

INVITATION FOR BIDS

NTPC VIDYUT VYAPAR NIGAM LIMITED
(A wholly owned Subsidiary of NTPC Limited)

CONTRACT & MATERIALS

INVITATION FOR BIDS (IFB) FOR

EPC PACKAGE OF WASTE TO ENERGY FACILITY (600 TPD) AT RAMNA, VARANASI (Domestic Competitive Bidding)

Bidding Document No.: NVVN/ C&M/RE-95/2021-22

Date: 22.06.2021

1.0 NVVN invites online Bids on 'Two Stage' bidding basis [Stage-I (Techno-Commercial) Bid & Stage-II (Price) Bid] from eligible Bidders for aforesaid Package, as per the Brief Scope of Work mentioned hereinafter.

2.0 BRIEF SCOPE OF WORK

Employer intends to install a Waste to Energy (Torrefied Charcoal/RDF) Plant having waste disposal/segregation facility of 600+33% TPD fresh Municipal Solid Waste (MSW). The plant shall be designed in modular/unit wise fashion to allow for assembly, testing, maintenance, and replacement of individual sub-assemblies. Also, the design should demonstrate improved robustness to material handling in comparison to their proven pilot scale projects.

The Complete plant shall be odorless and applicable emission norm compliant. The plant shall have an aesthetic environment with noise level in permissible limits. The plant shall involve enough automation to prevent human exposure to messy areas during operation and maintenance (O&M) of plant. The plant shall have effluent & leachate treatment system to prevent discharge of harmful substance.

Employer will provide 600+33% TPD of Fresh unsegregated Municipal Solid Waste, at segregation/pre-processing facility which is to be developed by Bidder to segregate the MSW into two parts:

1. 600+10% TPD of inert free MSW/RDF (primary fuel for Torrefaction)
2. Inert fraction of MSW as per actual (to be loaded into trucks for disposal by Varanasi Municipal Commission)

RDF segregated from the MSW, must be stored in a moisture proof silo/tank. It should have a GCV of atleast 3000 Kcal/Kg and its size must be in the range of 25mm to 60mm. The Complete Plant including Waste Segregation & Torrefaction must be designed (module wise) to dispose off the 600 + 33% TPD of MSW. Plant must be designed in such a way that it will be expandable (if needed, for future expansion) and last for at least 25 years of life.

SCOPE OF PROPOSAL

The scope of the proposal for the Design Engineering, Supply, Construction, Erection, Testing, Commissioning including Two (2) year Operation and Maintenance (O&M) works on turnkey basis completely covering the following activities and services in respect of all the equipment & works specified and covered under the specifications and read in conjunction

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with “Scope of Supply & services” elaborated elsewhere.

All equipment, materials and services whether explicitly stated or otherwise and that are necessary for the satisfactory operation of the Torrefaction Facility along with the Waste Segregation system and its integration as described in the specification shall be deemed to be included in the scope of work of the Contractor and shall not be limited to the following:

- i. Basic Engineering of the plant and systems.
- ii. Detailed design of all the equipment and equipment system(s) including civil works.
- iii. Providing basic/detail engineering drawings, data, process for employer’s review and approval.
- iv. Calculations, test procedures, structural design calculations, P&ID, Plant & Equipment layout, mass balance drawing, Drawings/Data sheets of bought out items, Civil structural/architectural Drawings, Performance & Guarantee Test procedure etc.
- v. Providing Operation & Maintenance/ instruction manuals, as built drawings and other information;
- vi. Providing training of Employer’s personnel
- vii. Finalization of sub-vendors, manufacturing quality plans and Field quality plans.
- viii. Complete manufacturing including conducting all type, routine and acceptance tests; Civil, Structural and Architectural works to the extent applicable, including construction facilities and construction power distribution.
- ix. Packing and transportation from the manufacturer’s works to the site including customs clearance & port clearance, port charges, (if any).
- x. Receipt, storage, preservation and conservation of equipment at the site; Fabrication, pre-assembly, (if any), erection, testing, precommissioning and commissioning and putting into satisfactory operation all the equipment including successful completion of initial operation
- xi. Reliability and Functional guarantee tests after successful completion of trial operation;
- xii. Supply of recommended/mandatory spares.
- xiii. Satisfactory completion of the contract.
- xiv. The scope of work also includes Operation & Maintenance (O&M) Contract for a period of two (2) years which shall commence from the date of Completion of Facilities of the Contract.
- xv. Complete Civil, Structural, Architectural & horticulture works, including survey, providing construction material and equipment, construction water supply, construction / permanent roads, drainage arrangements, fencing / boundary wall around the land boundary.

