

RFQ: RCKMOU02 DTD 22-08-2017

Battery Energy Storage System (BESS) for 17 MW Solar PV Project at Manglutan in South Andaman, in Andaman & Nicobar Islands

AMMENDMENT-02 DTD 01-09-2017

Sl.No.	Section / Clause	Amendment description	Remarks
1	Section 1,2,3	Revised IFB, ITB and SCC	Revised PQR Generally
2	Section 5	Amendment 01 to Technical Spec issued by NTPC Clarification 02 to Technical Specifications issued by NTPC	Added
4	Section 6	Appendix-1 Rev01 to Price Schedule	Price Schedules Revised Rev01

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Section 6	:	Forms and Procedures (FP)

Bid Form & Attachments (Techno-Commercial Bid)
 Bid Form & Attachments along with Price Schedules (Price Bid)

1. Performance Security Forms
2. Form of Joint Deed of Undertaking
3. Form of MoU to be signed with Associate / Collaborate
4. Check List for Bidder's Compliance
5. Form of Bank Guarantee by Associate/Collaborator

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SECTION - 1

INVITATION FOR BIDS (IFB)

NTPC Ltd. has invited Bids vide **IFB No.: 40073898** and **Tender No: RE-CS-5728-004(B)-9 dated 05-05-2017** for Battery Energy Storage System (BESS) for 17 MW Solar PV Project at Manglutan in South Andaman, in Andaman & Nicobar Islands. The scope of work includes Design, Engineering, Supply, Packaging and Forwarding, Transportation, Unloading, Storage, Installation, Testing, Commissioning, Grid Integration with 17 MW Solar PV Plant and 33 kV grid, of **6 MW, 24 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. The scope of work also includes Operation and Maintenance of the entire system for twenty five years including one year warranty period.

Bharat Heavy Electricals Ltd., Electronics Division, Bangalore, Karnataka State, India Invites Sealed bids in English (one original and six identical copies) are invited in 2 parts , Part-I (Techno-Commercial Bid including Qualification Bid and Part-II: Priced Bid) from eligible and qualified Battery Energy Storage System manufacturers / suppliers, for selecting Techno-commercially best and Pricewise Lowest Bidder for participating as BHEL's Associate for Bidding for above Tender of NTPC Ltd..

Tender No. RCKMOU02 , dt.22.08.2017.	
Cost of Tender Documents	NIL
Tender document Sale Period	Hosted on Web Site of BHEL
Backup Bid Guarantee Amount to BHEL by successful bidder	₹ 4,50,00,000/- or Equivalent USD or Euro
MoU Guarantee Amount to BHEL by successful Bidder	1% of Bidder's quoted Price
Bank Guarantee for Deed of Joint Undertaking to NTPC by Selected Associate / Collaborator in case of Award of contract to BHEL	2% of Bidder's share of Contract Price.
Bank Guarantee for Contract Performance Security to BHEL by Selected Associate / Collaborator in case of Award of contract to BHEL	10% of the Associate's / Collaborator's share of Contract Price.
Last Date & Time for receipt of bids by email / hard copy of bids	04.09.2017 upto 13.00 hrs.
Date & Time of Bid opening Part – I (email)	04.09.2017 at 13.30 hrs.
Date & Time of Bid opening Part – II	Will be intimated Later

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Note: Bidders who participate in this Tender of BHEL and submit Bids in full compliance of this ITB shall be considered for Epanellement as BESS Vendor of BHEL.

For further details please please visit our web site: www.bheledn.com or www.bhel.com, or www.tenders.gov.in. All corrigenda, addendum, amendments, time extensions, time extensions, clarifications, etc (if any) to the Tender will be hosted on these websites www.bheledn.com or www.bhel.com only. Bidders should regularly visit websites to keep themselves updated.

Note: Registration procedure for items required by BHEL is always open at <https://suppliers.bhel.in>. Prospective suppliers (including MSEs and owned by SCs / STs (may visit this site and apply for registration in the respective Unit.

GENERAL MANAGER (SC&PV)

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SECTION – 2

INSTRUCTIONS TO BIDDERS (ITB)

1.0. DETAILED INVITATION FOR BIDS:

BHEL-Electronics Division, Bangalore is participating in the ICB tender floated by NTPC for Battery Energy Storage System for 17 MW Solar PV Project at Manglutan in South Andaman, A&N Islands. BHEL will be participating in this Tender of NTPC as the lead Bidder by associating / collaborating with a Battery Energy Storage System manufacturer / supplier who meets the stipulated qualification requirement. Bidder's brief scope of work shall be as follows. Detailed scope of work is listed elsewhere in this NIT.

BHEL invites bids from eligible bidders in TWO PARTS (i.e. Part-I: Techno-Commercial Bid and Part-II: Price Bid) from eligible bidders for Associating with BHEL for participating in NTPC Tender for Battery Energy Storage System for 17 MW Solar PV Project at Manglutan in South Andaman, A&N Islands

2.0. BRIEF SCOPE OF WORK

The scope shall cover Design, Engineering, Supply, Packaging and Forwarding, Transportation upto site, comprehensive transit cum storage cum erection insurance Unloading, Storage, Installation, Testing, Commissioning, Integration with NTPC's 17 MW Solar PV Plant, of 6 MW, 24 MWh (throughout life of 25 Years) Battery Energy Storage System (BESS, PCU, BMS, EMS, DC Cables, SCADA, fire detection system, 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 of Bidder:

Date of opening of Part -II (Price Bid) shall be intimated separately after opening and evaluation of Part-I (Techno-Commercial) Bid.

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3.0. PRE-QUALIFICATION REQUIREMENTS (PQR) :

Bids of Only such Bidders who meet all the following Qualification criteria, shall be evaluated:

3.1. Qualifying Requirements for Bidders:

The Bidder should meet the qualifying requirements stipulated under clause 1.1. (Route-1). In addition, the Bidder should also meet the qualifying requirements stipulated under clause 2.0 together with the requirements stipulated under section ITB.

