

INVITATION FOR BID

**NTPC LIMITED
(A GOVERNMENT OF INDIA ENTERPRISE)
RENEWABLE ENERGY – CONTRACTS SERVICES, NOIDA.**

INVITATION FOR BIDS (IFB)

FOR

**HYDROGEN FUELLING STATION FOR GREEN HYDROGEN MOBILITY PILOT PROJECT IN
LEH (LADAKH), INDIA**

OF

**NTPC RENEWABLE ENERGY LIMITED
(A Wholly Owned Subsidiary of NTPC Limited)**

(Domestic Competitive Bidding)

IFB No.: RE-CS-NREL-LEH-001

Date: 28.07.2021

Tender Search Code: NTPC-2021-TN000015

1.0 NTPC Ltd invites online bids on behalf of its wholly owned subsidiary i.e. NTPC Renewable Energy Ltd. from eligible bidders on Single Stage Two Envelope (i.e. Envelope-I: Techno-Commercial Bid and Envelope-II: Price Bid) for **HYDROGEN FUELLING STATION FOR GREEN HYDROGEN MOBILITY PILOT PROJECT IN LEH (LADAKH), INDIA** .

2.0 BRIEF SCOPE OF WORK

1. Design, engineering, manufacturing, supply, packing and forwarding, transportation, unloading storage, installation, testing, commissioning, trial operation and PG test of Hydrogen Fuelling station at Leh, Ladakh
2. The equipment/system/documentation required are:
 - a. **Containerized-type hydrogen generation system** using a bipolar type water Electrolyser (2 x 50% rated capacity), operating during sun-hours only (producing ~ 80 kg/ day) with input electrical energy of 6500 kWh/day.
 - b. Hydrogen Purifier / De-oxo/ Dryer to be installed with an output Hydrogen purity of 99.97% and to be housed in Container
 - c. **Hydrogen Compression system** (2 units with 50% rated capacity considered for operation) with final discharge pressure of atleast 450 Bar to be installed outside of the hydrogen generation container.
 - d. A **high-pressure storage facility** to store atleast 100 kg of Hydrogen at 450-500 bar to be installed. This facility has to approved by PESO and is in the scope of the bidder.
 - e. **Hydrogen dispenser (dual hose type)** required to be installed to deliver gaseous hydrogen to the FCEVs. The input to the dispenser would be from the high-pressure storage system and chiller (-40 °C)

**HYDROGEN FUELLING STATION FOR GREEN HYDROGEN
MOBILITY PILOT PROJECT IN LEH (LADAKH), INDIA
BIDDING DOCUMENT NO.: RE-CS-NREL-LEH-001**

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- f. All **safety provisions and precautions** to be taken care diligently both at the time of design, commissioning and operation.
- g. **Hazard and Operability study (HAZOP)/ HIRA** of the whole system (Electrolysers, compressor, storage tubes, dispenser etc.) before starting of installation activity. Report on analysis of **quantitative risk assessment** needs to be done as recommended in ISO 19880-1:2020. Analysis of hydrogen flow path in case of any explosion or leakage shall be done by any **CFD package** and submitted.
- h. All PESO requirements for layout and relevant IS/ISO/IEC/OISD/NFPA standards must be adhered to.
- i. **Complete civil work** for setting up the containerized units, having relevant buildings, architectural works, boundary wall, admin room, control room/operator cabin etc. The total area considered for the infrastructure development is 0.55 acres of land at one place.
- j. **Drive-thru type of road** upto the dispenser from the main road and again connecting the main road are to be done under the contract.
- k. As **stepdown transformer** for transforming power from 11 kV to 415 V is required.
- h. Net-metering facility arrangement as well as all associated electrical and civil works required for interfacing with the solar substation.
- i. A **three-year O&M** would be under the contract and also including all spares and consumables.