Detailed scope of work is given in Section VI (Technical specification) of the tender documents.

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- 3.0 NVVN intends to finance subject Package through External Commercial Borrowings/ Domestic Commercial Borrowings / Own sources.
- 4.0 Detailed Specification, Scope of Work and Terms & Conditions are given in the Bidding Documents, which are available for examination and Sale at our GePNIC e-procurement portal <https://eprocurrentpc.nic.in> as per following schedule

Issuance of IFB	22.06.2021
Bidding Document Sale Date & Time	From 22.06.2021 to 13.07.2021 upto 1700 Hrs. (IST)
Last Date for receipt of queries from bidders (if any) *	30.06.2021 18:00 Hrs
Bid Submission Start	From 30.06.2021
Bid Submission End Date & Time	Upto 13.07.2021 by 1700 Hrs. (IST)
Bid Opening Date & Time for Techno-Commercial Bid	14.07.2021 at 1500 Hrs. (IST)
Price Bid Opening Date & Time	Shall be intimated separately by NVVN.
Cost of Bidding Document	₹ 22,538/- (Indian Rupees Twenty Two Thousand Five Hundred Thirty Eight Only)

* No Queries from Bidders, whatsoever, shall be entertained by the Employer beyond the last date of receipt of Queries as specified above. Pre-bid conference shall be organized online in MS teams on 07.07.2021.

- 5.0 All bids must be accompanied by "Bid Security Declaration" in lieu of Bid Security in the form as stipulated in the Bidding Documents.

ANY BID NOT ACCOMPANIED BY AN ACCEPTABLE "BID SECURITY DECLARATION" IN A SEPARATE SEALED ENVELOPE SHALL BE REJECTED BY THE EMPLOYER AS BEING NON-RESPONSIVE AND SHALL NOT BE OPENED.

6.0 QUALIFYING REQUIREMENTS FOR BIDDERS

1.0.0 Technical Criteria

The Bidder should meet the qualifying requirements stipulated in any one of the qualifying routes i.e. Route-1 (clause 1.1.0) or Route-2 (clause 1.2.0) including requirements stipulated in sub clauses of respective routes. In addition, the Bidder should also meet the requirements stipulated under clause 2.0.0 together with the requirements stipulated under section ITB.

1.1.0. Route 1: Qualified Torrefaction Plant Equipment Manufacturer (QTPEM)

1.1.1 The Bidder should have designed and installed at least one (01) number of Plant, employing torrefaction technology, having reactor capacity of at least 01 metric tonnes of input per day (TPD) anywhere in the world. Reference plant should demonstrate successfully Charcoal making process from MSW/RDF as input material. Plants having continuous or batch type operation will be considered.

1.2.0 Route 2: Indian EPC* company/Developer in Collaboration with QTPEM

1.2.1 The Bidder should have executed EPC project(s) (with or without civil works) either as developer or as EPC contractor in the last 7 years, in the area of power, steel, oil & gas, petrochemical, fertilizer, bio-gas, waste management and / or any other process industry. At least, one of such project should have a contract value of INR 400 million or more and in successful operation for a period of not less than one (1) year prior to the date of Techno-Commercial bid opening.

1.2.2 Such Bidder should collaborate and have a technology transfer/support agreement with a QTPEM meeting requirements of clause 1.1.0 on its own, valid minimum up to the end of the defect liability period of the contract. In such a case Bidder can either source the torrefaction reactor from such manufacturer or manufacture/get manufactured the torrefaction reactor as per the design and manufacturing drawings of such QTPEM.