As per clarification issued by NTPC, In case, Battery Manufacturer is not participating directly in NTPC's tender, in that case battery manufacturer (irrespective of technology) can associate/collaborate with one or more bidders. Hence, Bidders who wish to participate in this Tender of BHEL shall NOT participate in NTPC's tender directly as lead Bidder. An undertaking to this effect shall be submitted along with Part-I of this Bid.

3.2 TECHNICAL CRITERIA

3.2.1. Experience (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 3.6 MW or higher, out of which at least one grid interactive battery energy storage system should be of 1.2 MW capacity or higher. The reference grid interactive battery energy storage system of 1.2 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.

3.2.2. Other Conditions:

3.2.2.1. The reference grid interactive battery energy storage system of 1.2 MW or higher capacity should be at a single location developed by Bidder for itself or any other client.

3.2.2.2. Bidder shall submit certificate of successful completion and operation from the Owner.

3.2.2.3. Projects executed by Bidder's group company, Holding Company or Subsidiary Company shall not be considered as Bidder's experience for meeting the QR.

3.2.2.4. 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. The Bidder shall submit End User Certificate which is subject to verification for qualification and hence shall provide full contact details of the End User for verification.

3.2.2.5. The bidder shall furnish major legal cases and their statutory liabilities if any.

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3.3. FINANCIAL CRITERIA

3.3.1. FINANCIAL CRITERIA FOR BIDDER

3.3.1.1. The average annual turnover of Bidder, should not be less than INR 840 Million (Indian Rupees Eight Hundred Forty Million Only) or in equivalent foreign currency, during the preceding three (3) completed financial years as on the date of techno-commercial bid opening. **This should be supported with Documentary evidence in the form of Audited Balance Sheet. In case of Foreign Bidders the Audited Balance sheet should be supported by certification by a Chartered Accountant in India,**

3.3.1.2 In case the Bidder does not satisfy the average annual turnover criteria, stipulated at Clause 3.3.1 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 Associate/ Collaborator in case of award.

3.3.1.3. 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 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..

In case of Foreign Bidders the Audited Balance sheet should be supported by certification by a Chartered Accountant in India,

Note:

- (i) 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

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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.

- (ii) 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.
- (iii) Other income shall not be considered for arriving at annual turnover.
- (iv) "Holding Company" and "Subsidiary" shall have the meaning ascribed to them as per Companies Act of India.
- (v) 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.

3.4 ESTABLISHMENT AND MANPOWER CRITERIA:

The Bidder shall be able to provide services to BHEL-EDN as detailed in the specifications within 24 hours of BHEL-EDN asking for the same. It is preferred that the Bidder has a local Indian office for providing services to BHEL-EDN **for which documentary evidence shall be furnished.**

However Bidders who do not have a local India office may also participate if they are willing to start a local Indian office with at least 10 engineers working on BESS, within 30 days from the date of receipt of order by BHEL from NTPC. An undertaking to this effect shall be submitted by Bidder on Company letter head and seal stating the above

3.5 EXCLUSIVITY CRITERIA :

The bidder who is selected in this Bid as BHEL's Associate shall preferably not participate in this NTPC's Bid either directly or as an associate of any other Bidder. Else, the Bidder shall at least mandatorily agree to participate as BHEL's Associate as a preferred partner and provide preferential pricing to BHEL. **An undertaking to this effect shall be submitted by Bidder on Company letter head and seal stating the above.** If at a later date it is found that Bidder has violated this requirement, then BHEL may ban the Bidder from bidding to BHEL for any product or services in future.

4.0. BID SUBMISSION AND OPENING:

The proposals are to be submitted in TWO PARTS as follows:

Part-I: Pre-Qualification Requirement, Letter of Undertaking of Exclusivity / Preferential pricing, No-Deviation Certificate, Techno-commercial (with Un-priced Price Schedule) Bid

Part-II: Price Bid

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Both Part-I and Part-II shall be submitted together latest by 30.08.2017 upto 13.00 hrs.

Price Bids of only such Bidders who meet the PQR and whose Techno-Commercial Bids are found acceptable, shall be opened. Date of Price Bid will be informed after Opening & evaluation of Part-I Bid

Soft signed copy of Qualification Requirements, Techno-Commercial Bids and Price Bids in soft copies in .pdf format shall reach the mailbox mentioned below:

spankaj@bheledn.co.in, chendhil@bheledn.co.in

NO REQUEST FOR EXTENSION SHALL BE ENTERTAINED.

Signed ORIGINAL Hard copy of the Part-I and Part-II Bids Price Bids shall be sent to:

AGM (SC&PV-MM) **Attention. Sh S S Dubey**

Bharat Heavy Electricals Ltd.

NEB 5th Floor, Electronics Division

Mysore Road, Bangalore – 560026.

Ph. 080-26989067, Cell: +919945530180

4.1. Bid Clarifications:

Bidders seeking clarifications on the tender specification requirements shall email the same to the following on or before 12:00 hrs IST on 29-08-2017

spankaj@bheledn.co.in, chendhil@bheledn.co.in

Only Clarifications by written Email will be acknowledged and replied by BHEL. Clarifications sought orally or via telephone will not be entertained.

4.2. Preparation of Bids

The Part-I and Part-II Bids shall consist of following and the same shall be submitted together within the due date as stipulated in the tender specifications.

4.2.1. Part-I Bid:

1) Pre-Qualification Requirements:

Documentary evidences in support of the PQR stipulated in this ITB. **Documentary evidence to meet the Financial criteria, Establishment criteria, and Undertaking for Preferred Partner and Preferential Pricing to BHEL, Undertaking for Establishing Local Indian Office with stipulated manpower.** The bidder shall furnish their audited profit and loss accounts and balance sheets for the preceding three (3) financial years from the original scheduled date of tender opening in support of meeting Financial Criteria. **This should be supported with Documentary evidence in the form of Audited Balance Sheet. In case of Foreign Bidders the Audited Balance sheet should be supported**

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by certification by a Chartered Accountant in India. The Net worth of the Bidder should be supported with Certification in English by the Bidder's Banker.

