

SECTION – I
INVITATION FOR BIDS (IFB)

DETAILED INVITATION FOR BID

**NTPC Limited
(A GOVT. OF INDIA ENTERPRISE)**

CORPORATE CONTRACTS, NOIDA

**INVITATION FOR BIDS (IFB)
FOR
CIVIL WORKS OF INSTALLATION OF 25 MWh SURFACE HYDRO-KINETIC PUMP
STORAGE PLANT AT NTPC RAMAGUNDAM**

(Domestic Competitive Bidding)

GEPNIC Tender Ref. No.:xxxxx

Date: 30.03.2026

BIDDING DOCUMENT No.: NTPC-RE-CS-PSPCIVIL- RAMAGUNDAM

1.0 NTPC invites **online bids** at Government e-procurement portal of NIC (GePNIC) at website- <https://eprocurentpc.nic.in/> on **Single Stage Two Envelope bidding basis (i.e. Envelope-I: Techno-Commercial Bid & Envelope-II: Price Bid)** from eligible bidders for aforesaid package, as per the scope of work briefly mentioned hereinafter.

2.0 **Salient Technical Features**

A. Name of the Package:

Civil Works for Installation of Surface Hydro Kinetic Pump Storage system at NTPC Ramagundam

NTPC has to setup a 5MW/25MWh Pumped Hydro Energy storage system at its Ramagundam Super Thermal Power Plant in the state of Telangana, the major works are the construction of Reservoir, Loop Canal, Spillway.

B. Location & Approach

Location of Site- NTPC Ramagundam

Nearest Town- Ramagundam-8 Kms

Nearest Highway- SH1(Hyderabad - Ramagundam Road) -1 Kms NH63 - 18 Kms

Nearest Railway Station- Ramagundam 4 Kms

Nearest Commercial Airport- Hyderabad-265 Kms

C. Availability

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Land will be provided by NTPC Ramagundam as already identified for the project.

D. Technology

Pumped Hydro Energy Storage Systems using surface hydro kinetic turbine that can store electric energy as potential energy of water in higher reservoir. Energy will be produced whenever required using canals to lower reservoir and Hydro kinetic turbine. Energy is injected into the grid using suitable energy transmission system. Pumping system is used to pump the water from lower reservoir to upper reservoir.

E. Other

The following clearances shall be arranged by bidder. However, necessary documents/ applications shall be in the name of NTPC.

SL	ITEM	DETAILS
1	Water Requirement during construction	To be arranged by bidder
2	Power Requirement during construction	To be arranged by bidder
3	Tree Cutting Permission	To be facilitated by bidder

F. Mandatory permission/ licenses/ statutory clearances from Competent Authorities for undertaking blasting related works, disposal of cutting material, etc. shall be carried out by the Bidder.

G. All material including cement, reinforcement steel and structural steel required for completion of the work covered under this package are in the scope of the bidder.

H. Topographical survey & Geotechnical investigation of land are in scope of agency.

I. Scope of Work

The scope of work described below is general in nature. The Bidder shall provide all structures / facilities required for the effective functioning of the SURFACE HYDROKINETIC PUMP STORAGE PLANT, whether or not these are specifically mentioned.

1. Preparation of work areas / clearing site / jungle clearance.

2. Excavation in Cutting for Dam & Reservoir Bed Preparation

Excavation shall be carried out to all required depths within the dam boundary for reservoir bed preparation and for foundation, including stripping of topsoil, removal of unsuitable strata, and cutting in all types of soil/rock as per approved drawings and levels. The excavation shall conform to designed slopes, grades, and profiles. The useful excavated material shall be utilised, and reused for embankment construction, canal bed preparation, canal medians, and in other earthworks. Disposal of surplus or unsuitable material shall be done at designated

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locations. Dewatering, slope stabilization, and safety measures shall be ensured during excavation.

3. Construction of Rock Toe in Earthen Embankment

The rock toe shall be constructed at the downstream side of the earthen embankment to provide stability and facilitate drainage. It shall be as per specification mentioned.