1.3.0. Performance Guarantee

In case of award of a project, the bidder will be required to give the on demand performance guarantee of the 1st module for an amount of 0.2% of the total contract price of the awarded project in addition to the contract performance security.

NOTES :

(1) Definitions

(i) Erection/Commissioning

Where erection / supervision of erection and commissioning / supervision of commissioning has not been in the scope of the Bidder as mentioned in clause 1.2.0, the Bidder should have acted as an advisor for erection and commissioning. Necessary documents / certificates from the client, in support of above shall be furnished along with the Techno-Commercial bid.

(ii) Direct / Indirect order

The Bidder/ QTPEM shall also be considered qualified, in case the award for executing the reference works has been received by the Bidder/ QTPEM either directly from owner

of plant or any other intermediary organization. However, a certificate from such owner of plant or any other intermediary organization shall be required to be furnished by the Bidder along with its Techno-Commercial bid in support of the Bidder's/ QTPEM's claim of meeting the qualification requirement as per clause 1.1.0 & 1.2.0 above. Further, certificate from owner of the plant shall also be furnished by the Bidder along with the Techno-Commercial bid for the successful operation as specified at clause 1.1.0 & 1.2.0 above.

(iii) Technology Transfer Agreement (TTA) (Applicable for Clause 1.2.0)

The bidder shall have a technology license/transfer agreement as on the date of Techno-commercial bid opening between the Bidder & QTPEM which shall necessarily cover license/transfer of technological knowhow for Torrefaction System, in the form of complete transfer of design dossier, design softwares, drawings and documentation, quality system manuals and imparting relevant personnel training to the Bidder or in the form of support for the above. The validity of the TTA must be at least 5 years from the date of signing of TTA or up to the end of the defect liability period of the contract whichever is later.

- (iv) * EPC contractor should have engineered/got engineered, supplied, erected/supervised erection & commissioned/supervised commissioning of the project.
- (v) "Municipal Solid Waste" or "MSW" means and includes solid or semi-solid domestic waste sanitary waste, commercial waste. Institutional waste, catering and market waste and other non-residential wastes, street sweepings, silt removed or collected from the surface drains, horticulture waste, agriculture and dairy waste, treated bio-medical waste excluding industrial waste, bio-medical waste and e-waste, battery waste, radio-active waste generated in the area under the local authorities.
- (vi) "Refuse Derived Fuel" or "RDF" means the MSW derived from combustible waste fraction of solid waste like plastic, wood, pulp or organic waste, other than chlorinated materials, in the form of pellets or fluff produced by drying, shredding, dehydrating and compacting of solid waste.
- (vii) Client certificate as a document in support of the clause 1.1.0 above shall be acceptable. In case of own built plant, self-certification to be produced as a document in support or any other support document of the clause 1.1.0. However, employer has the right to visit and inspect the reference plant to verify the details of plant. During employer's visit, bidder/QTPEM has to ensure successful demonstration of torrefaction of MSW/RDF and estimate the capacity.
- (viii) For clause 1.2.0, multiple EPC bidders may also collaborate with same QTPEM as mentioned in clause 1.1.0.

2.0.0 Financial Criteria

2.1.1 The average annual turnover of the Bidder, in the preceding three (3) financial years as on the date of Techno-Commercial bid opening, should not be less than INR 88 Crore (Indian Rupees Eighty Eight Crore only) or in equivalent foreign currency.

In case a Bidder does not satisfy the average 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.

2.1.2 Net worth of the bidder should not be less than 100 % (one hundred percent) of its paid up share capital as on the last day of the preceding financial year on the date of Techno-commercial bid opening. In case the Bidder does not meet 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 Subsidiaries of its Holding company wherever applicable. In such a case, however 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% (hundred percent) of their total paid up share capital. However individually, their Net worth should not be less than 75% (seventy five percent) of their respective paid up share capitals.

Net worth in combined manner shall be calculated as follows:

$$\text{Net worth (combined)} = (X1+X2+X3) / (Y1+Y2+Y3) \times 100$$

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.