2) No Deviation Certificate

Bidders shall note that apart from the ITB and SCC enclosed herein, Terms & Conditions of NTPC (enclosed with this SCC) shall apply back-to-back on Associate / Collaborator. Bidder shall furnish a signed soft copy of **"Unconditional No Deviation Certificate"** on BHEL NIT specification requirements (mentioning NO DEVIATION from Technical specifications & Commercial Terms & Conditions) as a separate document. **Non-furnishing of the same shall risk in rejection of Bids.**

3) Power of Attorney:

Bidder shall furnish a Power of Attorney from competent authority of their organisation in the name of the Authorised signatory, authorizing him / her to sign and submit Bids, Provide clarifications if sought by BHEL, participate in negotiations with BHEL, participate in discussions with NYPC if required. Copy of Delegation of powers for Competent authority to issue Power of attorney shall be enclosed with the Power of Attorney.

4) Techno Commercial Bid

Bidder shall furnish a responsive techno commercial bid containing the Documents, Drawings, Sixing calculations, Energy Generation Guarantees as listed in BHEL's Technical Specifications. **Bidders shall note that techno commercial bids shall be considered for evaluation only if the "No Deviation Certificate" submitted by bidder is found to be satisfactory and unconditional.** Bidder shall furnish the signed soft copy of the Unpriced Price schedules indicating only Applicable taxes and Rates of taxes / duties as per the format enclosed in the specification in .pdf. **If Price information of any nature are included in Part-I the Bid will be summarily rejected.**

4.2.2. Part-II Bid:

Bidder shall furnish the signed soft copy of the filled price schedules by email as per the format enclosed in the specification in .pdf. Bidder shall also be required to furnish signed ORIGINAL HARD COPY of Part-I and Part-II Bids.

Bidders shall quote their Prices on F.O.R Site basis, including basic Price of supply including Marine Freight & Insurance, Customs Duty, Customs Clearance charges , port handling, port clearance, port charges, (if any)., basic prices for services, Transportation upto Site, Inland Transit Freight & Insurance , Unloading at site, Storage at Site, Storage and Erection Insurance, Installation (except Civil Cost) & Commissioning including all Taxes & Duties, as Applicable 2 days prior to Bid Submission date.

Note: Bidders who participate in this Tender of BHEL and submit Bids in full compliance of this ITB shall be considered for Epanellement as BESS Vendor of BHEL.

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4.3. Bid evaluation:

Bidders who meet the qualification requirements and have submitted documentary evidence in support of the same and who have submitted the signed copy of “No Deviation Certificate” as well as acceptance of Terms & Conditions shall be considered as eligible bidders and the Technical commercial bids of these Bidders shall be evaluated.

Clarifications if any shall be sought from Bidders on technical commercial Bid, and these clarifications shall be provided by Bidders within 24 hours upon request from BHEL failing which Bids shall be treated as nonresponsive and summarily rejected.

In case during the evaluation of Technical commercial Bid if any amendment is required to scope of supply and services, then the same shall be informed to eligible Bidders and Supplementary Price Bids shall be requested and the same shall be submitted by Bidders in similar fashion as Part-II Bid submission on date and time specified by BHEL-EDN.

Bidders who’s technical commercial bids are found to be responsive and suitable shall be requested by BHEL-EDN to submit the password for Price Bids via email.

Price Bids may be opened “IN CAMERA” by the committee. Clarifications if any shall be sought and filed for records.

4.4. Bid Evaluation Criteria:

The Bids shall be evaluated as per the following criteria:

The Total cost to BHEL-EDN shall be calculated including basic Price of supply including Marine Freight & Insurance, Customs Duty, Customs Clearance charges , port handling, port clearance, port charges, (if any)., basic prices for services, Transportation upto Site, Inland Transit Freight & Insurance , Unloading at site, Storage at Site, Storage and Erection Insurance, Installation (except Civil Cost) & Commissioning including all Taxes & Duties, as Applicable 2 days prior to Bid Submission date, to arrive at the “Lowest Cost to BHEL” Bid (L1). Bidder shall ascertain all costs towards above scope are included by Bidder in the Price Bid. Where Applicable Price and / or Taxes & Duties applicable is shown as NIL or left Blank, it will be assumed that such Price and / or Taxes & Duties is included in the overall Price. No Variation shall be allowed at a later date. Also Applicable taxes and duties as included in the Price shall be declared along with rates applicable. For supplies from abroad, the Customs Duty and other applicable Taxes & Duties on Imports shall be included (on Merit Duty basis) to arrive at the landed cost to BHEL.

No other Taxes & Duties other than those declared by Bidder shall be allowed at a later date except where the Taxes & Duties undergo a change due to statutory reasons.

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4.5. Selection of Associate:

Bidder whose Techno commercial bids are found suitable and whose Price bid is evaluated to be the Lowest (L1) shall be called for negotiations, if required, to be able to obtain the most optimum and best price to ensure that BHEL is successful in bagging the order from NTPC. Subsequent to this Bidder will be termed as BHEL-EDN's Associate and will be invited to enter into and sign an MoU Agreement with BHEL. The proposed MoU Format is enclosed, Subsequent to signing of MoU, Associate shall also sign a Deed of Joint Undertaking as per format enclosed which shall be submitted by BHEL along with composite Bid to NTPC.

In the event of NTPC placing order / signing contract with BHEL, this MoU and DJU shall form the basis for placement of order by BHEL on Associate during project execution on back-to-back basis. The successful bidder after Price bid evaluation shall visit BHEL-EDN, Bangalore office within a short notice of ONE DAY for price negotiations, signing of MoU Agreement , signing of DJU, signing of Attachments along with supporting documents for NTPC tender and also submit requisite BGs listed in clause 5.0.

Subsequent to evaluation of bids by NTPC, if NTPC wants to award the contract to BHEL and seeks reduction in prices / insists for negotiations then Associate shall agree for the same and resultant reduction in prices if any shall be proportionately be passed on to Associate and shall be unconditionally accepted by Associate.