4. Earthwork in Embankment (Hearting and Casing)

Earthwork for dam and canal embankments shall be carried out using approved borrow material. The embankment shall be constructed in layers of specified thickness of maximum 150 mm, moisture-conditioned to optimum moisture content, and compacted to achieve the required dry density (as per Proctor test).

5. Dry Stone Pitching

Dry stone pitching shall be provided on slopes of embankment for protection against erosion. It shall consist of hand-placed stones of specified size and thickness, laid over a prepared surface.

6. M-25 Grade Reinforced Cement Concrete (RCC)

Reinforced Cement Concrete of grade M-25 shall be used in substructure and superstructure components of the dam and associated hydraulic structures such as spillways, head regulators, retaining walls, and energy dissipation structures. The work shall include formwork, reinforcement placement, batching, mixing, placing, compaction (vibration), curing, and quality control as per relevant IS codes. Proper cover to reinforcement and joint treatment shall be ensured.

7. Laying of HDPE Lining

High-Density Polyethylene (HDPE) geomembrane lining shall be installed over the reservoir bed and dam slopes to minimize seepage losses. The lining shall be of specified thickness of 1 mm, UV-stabilized, and resistant to environmental degradation.

8. Non-Woven Geotextile (250 GSM)

A non-woven geotextile of 250 GSM shall be provided as a cushioning and separation layer beneath the HDPE lining. It shall protect the geomembrane from puncture due to subgrade irregularities and distribute stresses. The geotextile shall be laid with proper overlaps, free from wrinkles, and anchored securely.

9. Laying of 600 mm Dia RCC Hume Pipes (NP-4)

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RCC Hume pipes of 600 mm diameter, NP-4 class (high-strength), shall be laid for reservoir inlet works. The pipes shall be placed on a properly prepared bedding, aligned accurately, and jointed using cement mortar as specified. Proper backfilling, compaction, and testing for leakage shall be carried out.

10. Canal Lining and Concrete Works

Canal lining shall be carried out using fly ash bricks to reduce seepage and improve hydraulic efficiency. Brick lining shall be laid in cement mortar with proper jointing and finishing. At critical locations such as spillway outlets and escape gates, concrete lining of M10 grade shall be provided to withstand higher velocities and prevent scouring.

11. Plum Concrete Block (M15) for Transmission Tower Base

Plum concrete using M15 grade concrete with embedded large-size stones (plums) shall be used for constructing foundation blocks for transmission tower bases. The plums shall be properly embedded in concrete to ensure structural integrity and load transfer.

12. Diversion Road to Jetty

A diversion road shall be constructed to provide access to the jetty area during and after construction. The road shall include subgrade preparation, sub-base/base layers, drainage provisions, and suitable surfacing (WBM/bituminous as specified). Alignment and gradients shall be as per drawing.

13. Random Rubble (R.R.) Masonry Protection Wall

A protection wall using random rubble masonry in cement mortar shall be constructed at the canal inlet point to prevent erosion and safeguard the structure. Weep holes and proper foundation shall be provided to relieve hydrostatic pressure.

14. Approach Ramp to Canal Top

An approach ramp shall be constructed to facilitate access to the canal top for inspection and maintenance. It shall be designed with suitable gradient, width, and compaction to accommodate vehicular movement as per drawing.

15. Construction of WBM Road on Canal Top

A Water Bound Macadam (WBM) road shall be constructed along the canal top. It shall consist of properly graded aggregates laid in layers, compacted with rolling, and bound with screenings and water. Adequate camber and drainage shall be provided.

