

DETAILED INVITATION FOR BID

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

**DETAILED INVITATION FOR BIDS (IFB)
FOR
Battery Energy Storage System for 8 MW Solar PV Project at Chidiyatapu in A&N Islands
(International Competitive Bidding)**

IFB No.: 40073998

Date: 09.05.2017

Bidding Document No: RE-CS-5727-004(B)-9

1.0 NTPC invites online bids from eligible bidders in TWO STAGES (i.e. Stage-I: Techno-Commercial Bid and Stage-II: Price Bid) from eligible bidders for **Battery Energy Storage System for 8 MW Solar PV Project at Chidiyatapu in A&N Islands** as per the scope of work briefly mentioned hereinafter.

2.0 BRIEF SCOPE OF WORK

The scope shall cover Design, Engineering, Supply, Packaging and Forwarding, Transportation, Unloading, Storage, Installation, Testing, Commissioning, Grid Integration with 8 MW Solar PV Plant and 33 kV grid, of **3.2 MW, 3.2 MWh (at 33KV output throughout life of 25 Years)** Battery Energy Storage System (BESS, PCU, Transformers, BMS, EMS, Switchgears, Cables, Illumination, SCADA, weather prediction system, fire detection system, 33KV Metering Station etc. required for smooth operation) including twenty five year Operation and Maintenance (O&M) works on turnkey basis.

Bidder shall provide comprehensive operation & maintenance of the grid connected BESS System for a period of twenty-five (25) years from the date of successful completion of trial run. Bidder shall be responsible for identifying and providing any and all the other additional equipment, component and services necessary for its integration with the existing ac systems, as a fully functional grid interactive BESS System. All equipment, materials and services that are necessary for the satisfactory operation of the BESS for entire O&M period of 25 years shall be deemed to be included in the scope of EPC package work and shall not be limited to the following:

The scope includes the following:

1. Design, fabricate, ship, assemble, test, start-up, commission of all the equipment and system(s) including civil works, warrant and make ready for service a fully functional turnkey battery energy storage system that meets or exceeds all requirements delineated herein up to the battery energy storage system.
2. All Civil, Structural and Architectural works including construction facilities and construction power Distribution.
3. Design, install and make ready for the electrical connections from the battery energy storage system to the 33 kV system.
4. Design, install and make ready a battery management system with control and communication system for monitoring and controlling battery and PCU parameters and the communication connection from the battery energy storage system of other projects of NTPC and the substations of A&N distribution network.

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| Battery Energy Storage System for 8 MW Solar PV Project at Chidiyatapu in A&N Islands BIDDING DOCUMENT NO.: RE-CS-5727-004(B)-9 | SECTION-I (IFB) | PAGE 1 OF 8 |
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5. Packing and transportation from the manufacturer's works to the site including customs clearance & port clearance, port charges, (if any).
6. Receipt, storage, preservation and conservation of equipment at the site; Fabrication, preassembly, (if any), erection, testing, pre-commissioning and commissioning.
7. Complete manufacturing including conducting all type, routine and acceptance tests. Develop detailed start up and site acceptance plan. Perform factory acceptance test of the complete system. Reliability and Functional guarantee tests after successful completion of trial operation.
8. Provide documentation for design and expected performance through design calculations, software, design drawings, equipment drawings, and modifications to the existing drawings.
9. Provide onsite training for the operators, engineers, technicians and maintenance personnel.
10. Supply any special equipment and tools required for the operation and maintenance of the project.
11. Supply of mandatory spares.
12. Operation and maintenance for 25 years of the project after commissioning.
13. Provide a warranty for the battery energy storage system and its constituent equipments as per technical specification.

The detailed scope of work is as defined in the bidding document No.: **RE-CS-5727-004(B)-9**

3.0 NTPC intends to finance the subject package through Domestic Funding and/or Own Resources.

4.0 Detailed specification, Scope of work and Terms & Conditions are given in the bidding documents, which are available for examination and sale at the address given below and as per the following schedule:

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| IFB No. | 40073998 | |
| IFB Date | 09.05.2017 | |
| Document Sale Commencement Date | 12.05.2017 | |
| Document Sale Close Date & Time | 09.06.2017 | 17:00:00 (IST) |
| Pre Bid Conference and Last Date for receipt of queries from prospective Bidders | 16.06.2017 | |
| Last date and time for receipt of bids for Stage-I (Techno-Commercial) bids | 07.07.2017 | 14:30:00 (IST) |
| Stage-I (Techno-commercial) bids opening date & time | 07.07.2017 | 15:00:00 (IST) |
| Cost of Bidding Documents in INR | INR 22,500/- (Indian Rupees Twenty Two Thousand Five Hundred only) | |

Date of submission of Stage-II (Price Bid) shall be intimated separately after opening of Stage-I (Techno-Commercial) Bid.

4.1 Prospective bidders from U.P State are compulsorily required to provide TIN number at the time of purchase of bidding documents.

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- 5.0** All bids must be accompanied by Bid Security for an amount of **INR 1,39,64,000/- (Indian Rupees One Crore Thirty-Nine Lakh Sixty-Four Thousand only)** in the form as stipulated in the Bidding Documents.