5.0. REQUIREMENT TO BE FULFILLED BY BIDDER WHO IS SELECTED AS BHEL's ASSOCIATE

5.1. Bidder who is selected by BHEL as the successful Bidder after Techno-Commercial and Price Evaluation, will be BHEL's Associate for participating in the Tender floated by NTPC. The Associate shall enter into MoU Agreement for Associate with BHEL. Associate shall submit a Bank Guarantee to BHEL for 1% of the Final negotiated value of Bidder's price as a security **deposit for this MoU, This BG shall be valid for 45 days beyond the Date of Validity of the Bid and extendable further if required, till placement of order by BHEL on Associate.**

5.2. BHEL as lead Bidder shall be required to submit a Bid Security in form of a Bank Guarantee of Rs.5,54,84,000/- to NTPC for participating in the Tender. **Associate shall submit a Back-up Bank Guarantee to BHEL for EMD for Rs.4,50,00,000/- . This BG shall be valid for 225 days from the Date of Opening of the Bids by NTPC.**

5.3. Associate shall also sign a Deed of Joint Undertaking (DJU) for submission to NTPC along with the BHEL's Composite Bid. This agreement and Deed of Joint Undertaking shall be valid till completion of all the contractual obligations of the Associate. Within 28 days of award of contract by NTPC to BHEL, **Associate shall submit a Bank Guarantee to NTPC for 2% of the Associate's share of Contract price, as a security deposit for this DJU.**

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5.4. The MoU and DJU signed by Associate shall form the basis for future back-to-back placement of Order on Associate by BHEL, in the event of NTPC placing order / signing a contract with BHEL.

5.5. The selected Associate, shall furnish the following Bank Guarantees immediately upon being informed of selection and invited for signing of MoU agreement with BHEL.

- **Bank Guarantee to BHEL of 1 % of the Associates Price as Backup Guarantee for the MoU Agreement for Associate. This BG shall be valid for 45 days beyond the Date of Validity of the Bid and extendable further if required, till placement of order by BHEL on Associate.**
- **Back-up Bank Guarantee to BHEL for EMD for Rs.4,50,00,000/- . This BG shall be valid for 225 days from the Date of Opening of the Bids by NTPC and shall be extendable by NTPC on the request of BHEL..**

Bank Guarantees to BHEL shall be as per the enclosed formats from any of the Banks as per the List of approved Banks in this NIT. No change in format shall be acceptable whatsoever.

5.6. In the event of NTPC placing order / signing a contract with BHEL, **Associate shall submit a Bank Guarantee to NTPC for 2% of the Associate's share of Contract price, as a security deposit for this DJU.**

5.7. In the event of NTPC placing order / signing a contract with BHEL, then BHEL shall place back-to-back order on Associate on basis of MoU and DJU. **The Associate shall furnish within 10 days of placement of order by BHEL, a Bank Guarantee to BHEL for 10% of the Associates Ordered price as Contract Performance Guarantee (CPG) by Associate.**

6.0. **CHECKLIST FOR BIDDERS:** Bidders shall fill in the check List enclosed to the ITB and submit it with their Bid with seal & signature of the Bidder.

SECTION – 3

SPECIAL CONDITIONS OF CONTRACT (SCC)

Terms and Conditions:

1. Bidders shall note that BHEL will be participating as lead bidder in the following Tender of NTPC

Tender No. RE-CS-5728-004(B)-9, dt.05.05.2017

Tender for Battery Energy Storage System for 17 MW Solar PV Project at Manglutan in South Andaman, A&N Islands as per the scope of work briefly mentioned hereinafter.

1. The scope shall cover Design, Engineering, Supply, Packaging and Forwarding, Transportation upto site, comprehensive transit cum storage cum erection insurance Unloading, Storage,

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Installation, Testing, Commissioning, Integration with NTPC's 17 MW Solar PV Plant, of 6 MW, 24 MWh (throughout life of 25 Years) Battery Energy Storage System (BESS, PCU, BMS, EMS, DC Cables, SCADA, fire detection system, etc. required for smooth operation) including twenty five year Operation and Maintenance (O&M) works on turnkey basis.

2. This Tender vide RFQ RCKMOU02 floated by BHEL for Competitive Bidding is for sole purpose of Selection of techno-Commercially best and Price wise lowest Bid among Vendors who are Bidding to be BHEL's Associate for Submission of Bid to NTPC, in response to above tender of NTPC, by entering into a **"MoU Agreement for Associate"** with BHEL. Format for MoU Agreement is enclosed. In case BHEL's bid is successful and BHEL receives order from NTPC / NTPC signs a contract with BHEL, then this **"MoU Agreement for Associate"** will form the basis of back-to-back placement of order on Associate by BHEL as per agreed scope division. This MoU Agreement will also form the basis for BHEL and Associate signing a **"Deed of Joint Undertaking" (DJU)** as per NTPC's format, This DJU will be submitted by BHEL to NTPC along with the composite Bid.

This tender shall not be understood as Tender for placement of order/ procurement of BESS by BHEL.

3. BHEL-EDN is not responsible for any delay in receipt of quotation sent by vendor through post/e-Mail/fax.

4. BHEL- EDN does not bind itself to accept the lowest rate quoted, but reserves right to accept whole or part of any quotation at its sole discretion. Bids should remain valid for a minimum period of 225 days from the due date of Bid opening by NTPC and shall be further extendable depending upon requirement of BHEL / NTPC.

5. BHEL-EDN is under no obligation to inform the prices of Lowest quoted vendor or any other vendors to anyone. This is keeping in view the confidentiality required for participation in NTPC's ICB tender.

4. Bidders shall quote their Prices on F.O.R Site basis. Lowest quotation is determined on the basis of Total Cost to BHEL- EDN including basic Price of supply including Marine Freight & Insurance, Customs Duty, Customs Clearance charges , port handling, port clearance, port charges, (if any)., basic prices for services, Transportation upto Site, Inland Transit Freight & Insurance , Unloading at site, Storage at Site, Storage and Erection Insurance, Installation (except Civil Cost) & Commissioning including all Taxes & Duties, as Applicable 2 days prior to Bid Submission date.