The detailed scope of work is as defined in the bidding document No.: **RE-CS-NREL-LEH-001**

3.0 NTPC Renewable Energy Ltd intends to finance the subject package through Own Resources.

4.0 Detailed specification, Scope of work and Terms & Conditions are given in the bidding documents, which are available for examination and downloading at e-tender portal (as specified in this notice) and as per the following schedule:

IFB No.	RE-CS-NREL-LEH-001	
IFB Date	28.07.2021	
Period of Downloading of Bidding Documents	From 02.08.2021 to 13.08.2021	
Pre Bid Conference and Last Date for receipt of queries from prospective Bidders	16.08.2021	
Last Date and Time for receipt of bids comprising both Techno-Commercial Bid and Price Bid	23.08.2021	14:30:00 (IST)

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Date & Time of opening of Techno-Commercial Bid	23.08.2021	15:00:00 (IST)
Cost of Bidding Documents in INR	INR 11,250/- (Indian Rupees Eleven Thousand Two Hundred and Fifty only)	

No Queries from Bidders, whatsoever, shall be entertained by NTPC Ltd beyond the last date of receipt of Queries/ Pre-Bid Conference as specified above.

- 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:

In addition to the requirements stipulated under section Instruction to Bidder (ITB), the Bidder should also meet the qualifying requirements stipulated hereunder in Clause 1.0 and Clause 2.0 below:

1. Technical Criteria

The Bidder should meet the qualifying requirements stipulated in any one of the qualifying routes (i.e. Route-1 or Route-2 or Route-3 or Route-4) including requirements stipulated in sub clauses of respective Routes

i) Route–1: Qualified Bipolar type Water Electrolyser Manufacturer for Hydrogen Generation System (QEM)

The bidder should have designed, engineered, manufactured, supplied, erected (or supervised erection) and commissioned (or supervised commissioning) bipolar type water electrolyser (single or multiple units), in a single contract, for hydrogen generation system of minimum rated capacity of 30 Nm³/hr, within the preceding seven (7) years prior to the date of techno-commercial bid opening.

- ii) Route – 2:** The bidder shall be an Indian subsidiary company of Qualified Bipolar type Water Electrolyser manufacturer for Hydrogen generation system(QEM) meeting the requirements stipulated at route-1 above and the bidder should have an ongoing collaboration agreement with the QEM with the validity for a period at least up to the end of the defect liability period of the contract. The bidder shall be registered in India under the companies Act of India as on the date of techno-commercial bid opening.

In such a case, an “undertaking jointly executed by the bidder and the collaborator/associate for complying the provisions of Deed of Joint Undertaking” shall be submitted by the bidder along with their techno-

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commercial bid as per the format provided in the bidding documents, failing which bidder shall be disqualified and its bid shall be rejected.

Further, the bidder emerging as the successful Bidder shall be required to submit the applicable Deed of Joint Undertaking (DJU) executed by it and the QEM meeting the requirements of Route-1 in which the executants of DJU shall be jointly and severally liable to the Employer for successful performance of the Electrolyser System as per format enclosed with the bidding documents.

In case of award, the QEM meeting route-1 will be required to furnish an on-demand bank guarantee for an amount of 2% of the total contract price in addition to the contract performance security to be furnished by the bidder.

- iii) **Route – 3:** The bidder should have designed, engineered, supplied, installed/supervised installation, commissioned/supervised commissioning of bipolar type electrolyser-based hydrogen generation system, in a single contract, of rated generation capacity of 20 Nm³/hr or higher of hydrogen, within the preceding seven (7) years prior to the date of techno-commercial bid opening. The reference plant of 20 Nm³/hr or higher must be in successful operation for atleast one (1) year prior to the date of techno-commercial bid opening.
- iv) **Route – 4:** The Bidder should have worked as an EPC Agency in area of power/ steel/ oil and gas/ petrochemical/ fertilizer/cement/coal mining including coal handling plant or any other process industry with total executed value of such contracts (not more than three contracts) being INR 30 Crore or more within the preceding seven (7) years prior to the date of techno-commercial bid opening.