2.1.3. In case the Bidder is not able to furnish its audited financial statements on standalone 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:

- (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 with the bidding documents, stating that the unaudited unconsolidated financial statements form part of the consolidated financial statements of the Holding Company.

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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

- (i) Net worth means the sum total of the paid up share capital and free reserves. Free reserve 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.
- (iii) "Holding Company" and "Subsidiary Company" shall have the meaning ascribed to them as per Companies Act of India.
- (iv) For annual Turnover indicated in foreign currency, the exchange rate as on seven (7) days prior to the date of Techno-Commercial bid opening shall be used.

7.0 NVVN 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.

8.0. Class-I local suppliers' and 'Class-II local suppliers' only 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.

9.0. 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. However, the said requirement of

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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.

- 10.0 A complete set of Bidding Documents may be downloaded from <https://eprocurmentpc.nic.in> by any interested Bidder. Tender fee (₹22,538), in the form of a crossed A/C PAYEE DEMAND DRAFT / BANKERS CHEQUE / PAY ORDER in favor of "NTPC VIDYUT VYAPAR NIGAM LIMITED", Payable at NEW DELHI, is required to be submitted in a separately sealed envelope at the address mentioned in the bidding document, before the stipulated date & time of submission of the bid. For any assistance, please email to nvvncontracts@ntpc.co.in or contact Sr.Manager (C&M), NTPC VIDYUT VYAPAR NIGAM LIMITED, 2nd Floor, Core 5, Scope Complex, 7, Institutional Area, Lodi Road, New Delhi-110003.

It is required by agency to register and follow the guidelines/FAQ provided in the e-portal <https://eprocurmentpc.nic.in> for participating in the tender, BID is to be submitted online on that portal. Any amendment(s)/corrigendum/clarifications with respect to this Bid shall be uploaded on <https://eprocurmentpc.nic.in> only. Bidder should regularly follow up for any Amendment/Corrigendum/Clarification on the above website.

NOTE: No hard copy of Bidding Documents shall be issued

- 11.0 Issuance of bid documents to any Bidder shall not construe that such bidder is considered to be qualified. Bids shall be submitted online and opened at the address given below in the presence of Bidder's representatives who choose to attend the bid opening. Bidder shall furnish Bid Security declaration, Local content declaration, Letter of Undertaking (as applicable), Integrity Pact and Power of Attorney separately offline as detailed in Bidding Documents by the stipulated bid submission closing date and time at the address given below.
- 12.0 Transfer of Bidding Documents purchased by one intending Bidder to another is not permissible.

13.0 **Address for communication:**

Sr. Manager (C&M)
NTPC VIDYUT VYAPAR NIGAM LIMITED
2nd Floor, Core 5, Scope Complex, 7,
Institutional Area, Lodi Road, New Delhi-110003
Tel No. 011-24387096
Fax. No. (+91)-11-24362009
e-mail: nvvncontracts@ntpc.co.in
Corporate Identification Number: U40108DL2002GOI117584,
website: www.eprocurementpc.nic.n

14.0 **Registered Office**

NTPC VIDYUT VYAPAR NIGAM LIMITED,
NTPC Bhawan, Core-7, SCOPE Complex,
7, Institutional Area, Lodhi Road,

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New Delhi – 110003

Corporate Identification Number: U40108DL2002GOI117584.

Website: www.nvvn.co.in

15.0 Other Instructions

- i. Please use 'Online Bidder Enrollment' link provided on portal <https://eprocurementpc.nic.in> (GePNIC) to register
- ii. Go through Help, FAQ etc. as provided on the above portal.
- iii. Class III digital signature (DSC) is required for submission of BID on above portal.
- iv. Important Note: It is strongly recommended that all authorized users of Supplier organizations should thoroughly peruse the information provided under the relevant links, and take appropriate action. This will prevent hiccups, and minimize teething problems during the use of GePNIC.

GePNIC Helpdesk Telephone: 24X7 Customer Support +91-120-4001 002/+91-120-4200 462/
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