16. Any other item(s)/ work(s) that would be required as per the system requirements.

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- 3.0** 17. All protection measures to prevent any damage to the adjoining structures / facilities.
- 3.0** NTPC intends to finance the subject package through Domestic / Own Resources.
- 4.0** Detailed specification, scope of work and terms & conditions are given in the bidding documents, which are available at the GePNIC (e-tender) portal at <https://eprocurementpc.nic.in/>. The Bidding Schedule* for the Tender is as under:

Issuance of IFB	13.04.2026
Documents Download Dates & Timings	13.04.2026
Last Date for receipt of Queries from prospective Bidders (if any) *	20.04.2026
Bid Submission Start Date and Time (both Techno-Commercial and Price)	13.04.2026, 11:00 hrs. (IST)
Last date for receipt of Bid (both Techno-Commercial and Price)	27.04.2026 at 03:00 hrs. (IST)
Date & Time of opening of Techno-Commercial Bid	28.04.2026 at 03:00 Hrs (IST)
Date & Time of Opening of Price Bid	Shall be intimated separately after opening of Techno-Commercial proposal
Cost of Bidding Documents	Nil

***Bidders are advised to visit the GePNIC (e-tender) portal of NTPC for updated bidding schedule of the Tender.**

**It is to be noted that "No Queries from Bidders, whatsoever, shall be entertained by the Employer beyond the last date of receipt of Queries/ Pre-Bid Conference (if applicable) as specified at GePNIC portal of NTPC".

All bids must be accompanied by Bid Security for an amount of **INR 20,00,000/-** (Indian Rupees Twenty Lakhs only) in the form as stipulated in the Bidding Documents.

Any bid not accompanied by an acceptable Bid Security shall be rejected by Employer as being non-responsive and shall not be opened.

5.0 QUALIFYING REQUIREMENTS FOR BIDDERS

In addition to the satisfactory fulfillment of the requirements stipulated under Section ITB (Instructions to Bidders), the following shall also apply:

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1.1.0 Bidder should have executed the following works within the preceding seven (7) years as on the date of Techno-Commercial bid opening:

1.1.1 At least one earthen dam work or ash dyke work or reservoir embankment work of maximum height not less than 4.0 m, in one contract.

And

1.1.2 A cumulative progress of at least 5.0 Lacs Cu.M of earthwork in earthen dam work or ash dyke work or reservoir embankment or canal embankment work in any one (1) year period, in one (1) or maximum two (2) contracts.

Notes: The following notes (a to j) explain in detail the intention of various terms in qualifying requirements:

a) Earth dams, ash dykes, and reservoir embankments, which are designed as water retaining structures, shall be qualified for this work. However, canal embankments, guide bunds along water courses shall be considered for qualification under clause 1.1.2 only. All other types of earth work such as road embankments, railway embankments, site leveling works etc. shall not be qualified.

b) Sand / substitute filter media as filter either in chimney or in blanket or both; used in embankment shall be considered in earthwork quantity calculations. Rock toe shall not be considered.

c) For embankments/reservoir/dyke, the height and quantities shall be considered above formation level up to dyke top for qualifying requirements purpose. However, in case of ash dyke raising works, for both inward/upstream & outward/centre line methods, the height of dyke shall be considered from the stripped level of ash inside the lagoon for qualifying requirement purpose.

Formation level means bottom of stripped level for the dyke formation. The earth work in cut off trench (COT) shall be included for quantity estimation for qualifying requirement under clause 1.1.2.

However, the depth of COT shall not be considered for the height calculation for qualifying requirement under clause 1.1.1.

d) Wherever the ash dykes and other embankments are constructed in different contracts, the height applicable to individual contract only and not the cumulative effect shall be considered for the purpose of determining compliance

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of clause 1.1.1. For example, where the contract is for raising an embankment, only the raising portion shall be considered and not the earlier starter dyke.

e) In clause 1.1.0 above, the word “executed” means the Bidder should have achieved the criteria specified in the qualifying requirements within the preceding seven (7) year period even if the contract has been started earlier and /or is not completed / closed.

f) In clause 1.1.1 above, Bidder should have constructed full 4.0 m height of embankment work specified in the qualifying requirements, within the preceding seven (7) year’s period, even if the contract has been started earlier and/or is not completed/closed.

g) The “one (1) year period” means any continuous 12 months period for both one or maximum two contracts.

h) In case of works stipulated in 1.1.2 above the word “earthwork” shall mean earth /ash. The quantity of earth work in filling only will be considered for qualification.

i) Reference works executed by the Bidder, as a member of Joint Venture / Consortium/ Associate can also be considered provided:

The allocation of scope of work between the partners of the Joint Venture / Consortium/ Associate is clearly defined in the executed Joint Venture agreement/ Consortium Agreement/ Deed of Joint Undertaking and Bidder’s scope of work and break-up of quantities executed by them as individual contribution in the Joint Venture / Consortium/ Associate, duly authenticated by the Project Authority, meet the relevant provisions of qualifying requirement.