5. It is mandatory that all Bidders agree to sign Deed of Joint Undertaking (DJU) failing which Bids shall be liable for rejection. It is deemed that by submission of Bids to BHEL in response to this Tender, Bidder agrees to be considered for selection as BHEL's Associate for participating in NTPC Tender and if selected agrees to sign Deed of Joint Undertaking (DJU) if and when called upon by BHEL to do so. Techno-Commercial Best and Pricewise Lowest quoted (L1) Bidder shall be selected

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as BHEL-EDN's Associate for signing Deed of Joint Undertaking (DJU) as per NTPC's format enclosed , on Indian NON-JUDICIAL STAMP PAPER, before submission of Bid by BHEL-EDN to NPTI. This DJU shall be submitted along with the Bid by BHEL to NTPC and shall remain binding on both the parties till the completion of contract.

6. Submission of Bids, Receipt of bids, opening and Evaluation of Bids shall be as per ITB.

7. Process of Selection of Associate after evaluation and Requirements to be fulfilled by Associate after selection are detailed in ITB.

8. The Terms & Conditions (COMMERCIAL CONDITIONS OF CONTRACT) of NTPC as included in their Tender No. **RE-CS-5728-004(B)-9**, dt.05.05.2017, shall be applicable back-to-back and shall be binding on BHEL's Associate during execution of the contract. These terms and conditions are enclosed to this Tender specification.

9. Bidders shall submit NO DEVIATION Bids and shall furnish a **"NO DEVIATION"** declaration signed by Authorised signatory with company seal along with Part-I of the Bid, failing which the Bids will not be evaluated further. By submitting the NO DEVIATION declaration, Bidder agrees that he will comply to Technical Specifications, ITB, SCC and NTPC's Terms & Conditions and other Price related requirements specified by BHEL in totality and there shall be no deviations to any of the requirements

10. The Bidder is also required to submit a Signed copy of BHEL's Technical Specifications, ITB, SCC and NTPC's Terms & Conditions along with their Part-I Bid as acceptance of all terms & conditions and specifications. These shall form part of the future contract, if and when signed with Associate by BHEL.

11. In case of negotiations/ reduction in price required by NTPC as a part of post-Bid negotiations with successful Bidder, the same shall be proportionately passed on and acceptable to Associate.

12. Non-Acceptance or Non-Compliance of conditions at Sl. No. 8,9,10,11 will result in rejection of the Bids.

13. The MoU Agreement for Associate signed may be converted into back-to-back Purchase order on Associate after BHEL receives order from NTPC Validity of MoU Agreement shall be at least for 225 days from Date of Bid opening by NTPC.

14. At the time of award of order, Inspection/Test Reports/Certificates, if any as per specification/ Tender requirement, shall be adhered to. If Pre-shipment inspection at supplier's works is required either by BHEL and/or by NTPC, vendor shall provide necessary assistance for inspection.

15. Payment terms: NTPC payment terms as per NTPC's GCC / SCC shall apply back-to-back on Associate.

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16. Taxes and duties considered and their applicable rates as on 1 day prior to Bid opening by BHEL shall be indicated in the Unpriced Price Schedule as well as in the Part-II Price Schedule. BHEL will not allow for any other Taxes & Duties during evaluation or during execution, other than those declared by Bidder. If there is any statutory change such as new/ changed GST rates, new Taxes, Cess or levies, etc. these shall be treated in same manner as in NTPC Tender terms & Conditions

17. Bidder's GST Registration Number should be mentioned in the Unpriced Price Bid Schedule as well as in the Price Bid.

18. **Liquidated Damages:** If Liquidated Damages are due to be paid by BHEL to NTPC, the same shall be passed on to Associate, in case delay is due to reasons attributable to the Associate.

a) If the Associate fails to achieve the successful Completion of Facilities within the agreed work schedule, then Liquidated Damages shall be levied by NTPC and payable by Associate, as per sum calculated at the following rates:

A sum of INR 10,68,643/- (Rupees Ten Lakh Sixty Eight Thousand Six Hundred Forty Three Only For each day of delay in successful Completion of Facilities under the Contract as per the scope of work of the Associate on whom BHEL has placed order for BESS.

b)The liquidated damages for delay in supply of spares beyond the dates stipulated under the Contract shall be as follows :

One half of the one percent (1/2%) of F.O.R price of undelivered spares, per week or part thereof of delay subject to maximum of five percent (5%) of the total F.O.R price of all spares included in the scope of work of the contractor under the contract.

(c) The total amount of liquidated damages for delay under the contract will be subject to a maximum of five percent (5%) of the total Contract Price.

19. BHEL-EDN reserves the right to accept/reject bids of any Bidder and/or annul/ re-float/ call for snap bid the tender, in case outcome is not favorable to BHEL-EDN's participation in the tender. BHEL's decision will be Final and binding on all Bidders.

Enclosed in Section 4: NTPC Commercial Terms & Conditions:

TIME SCHEDULE FOR CONTRACT:

	Activities/Milestone	Period in months from NOA	
		Start	Finish

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1.	Basic Engineering & Approvals	0.5	3
2.	Ordering of Bought Out Items (BOIs)	1	4
3.	Detailed Engineering and approval	3	6
4	Civil Works	4	7
5	Supply of Batteries	7	10
6	Receipt of Batteries	8	11
7	Installation of Batteries	9	12
8.	Supply of Battery Management System and other BOI's	7	10
9.	Associated Electrical works	8	11
10.	Testing & Commissioning of Batteries	11	13
11	Installation and Commissioning of Battery Management System	11	13
12	Integration with Solar PV Plant/Grid	12	14
13	Completion of facilities	-	15

The bidder shall also be required to submit a brief integrated PERT Network (L1 Schedule) matching with the above work schedule. The L1 Schedule shall, inter alia, include at least following activities for each systems listed above, showing their

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SECTION – 4

NTPC's TERMS & CONDITIONS OF CONTRACT (SCC) (ENCLOSED)

- 1) General Conditions of Contract (GCC) and
- 2) Special Conditions of Contract (SCC).
- 3) Ammendments / Clarifications issued by NTPC

.....

