveyance such as open-channel or closed-conduit waterways), control structure (e.g. gates, valves, sluices etc.), irrigation structures (e.g. weirs, culverts, drop structures, aqueducts, siphons and inverted siphons, cross regulators and drainage structures, transitions etc.), river engineering, sediment flow in river/ reservoir, sediment deposition in de-silting basins/ chambers constructed behind water intakes of a hydroelectric power, erosion, deposition and scour around bridges, piers, dams, irrigation structures and scour downstream of spillway energy dissipaters etc.

CWPRS campus has a Local Area Network (LAN) on gigabit backbone Fibre-optics/UTP & Layer-3 Switches.

COMPLIANCE STATEMENT OF TECHNICAL SPECIFICATIONS

Note: If compliance is there, write 'Yes'. If compliance is not there, write 'No'

Mention the deviation if compliance is 'No'

Specifications General Requirements		Compliance Yes/no	Remarks
1.	Licensing and Support	Yes/no	
2.	2D/3D linear stress analysis	Yes/no	
3.	2D/3D Nonlinear stress analysis	Yes/no	
4.	2D/3D stress analysis of underground openings	Yes/no	
5.	Slope stability analysis	Yes/no	
6.	Analysis of tunnel intersection	Yes/no	
7.	Analysis of rock bolts	Yes/no	
8.	Analysis of strengthening of underground openings	Yes/no	
9.	Operation Manual	Yes/no	
10.	Pre-processor and Post-processor	Yes/no	
11.	Up gradation up to period of one year with latest version	Yes/no	
12.	Stage wise animation and storing	Yes/no	
13.	Plotting of summary of all type of analysis	Yes/no	
14.	Support Services	Yes/no	
15.	Parallel processing capacity on three PC terminals	Yes/no	
16.	Dynamic analysis	Yes/no	