Bidder should also have an ongoing collaboration agreement with the QEM meeting requirements of Route 1, valid for a period at least up to the end of the defect liability period of the contract. In such a case, Bidder can either source the Electrolyser from QEM or manufacture the Electrolyser System as per the design and manufacturing drawings released by such QEM.

In such a case an “undertaking jointly executed by the bidder and the collaborator for complying the provisions of Deed of Joint Undertaking” shall be submitted by the bidder along with their techno-commercial bid as per the format provided in the bidding documents, failing which bidder shall be disqualified and its bid shall be rejected.

Further, the bidder emerging as the successful Bidder shall be required to submit the applicable Deed of Joint Undertaking (DJU) executed by it and the QEM in which the executants of DJU shall be jointly and severally liable to the Employer for successful performance of the Electrolyser System as per format enclosed with the bidding documents.

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In case of award the QEM will be required to furnish an on-demand bank guarantee for an amount of 2% of the total contract price in addition to the contract performance security to be furnished by the bidder.

Notes:

- a. The word “executed” means the bidder should have achieved the criteria specified in the above qualifying requirement within the preceding seven years prior to the date of techno-commercial bid opening, even if the total contract (s) has/have been started earlier and/ or is not completed/closed. In case of contracts under execution as on date of techno-commercial bid opening, the value of work executed prior to the date of techno-commercial bid opening will be considered provided the same is certified by the employer.
- b. **Note for Route –1, 2 and 4:**
A certificate from owner of the plant shall be furnished by bidder along with techno commercial bid as a proof of the successful commissioning.
- c. **Note for Route – 3:**
A certificate from owner of the plant shall be furnished by bidder along with techno commercial bid as a proof of the successful operation of plant.
- d. “QEM” (Qualified Bipolar type Water Electrolyser Manufacturer for Hydrogen Generation System) means a manufacturer meeting requirement stipulated at Route-1.

2. Financial criteria

a) Financial criteria for Bidder

- i) The average annual turnover of the Bidder, should not be less than ₹ 30 Crore (Indian Rupees Thirty Crore Only) during the preceding three (3) 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.

- ii) Net Worth of the Bidder as on the last day of the preceding financial year should not be less than 100% (hundred percent) of 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

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(ies) and/or Holding Company and/or Subsidiaries 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% (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:

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.

- iii) 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 on substantiation of its qualification:

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

(b) Certificate from the CEO/ CFO of the Holding Company, as per the format enclosed in the bidding documents, stating that the unaudited unconsolidated financial statements form part of the consolidated financial statement of the Holding Company.

In case where audited results for the last financial year as on date of techno commercial bid opening are not available, the financial results certified by a practicing Chartered Accountant shall be considered acceptable. In case the Bidder is not able to submit the Certificate from a practicing Chartered Accountant certifying its financial parameters, the audited result of three consecutive financial years preceding the last financial year shall be considered for evaluating 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 techno-commercial bid opening and the Certificate from a practicing Chartered Accountant certifying the financial parameters is not available.

b. Financial criteria for the collaborator/ Associate meeting the criteria stipulated at Route- 1(Applicable for Route 2 & 4):

- i) The average annual turnover of the **collaborator/ Associate** for the water electrolyser, should not be less than ₹ 3 Crore (Indian Rupees Three Crore Only) or in equivalent foreign currencies during the preceding three (3) financial years as on date of techno-commercial bid opening.

In case a **collaborator/ Associate** 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

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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 **collaborator/ Associate** 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.

- ii) Net Worth of the **collaborator/ Associate** as on the last day of the preceding financial year should not be less than 100% (hundred percent) of **its** paid-up share capital. In case the **collaborator/ Associate** does not meet the 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 companies wherever applicable. In such a case, however the Net worth of the **collaborator/ Associate** 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:

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.