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SECTION – 5
TECHNICAL SPECIFICATIONS

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SECTION 6 ATTACHMENTS & FORMS

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**BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN IN
SOUTH ANDAMAN, A&N ISLANDS
BID DOCUMENT NO. : RE-CS-5728-004(B)-9
POWER OF ATTORNEY
BIDDER TO ATTACH THE POWER OF ATTORNEY
IN ACCORDANCE WITH CLAUSE 8.2.4 (b) OF ITB
(BOARD RESULATION IN FAVOUR OF AUTHORIZED SIGNATORY ALSO ENCLOSED)**

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**BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN IN
SOUTH ANDAMAN, A&N ISLANDS**

**BID DOCUMENT NO. : RE-CS-5728-004(B)-9
(Qualification Data)**

Our qualification data in support thereof is enclosed in the following Attachments:

1. Attachments 3A : Experience Details of Bidder
2. Attachment 3B : Details of Financial Capacity Status
3. Attachment 3I : Deed of Joint undertaking (if applicable)

We further understand and agree that any misleading or false information furnished by us may result in summary rejection of our bid.

Note : 1. The Bidder shall enclose relevant documents like copies of authentic purchase order, completion certificates, agreements etc. supporting the details/data provided in above Attachments.

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**BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN IN
SOUTH ANDAMAN, A&N ISLANDS**

**BID DOCUMENT NO. : RE-CS-5728-004(B)-9
(Details Pertaining to Technical Qualification of the Bidder
(A) FOR BIDDERS SEEKING QUALIFICATIONS AS PER 3.2.1 of ITB**

In support of Qualifying Requirements of Clause 3.2.1 of ITB, we confirm that we have manufactured, supplied, installed/ supervised installation and commissioned/ supervised commissioning of grid interactive battery energy storage system(s) of cumulative installed capacity of 3.6 MW or higher, out of which at least one grid interactive battery energy storage system have been of 1.2 MW capacity or higher.

We further confirm that reference grid interactive battery energy storage system of 1.2 MW or higher capacity has been in successful operation for at least six (6) months prior to the date of techno-commercial bid opening:

- (I) Details of grid interactive battery energy storage system(s) of cumulative installed capacity of 3.6 MW or higher out of which one grid interactive battery energy storage system(s) is of 1.2 MW capacity or higher, which has been in successful operation for at least six (6) months prior to the date of techno-commercial bid opening, as per following :**

Sl. No.	Item Description	Reference Plant No.01 (1.2 MW or above)	Reference Plant No.02	Reference Plant No.03
1.0	Description of work			
2.0	Name of Client with full address, Fax No. & Tel. No.			
3.0	Name of the Power Plant with its location			
4.0	Name and designation of the responsible person in client's organization			
5.0	Contract No. and Date			
6.0	Whether this is a grid interactive battery energy storage system	YES*/ NO*	YES*/ NO*	YES*/ NO*
7.0	Capacity of the Plant	MW	MW	 MW

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Sl. No.	Item Description	Reference Plant No.01 (1.2 MW or above)	Reference Plant No.02	Reference Plant No.03
8.0	Whether scope of works included (a) manufacturing (b) Supply (c) Erected (d) Supervised Erection (e) Commissioning (f) Supervised Commissioning	YES*/NO* YES*/NO* YES*/NO* YES*/NO* YES*/NO* YES*/NO*	YES*/NO* YES*/NO* YES*/NO* YES*/NO* YES*/NO* YES*/NO*	YES*/NO* YES*/NO* YES*/NO* YES*/NO* YES*/NO* YES*/NO*
9.0	Date of Commissioning of the above Plant			
10.0	No. of months of successful operation of the above plant prior to the date of Techno-Commercial bid opening date.			
11.0	Completion Certificate from client, Copies of Authentic purchase orders, Agreements in support of data/details of Sl. No. 1 to 10 enclosed as Annex.			

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**BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN IN
SOUTH ANDAMAN, A&N ISLANDS
BID DOCUMENT NO. : RE-CS-5728-004(B)-9**

(Financial Data pertaining to Financial Qualification of the Bidder's Associate/Collaborator as per Clause 3.3.1.1 of ITB)

A* To satisfy the requirements specified in Sub-Clause Clause 3.3.1.1 of ITB of Bid Data Sheet, Section-III, We give below the following details:

In terms of Sub Clause 3.3.1.1 of ITB, Section-III, we confirm that our ~~Associate/Collaborator~~ average annual turnover during preceding three completed financial years as on date of Techno-commercial bid opening is not less than **INR 840 Milliion** (Indian Rupees Eight Hundred Fourty Million only). In support of above, we are indicating following details and also enclosing Audited Financial Statements:

Sl.No. Financial Year	Amount in Rupees (in Crore)
-----------------------	-----------------------------

1. 2016 - 2017	
----------------	--

2. 2015 - 2016	
----------------	--

4. 2014 - 2015	
----------------	--

4. ** 2013 - 2014	
-------------------	--

5. Average Annual Turnover
for the preceding three (3) completed
Financial Years as on date of
Techno-commercial Bid Opening.

6. We have enclosed Audited Financial Statements for preceding (3) Three completed Financial Years	Yes*/No*
--	----------

**** In case where audited results for the last financial year as on the date of Techno-Commercial bid opening are not available, certification of financial statement from a practicing chartered accountant shall also be considered acceptable. In case, Certificate from practicing Chartered Accountant certifying its financial parameters is not submitted, the audited results of three consecutive financial years preceding the last financial year shall be considered for evaluating the financial parameters. Further a certificate**

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would be required from the CEO/CFO as per the format enclosed (Refer Appendix-C) 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.