ANY BID NOT ACCOMPANIED BY AN ACCEPTABLE BID SECURITY IN A SEPARATE SEALED ENVELOPE SHALL BE REJECTED BY THE EMPLOYER AS BEING NON-RESPONSIVE AND RETURNED TO THE BIDDER WITHOUT BEING OPENED.

6.0 Qualifying Requirements for Bidders:

The Bidder should meet the qualifying requirements of any one of the qualifying routes stipulated under clause 1.1 or 1.2 or 1.3 or 1.4 or 1.5. In addition, the Bidder should also meet the qualifying requirements stipulated under clause 2.0 together with the requirements stipulated under section ITB.

1.0 TECHNICAL CRITERIA

- 1.1 Route 1:** The bidder should have manufactured, supplied, installed/ supervised installation and commissioned/ supervised commissioning of grid interactive battery energy storage system(s) of cumulative installed capacity of 1.9 MW or higher, out of which at least one grid interactive battery energy storage system should be of 0.6 MW capacity or higher. The reference grid interactive battery energy storage system of 0.6 MW or higher capacity must have been in successful operation for at least six (6) months prior to the date of techno-commercial bid opening.
- 1.2 Route 2:** The bidder should be an integrator of grid connected renewable energy project(s) with battery energy storage system of cumulative installed capacity of 1.9 MW or higher, out of which at least one project should be of 0.6 MW capacity or higher. The reference project of 0.6 MW or higher capacity must have been in successful operation for at least six (6) months prior to the date of techno-commercial bid opening. In such a case, bidder shall associate/ collaborate with agency meeting technical requirement at Clause 1.1 above and enter into Deed of Joint Undertaking as per 'Note (a) for Clause 1.0' below.
- 1.3 Route 3:** The bidder should have supplied, installed/ supervised installation and commissioned/ supervised commissioning grid interactive battery energy storage system(s) of cumulative installed capacity of 1.9 MW or higher, out of which at least one grid interactive battery energy storage system should be of 0.6 MW capacity or higher. The reference grid interactive battery energy storage system of 0.6 MW or higher capacity must have been in successful operation for at least six (6) months prior to the date of techno-commercial bid opening. In such a case, bidder shall associate/ collaborate with agency meeting technical requirement at Clause 1.1 above and enter into Deed of Joint Undertaking as per 'Note (a) for Clause 1.0' below.
- 1.4 Route 4:** The Indian Bidder should have technical collaboration agreement or should be a licensee of a battery manufacturer, meeting technical requirement stipulated at Clause 1.1 above. In such a case, Bidder shall enter into Deed of Joint Undertaking with the above qualified battery manufacturer as per 'Note (a) for Clause 1.0' below. Bidder shall also furnish, along with the bid, the documentary evidence/certificate as per NTPC format regarding its technical collaboration agreement with the Battery Manufacturer.

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1.5 Route 5:

- (i) The bidder should have executed in the last ten (10) years an industrial project either as developer or as EPC Contractor in the area of power/ steel/ oil and gas/ petro-chemical/ fertilizer and/ or any other process industry, of a value of INR 260 Million (Indian Rupees Two Hundred Sixty Million Only) or more in a single project or single work respectively and the same must be in successful operation for at least one (1) year prior to the date of techno-commercial bid opening.

AND

- (ii) The bidder should have executed at least one (1) Electrical Sub-station of 33kV or above voltage level, consisting of equipments such as 33kV or above voltage level circuit breakers and power transformer, either as developer or as EPC Contractor which must be in successful operation for at least one (1) year prior to the date of techno-commercial bid opening.

The works referred to at Clause 1.5(i) & 1.5(ii) can be in same or different projects.

Bidder seeking qualification through 'Route 5' shall associate/ collaborate with agency meeting technical requirement at Clause 1.1 above and enter into Deed of Joint Undertaking as per 'Note (a) for Clause 1.0' below.

Notes for Clause 1.0:

- a. Bidder seeking qualification through 'Route 2 or 3 or 4 or 5' shall furnish, along with the bid, an undertaking jointly executed by him and his associate (qualified battery manufacturer) as per NTPC format enclosed in the bidding documents for successful performance of the part of the contract for which he is associated. The deed of joint undertaking (DJU) shall be submitted along with the bid, failing which the bidder shall be disqualified and his bid shall be rejected. Further, in case of award, the associate / collaborator will be required to furnish an On Demand Bank Guarantee for a value of 2% (two percent) of Contract Price in addition to the contract performance security to be provided by the bidder as per NTPC format.
- b. The reference grid interactive battery energy storage system of 0.6 MW or higher capacity should be at a single location developed by Bidder for itself or any other client.
- c. Bidder shall submit certificate of successful completion and operation from the Owner.
- d. Projects executed by Bidder's group company, Holding Company or Subsidiary Company shall not be considered as Bidder's experience for meeting the QR.
- e. In case the award for the reference works has been received by the Bidder either directly from owner of plant or any other intermediary organization, a certificate from such owner of plant or the intermediary organization shall be required to be furnished by the Bidder along with its techno-commercial bid in support of its claim of meeting requirement stipulated above. Certificate from owner of the plant shall also be furnished by the Bidder for successful operation of the reference plant.
- f. Integrator under 'Route 2' means, the agency/ entity, which has carried out the renewable energy grid integration work(s)/ project(s) consisting of Battery Energy Storage System (BESS) and Power Conditioning System (PCS).