In case the **collaborator/ Associate** is not able to furnish its audited financial statements on standalone entity basis, the unaudited unconsolidated financial statements of the **collaborator/ Associate** can be considered acceptable provided the **collaborator/ Associate** further furnishes the following documents on substantiation of its qualification:

- (a) Copies of the unaudited unconsolidated financial statements of the associate along with copies of the audited consolidated financial statements of its Holding Company.
- (b) Certificate from the CEO/ CFO of the Holding Company, as per the format enclosed in the bidding documents, stating that the unaudited unconsolidated financial statements form part of the consolidated financial statement of the Holding Company.

In case where audited results for the last financial year as on date of techno commercial bid opening are not available, the financial results certified by a practicing Chartered Accountant shall be considered acceptable. In case the **collaborator/ Associate** is not able to submit the Certificate from a practicing Chartered Accountant certifying its financial parameters, the audited result of three consecutive financial years preceding the last financial year shall be considered for evaluating financial parameters. Further, a certificate would be

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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 techno-commercial bid opening and the Certificate from a practicing Chartered Accountant certifying the financial parameters is not available.

Notes for sub-clause (ii) of 2a & 2b.

- a. 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.
- b. Other income shall not be considered for arriving at annual turnover.
- c. "Holding Company" and "Subsidiary company" shall have the meaning ascribed to them as per Companies Act of India.
- d. For the executed value of contract(s) and/or the annual turnover indicated in foreign currency, the exchange rates as on seven (7) days prior to the date of Techno- commercial bid opening shall be used.

7.0 NTPC 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 Interested parties are required to get registered with M/s ISN Electronic Tender Services website <https://www.bharat-electronictender.com> (if not registered already). The cost of the bidding documents as mentioned above is required to be submitted in the form of a crossed account Payee demand draft in favour of "NTPC Ltd.", Payable at New Delhi at the address mentioned at para no.11.0. below along with GSTIN and Organization ID registered with ETS portal or in the manner specified at 8.1 below. After registration with ETS portal and payment of the cost of bidding documents as above or as per 8.1 below, a complete set of Bidding Documents may be downloaded by any interested Bidder from ETS Portal <https://www.bharatelectronictender.com> with Tender Search Code NTPC-2021-TN000015. Interested parties are required to ensure that they have downloaded the official copy of Bidding documents against Tender Search code- NTPC-2021-TN000015 from above mentioned website without which they will not be able to submit their bids. For technical assistance call ETS Helpdesk at 0124-4229071, 0124-4229072.

8.1 Bidders may also opt for Online Transfer of Cost of bidding document through NEFT/RTGS to NTPC's Bank whose details are provided herewith:

Account No.	52142904702
IFSC Code	SBIN0020511
Name of the Bank	State Bank of India

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Branch Code	20511
Address	Scope Complex Lodhi Road Branch Ground Floor, Core-6 Scope Complex Delhi-110003

While carrying out online transfer, Bidders shall ensure to enter "Cost of bidding document - Tender No - Bidder Name" in the Text / Remarks / Reason field. Bidder shall intimate the details of same through email to Employer and also upload the details on ETS portal (Technical Bid Part) in the following format:

Declaration for payment of Cost of Bidding document:

Tender Search Code. :
Vendor Name :
UTR Reference :
Amount:
Date of Transfer:
Transferor Bank:

(Signature of vendor with seal)

Note: No hard copy of Bidding Documents shall be issued.

8.2 Issuance of Bid Documents to any Bidder shall not construe that such Bidder is considered to be qualified. Bids shall be submitted online. Bidder shall furnish Bid Security Declaration form, Integrity Pact, Pass Phrase and Power of Attorney separately offline as detailed in Bidding Documents before the stipulated bid submission closing date and time at the address given below.

9.0 '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."

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

11.0 Address for communication:

Addl. General Manager (Renewable Energy-Contract Services) / Deputy General Manager (Renewable Energy-Contract Services),

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