*** Please Strike off whichever is not applicable.**

B.* For Bidder's Associate/Collaborator not meeting the requirement of Sub Clause 3.3.1.1 of ITB on its own:

Since our ~~Associate/Collaborator~~ we do not satisfy the Financial Criteria stipulated at Sub Clause 3.3.1.1 of ITB, on our Own, we give below the following details of our ~~Associate/Collaborator's~~ **Holding Company in terms of Sub Clause 3.3.1.2** of ITB who meet the stipulated turnover requirements of 3.3.1.1 of ITB and whose Net worth 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.

1. Name and Address of the Holding Company:.....

2. Annual Turnover of the Holding Company with following details :

Sl.No. Financial Year	Amount in Rupees (in Crore)
-----------------------	-----------------------------

1. 2016 - 2017

2. 2015 - 2016

3. 2014 - 2015

4. Average Annual Turnover of the Associate/Collaborator's Holding Company for the preceding three (3) completed Financial Years as on date of Techno-commercial Bid Opening.

5. We have enclosed Audited Financial Yes*/No* Statements for the last 3 financial years of the Holding Company

6. A Letter of Undertaking from the Holding Company, supported by Board Resolution, pledging unconditional and irrevocable financial support for execution of the contract by the bidder in case of award is enclosed

*** Please Strike off whichever is not applicable.**

Date :

(Printed Name).....

Place : (Designation).....

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**BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN IN
SOUTH ANDAMAN, A&N ISLANDS**

BID DOCUMENT NO. : RE-CS-5728-004(B)-9

(Financial Data pertaining to Financial Qualification of the Bidder's Associate/Collaborator as per Clause 3.3.1.3 of ITB)

Bidder's Name & Address :

Dear Sirs,

A)* To satisfy the requirements specified at Clause 3.3.1.3 of ITB, Section-III, We give below the following details:

We hereby confirm that our net worth of our ~~Associate/Collaborator~~ as on the last day of the preceding financial year is not less than 100% (One Hundred Percent) of its paid-up share capital.

The Details are as under:

Sl. No.	Description	As on last day of the preceding financial year (in INR Crore)
---------	-------------	--

1. Paid-up Share Capital
2. Net Worth
3. %age of Net worth to Paid-up Share Capital
4. Documentary evidence like Annual Report/
Audited financial statements for the last preceding
Financial year / in case Audited results for the last
preceding three (3) completed Financial Years are
not available, certification of financial statements
from a practicing Chartered Accountant etc. in
support of above is enclosed at Annexure.....to
his Attachment-3A-3.
5. Since we are not able to furnish our ~~Associate/Collaborator~~
audited financial statements on stand
alone entity basis, we are submitting
the following Documents for substantiation
of our Qualification:

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Sl. No.	Description	As on last day of the preceding financial year (in Rs.Crores)
---------	-------------	--

a) Copies of unaudited unconsolidated financial

statements of the **Associate/Collaborator** alongwith

copies of the audited consolidated financial

statements of the **Associate/Collaborator's** Holding Company

for the last 3 completed Financial years enclosed at

Annexure.....to this Attachment 3A-3.

b) Certificate from the CEO/CFO of the **Associate/Collaborator's**.....

Holding company stating that the unaudited unconsolidated

financial statements form part of the consolidated

Annual Report of the company, is enclosed as per

the format at **Appendix-A** to this Attachment-3A-3.

In case where audited results for the last financial year as on the date of Techno-Commercial bid opening are not available, certification of financial statement from a practicing chartered accountant shall also be considered acceptable. In case, Certificate from practicing Chartered Accountant certifying its financial parameters is not submitted, 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.

Date :

(Printed Name)

Place : (Designation).....

Note : * Please Strike off whichever is not applicable.

(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 is not considered for arriving at annual turnover.

(iii) "Holding Company" and "Subsidiary" shall have the meaning ascribed to them as per Companies Act of India.

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**APPENDIX-A
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**BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN IN
SOUTH ANDAMAN, A&N ISLANDS
BID DOCUMENT NO. : RE-CS-5728-004(B)-9**

**PROFORMA OF CERTIFICATE FROM THE CEO/CFO OF THE ASSOCIATE/ COLLABORATOR'S
HOLDING COMPANY IN ACCORDANCE WITH 3.3.1.3 of ITB
(To be submitted by Bidder alongwith the Techno-Commercial Bid)**

Ref. :

Date :

Dear Sirs,

1.0 I, Mr. (CEO of the Company / CFO of the Company)* declare that M/s.

..... (Name of the Holding Company) is the Holding Company of M/s.

..... (Name of the Bidders **Associate/Collaborator**).

2.0 I hereby confirm and undertake that the unaudited unconsolidated financial statements submitted in respect of the (**Bidder's Associate/Collaborator**) as part of the bid reference no.

..... dated have been considered for the purposes of the finalisation of Consolidated Financial Statements of the Holding Company as part of the Annual Reports.

3.2 I further, certify that the figures in the unaudited unconsolidated financial statements are true and correct and same have been duly reflected in the audited consolidated financial statements and / or Annual Report of the Holding Company.

Yours faithfully
(Signature)

Date :

Place :

(Name & Designation).....

(Name of the Holding Company)

(Seal of Holding Company)

.....

Note : *Strike off whichever is not applicable.

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ATTACHMENT - 3B

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**BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN IN SOUTH ANDAMAN,
A&N ISLANDS**

BID DOCUMENT NO. : RE-CS-5728-004(B)-9

**Financial Capacity Status of Bidder and/or wherever applicable, his
Associate(s)/Collaborator(s)**

Sl. No.	Description
A	Orders in Hand
i	Total value of Contracts
ii	Value of work completed out of above value upto March 2016
iii	Value of anticipated work to be performed in the following Financial Years : 2017 - 2018 2018 - 2019 2019 - 2020 2020 - 2021 2021-2022

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B	Bidder's assessment of maximum negative cash flow (fund requirement) at any point of time between Notification of Award and completion of contract based on specified terms of payment and his expenditure plan for plant & equipment being offered by bidder for this package.				
C	Arrangement to meet the above fund requirement	Own Funds	Credit	Others	Total