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- g. In case of developer as bidder in 'Route 5', the documentary evidence (certified by Chartered Accountant) for value of executed reference work must be submitted by the bidder. Here developer means, an entity who has either executed or got executed the work/ project as owner of facility.
- h. The execution of industrial project as EPC Contractor under 'Route 5' means, such EPC Contractor is responsible for all the activities i.e. Design/Engineering, Procurement, Construction and Commissioning of a project/work.

2.0 FINANCIAL CRITERIA

2.1 FINANCIAL CRITERIA FOR BIDDER

- 2.1.1** The average annual turnover of the Bidder, should not be less than INR 260 Million (Indian Rupees Two Hundred Sixty Million Only) or in equivalent foreign currency, during the preceding three (3) completed financial years as on the date of techno-commercial bid opening.

In case a Bidder does not satisfy the average annual turnover criteria, stipulated at Clause 2.1.1 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 its 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 as on the last day of the preceding financial year should not be less than 100% (one 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(ies) and/or Holding Company and/or Subsidiaries of its Holding companies 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% (one 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% (seventy five percent) 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

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acceptable provided the Bidder further furnishes the following documents on 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) 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 (3) 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.

2.2 FINANCIAL CRITERIA FOR ASSOCIATE/ COLLABORATOR

2.2.1 The average annual turnover of its Associate/ Collaborator, should not be less than INR 180 Million (Indian Rupees One Hundred Eighty Million Only) or in equivalent foreign currency, during the preceding three (3) completed financial years as on the date of techno-commercial bid opening.

In case the Associate/ Collaborator does not satisfy the average annual turnover criteria, stipulated at Clause 2.2.1 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 Associate/ Collaborator would be required to furnish along with its Techno-Commercial bid, a Letter of Undertaking from its 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 Associate/ Collaborator in case of award.

2.2.2 Net Worth of the Associate/ Collaborator as on the last day of the preceding financial year should not be less than 100% (one hundred percent) of Associate/ Collaborator's paid-up share capital. In case the Associate/ Collaborator 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 Subsidiaries of its Holding companies wherever applicable. In such a case, however the Net worth of the Associate/ Collaborator 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% (one 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:

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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% (seventy five percent) of the respective paid up share capitals and Y1,Y2,Y3 are individual paid up share capitals.

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

- (i) Copies of the unaudited unconsolidated financial statements of the Associate/ Collaborator along with copies of the audited consolidated financial statements of its Holding Company.
- (ii) 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 Associate/ Collaborator is not able to submit the Certificate from a practicing Chartered Accountant certifying its financial parameters, the audited result of three (3) 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.

Notes for Clause 2.0:

- 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.
- iii. "Holding Company" and "Subsidiary" shall have the meaning ascribed to them as per Companies Act of India.
- iv. For 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 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 A complete set of Bidding Documents may be downloaded by any interested Bidder on payment (non-refundable) of the cost of the documents as mentioned above in the form of a crossed account Payee demand draft in favour of "NTPC Ltd.", Payable at New Delhi or directly through the payment gateway at our SRM Site (<https://etender.ntpclakshya.co.in>). For logging

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on to the SRM Site, the bidder would require vendor code and SRM user id and password which can be obtained by submitting a questionnaire available at our SRM site as well as at NTPC tender site (www.ntpctender.com). First time users not allotted any vendor code are required to approach NTPC at least three working days prior to Document Sale Close date along with duly filled in questionnaire for issue of vendor code and SRM user id/password.

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

8.1 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 chose to attend the bid opening. Bidder shall furnish Bid Security, Integrity Pact, Power of Attorney and Deed of Joint Undertaking (as applicable) in physical form as detailed in Bidding Documents before the stipulated bid submission closing date and time at the address given below.

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

10.0 Address for communication:

For the detailed IFB and bidding documents please visit at <https://etender.ntpclakshya.co.in>, www.ntpctender.com or www.ntpc.co.in or may contact General Manager (Renewable Energy - Contract Services) / Addl. General Manager (Renewable Energy-Contract Services) / Dy. General Manager (Renewable Energy-Contract Services)/ Manager (Renewable Energy-Contract Services), NTPC Limited, Room No. 220, R&D Building, Engineering Office Complex (EOC) Annexe, A-8A, Sector-24, NOIDA, Distt. Gautam Budh Nagar, (UP), India, Pin - 201301 on Telephone No. +91-120-4947376, +91-120-4947408, +91-120-4947592; Fax: +91-120-2410251

Email:

aseemjain@ntpc.co.in/shailendra@ntpc.co.in/akmishra21@ntpc.co.in/jaideep@ntpc.co.in or at office.

Corporate Identification Number: L40101DL1975GOI007966, Website: www.ntpc.co.in

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