In case the reference work has been executed by the Bidder in an integrated Joint Venture wherein allocation of scope of work and break-up of quantities between the partners is not clearly specified in the integrated Joint Venture Agreement, then for Clause 1.1.2 above, the credit of executed quantities can be claimed by the bidder in the ratio of bidder’s share in the integrated Joint Venture Agreement, provided the bidder establishes that it regularly undertakes works as at Clause 1.1.2 above. The executed works/ quantities by integrated Joint Venture shall be duly authenticated by the Project Authority. However, the bidder will not be eligible to claim the credit of executed work by integrated Joint Venture for Clause 1.1.1 above, unless the bidder has individually executed the work meeting the requirement of Clause 1.1.1 above and which has been duly authenticated by the Project Authority.

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j) Reference work executed by a Bidder as a sub-contractor may also be considered provided the certificate issued by main contractor is duly certified by Project Authority specifying the scope of work executed by the sub-contractor in support of qualifying requirements.

2.0.0 Financial criteria:

(a) The average annual turnover of the Bidder should not be less than **Rs. 18 Crore (Indian Rupees Eighteen Crore only)** during the preceding three (3) completed financial years as on date of Techno-Commercial bid opening.

In case a Bidder does not satisfy the annual turnover criteria, stipulated above on its own, its Holding Company would be required to meet the stipulated turnover requirements as above, provided that the Net Worth of such Holding Company as on the last day of the preceding financial year is at least equal to or more than the paid-up share capital of the Holding Company. In such an event, the Bidder would be required to furnish along with its Techno-Commercial bid, a Letter of Undertaking from the Holding Company, supported by the Holding Company's Board Resolution, as per the format enclosed in the bid documents, pledging unconditional and irrevocable financial support for the execution of the Contract by the Bidder in case of award.

(b) Net worth of the bidder as on the last day of the preceding financial year (reckoned on the date of techno-commercial bid opening) should not be less than 100% of the bidder's paid up share capital. In case the Bidder does not satisfy the Net worth criteria on its own, it can meet the requirement of Net worth based on the strength of its Subsidiary(ies) and/or Holding Company and/or Subsidiary(ies) of its Holding Companies wherever applicable. The net worth of the Bidder and its Subsidiary(ies) and or Holding Company and/or Subsidiary(ies) of the Holding Company, in combined manner should not be less than 100% of their total paid up share capital. However individually, their Net worth should not be less than 75% of their respective paid-up share capitals.

Net worth in combined manner shall be calculated as follows: Net worth (combined) = $(X1+X2+X3) / (Y1+Y2+Y3) \times 100$
Where X1, X2, X3 are individual Net worth which should not be less than 75% of the respective paid-up share capitals and Y1, Y2, Y3 are individual paid up share capitals.

(c) In case the Bidder is not able to furnish its audited financial statements on stand-alone entity basis, the unaudited unconsolidated financial statements of the Bidder can be considered acceptable provided the Bidder further furnishes the following documents for substantiation of its qualification.

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(i) Copies of the unaudited unconsolidated financial statements of the Bidder along with copies of the audited consolidated financial statements of its Holding Company.

(ii) A Certificate from the CEO/CFO of the Holding Company, as per the format enclosed in the bid documents, stating that the unaudited unconsolidated financial statements form part of the Consolidated Annual Financial Statements of the Holding company.

In cases where audited results for the last financial year as on the date of Techno Commercial bid opening are not available, the financial results certified by a practicing Chartered Accountant shall be considered acceptable. In case, Bidder is not able to submit the Certificate from a practicing Chartered Accountant certifying its financial parameters, the audited results of three consecutive financial years preceding the last financial year shall be considered for evaluating the financial parameters. Further, a certificate would be required from the CEO/CFO as per the format enclosed in the bidding documents stating that the Financial results of the Company are under audit as on the date of Techno-commercial bid opening and the Certificate from the practicing Chartered Accountant certifying the financial parameters is not available.

NOTES FOR CLAUSE 2.0.0 ABOVE:

(i) Net worth means the sum total of the paid up share capital and free reserves. Free reserves means all reserves credited out of the profits and share premium account but does not include reserves credited out of the revaluation of the assets, write back of depreciation provision and amalgamation. Further any debit balance of Profit and Loss account and miscellaneous expenses to the extent not adjusted or written off, if any, shall be reduced from reserves and surplus.

(ii) Other income shall not be considered for arriving at annual turnover.

6.0

A complete set of Bidding Documents may be downloaded by any interested Bidder from the e-Tender Portal as per specified schedule. The tender is invited under e-tendering process. The bidders can enroll themselves on the website <https://eprocurementpc.nic.in/>. The use of Digital Signature Certificate (DSC) Class- 3 key is mandatory for e-tendering activities. Accordingly, bidders should have Digital Signature Certificate (DSC) key of Class 3 to participate in e-tendering. Bidders, if required, can obtain DSC Class-3 key from agencies authorized by Govt. of India. The e-Tender Portal also has the user manuals with detailed guidelines

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on enrolment and participation in the bidding process including Bidder Manual for online fee payment.

No hard copy of Bidding Documents shall be issued. Bids shall be submitted ONLY at the e- tendering portal i.e. <https://eprocurementpc.nic.in/>.

7.0 Notwithstanding anything stated above, the Employer reserves the right to assess the capabilities and capacity of the Bidder/ his collaborators / associates/ subsidiaries/ group companies to perform the contract, should the circumstances warrant such assessment in the overall interest of the Employer.

8.0 Employer reserves the right to reject any or all bids or cancel/withdraw the Invitation for Bids without assigning any reason whatsoever and in such case no bidder / intending bidder shall have any claim arising out of such action.

9.0 Only 'Class-I local suppliers' are eligible to participate in this tender, as defined in the bidding documents/ Public Procurement (Preference to Make in India), Order 2017 and its subsequent amendments/ revisions issued by DPIIT. The bidders may apprise themselves of the relevant provisions of bidding documents in this regard before submission of their bids.

10.0 Any 'Bidder from a country which shares a land border with India', as specified in the Bidding Documents, will be eligible to bid in this tender only if bidder is registered with the Competent Authority as mentioned in the Bidding Documents.

Further, any bidder (including bidder from India) having specified Transfer of Technology (ToT) arrangement with an entity from a country which shares a land border with India, will be eligible to bid only if the bidder is registered with the same competent authority.

However, the said requirement of registration will not apply to bidders from those countries (even if sharing a land border with India) to which the Government of India has extended lines of credit or in which the Government of India is engaged in development projects.

11.0 Downloading/Issuance of Bidding Documents and /or submission of Bid shall not construe that such Bidder is considered to be qualified.

12.0 Transfer of Bidding Documents purchased by one intending Bidder to another is not permissible.

13.0 With reference to Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012, MSE benefit not applicable.

14.0 **Address for Communication:**

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Manager (CS)/ DGM(CS)
NTPC GREEN ENERGY LIMITED,
E-3, Main Market Rd, Ecotech-II,
Udyog Vihar, Greater Noida, UP- 201306
Contact Phone: 9471003266

E-Mail: neetabaranwal@ntpc.co.in / abhishekkumar02@ntpc.co.in
Websites: www.ntpctender.ntpc.co.in or www.ntpc.co.in or
<https://eprocurrentpc.nic.in/>

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Registered Office

NTPC Limited,
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7, Institutional Area, Lodi Road,
New Delhi – 110003
Corporate Identification Number: L40101DL1975GOI007966,
Website: www.ntpc.co.in