D	Gross Turnover of Company during: Year ending - March 2013 Year ending - March 2014 Year ending - March 2015 Year ending - March 2016 Year ending - March 2017				
E	Balance Sheet and Profit & Loss Account duly certified by a Chartered Accountant for the last 5 years is to be submitted.	Enclosed at Annexure to this Attachment-3B			

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F	Declaration by Bankers or the Chartered Accountant regarding : i) Bank Guarantee Limits ii) Over Draft Limits/Cash Credit Limits iii) Deferred payment limits. iv) Fixed Deposits v) Movable Property Hypothecation. (Please state the present utilisation status also)	Enclosed at: Enclosed at: Enclosed at: Enclosed at: Enclosed at:
G	Information regarding any current litigation in which the Bidder is involved, the parties concerned the disputes and the dispute amount if any.	Enclosed at:

Note : 1. The above Attachment shall be filled-up by the bidder for **himself** and shall be furnished. 2. Continuation sheets of like size and format may be used and annexed to this Attachment if required.

Date :

(Printed Name)

Place : (Designation).....

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ATTACHEMENT 3I **FORM OF JOINT DEED OF UNDERTAKING**

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FORM OF JOINT DEED OF UNDERTAKING (Rev.01)

(ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

DEED OF JOINT UNDERTAKING TO BE EXECUTED BY THE BIDDER MEETING THE REQUIREMENTS SPECIFIED AT OF CLAUSE NO. 1.2(Route 2)*/ 1.3(Route 3)*/ 1.4(Route 4)*/ 1.5(Route 5)* AND THE ASSOCIATE / COLLABORATOR (BATTERY MANUFACTURER WHO HAS MANUFACTURED AND SUPPLIED 3.6 MW (OR HIGHER) CUMULATIVE CAPACITY WITH 1.2 MW (OR HIGHER) SINGLE LARGEST GRID INTERACTIVE BATTERY ENERGY STORAGE CAPACITY WHICH SHOULD HAVE BEEN IN SUCCESSFUL OPERATION FOR AT LEAST SIX (6) MONTHS PRIOR TO THE DATE OF TECHNO-COMMERCIAL BID OPENING), OF ITEM 3.0 OF SECTION-III (BID DATA SHEET) FOR SUCCESSFUL PERFORMANCE OF BATTERY PORTION OF THE “BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN IN SOUTH ANDAMAN, A&N ISLANDS”, IN WHICH THE ASSOCIATE/ COLLABORATOR AND THE BIDDER ARE JOINTLY LIABLE TO THE EMPLOYER TO PERFORMANCE INCLUDING MEETING THE TECHNICAL GURANTEES OF BATTERY PORTION.

This DEED OF UNDERTAKING executed thisday of
Two thousandby M/s a
Company incorporated under having its Registered Office at
..... (hereinafter called the “Associate/Collaborator”, which expression shall
include its successors, administrators, executors and permitted assigns) and M/s
..... a company incorporated under the
..... having its registered office at (hereinafter called the
“Bidder”, which expression shall include its successors, administrators, executors and
permitted assigns) in favour of NTPC Limited, a company incorporated under the Companies
Act, 1956, having its Registered Office at NTPC Bhavan, Scope Complex, 7, Institutional Area,
Lodhi Road, New Delhi - 110 003, (India) (hereinafter called “NTPC” or “Employer” which
expression shall include its successors, administrators, executors and assigns).

WHEREAS, the Employer invited bids for Battery Energy Storage System for 17 MW Solar PV Project at Manglutan in South Andaman, A&N Islands Package vide its Bid Document No. RE-CS-5728-004(B)-9.

AND WHEREAS the bid document stipulated that bidding is open to a bidder who meets the requirement at Clause No. **1.2(Route 2)*/ 1.3(Route 3)*/ 1.4(Route 4)*/ 1.5(Route 5)*** of Item No.3.0 of Section-III (Bid Data Sheet) and associates with a Battery Manufacturer as per Item No.3.0 of Section-III (Bid Data Sheet), forming part of the bid documents.

WHEREAS, M/s.(Bidder) is submitting its proposal in response to the aforesaid Invitation for Bid for Battery Energy Storage System for 17 MW Solar PV Project at Manglutan in South Andaman, A&N Islands Package vide its Bid Document No. RE-CS-5728-004(B)-9.

AND WHEREAS M/s..... (Bidder) itself meet the requirements of Clause No. **1.2(Route 2)*/ 1.3(Route 3)*/ 1.4(Route 4)*/ 1.5(Route 5)*** of Item No.3.0 of Section-III (Bid Data Sheet) and desire of associate/ collaborator with M/s..... (hereinafter referred to as 'Associate') who **has manufactured and supplied 3.6 mw (or higher) cumulative capacity with 1.2 MW (or higher) single largest grid interactive battery energy storage capacity which should have been in successful operation for at least six (6) months prior to the date of techno-commercial bid opening**, the Bidder and associate/ collaborator are required to jointly execute and furnish

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along with the bid an irrevocable Deed of Joint Undertaking and be jointly and severally responsible and bound unto the Employer for successful performance of the Battery Portion of Battery Energy Storage System EPC Package, fully meeting the declared guaranteed parameters and characteristics of Battery Portion as per the Bid Documents, in the event the bid is accepted by the Employer resulting in a Contract.

NOW THEREFORE, THIS DEED WITNESSETH AS UNDER:

1. That in consideration of the Award of the Contract by the Employer to the Bidder, we the Associate/ Collaborator and the Bidder, do hereby declare and undertake that we shall be jointly and severally responsible and bound unto the Employer for the execution of successful performance of the Battery portion for Battery Energy Storage System EPC Package, such that it fully meets the guaranteed parameters and characteristics of the Battery portion as declared by associate/collaborator (Battery Manufacturer). However, Bidder/Contractor shall be fully and severely responsible for guaranteed parameters and characteristics of Battery Energy Storage system to employer.
2. In case of any breach of the Contract committed by the Bidder, we the Associate/ Collaborator do hereby undertake, declare and confirm that we shall be fully responsible for scope of supply and work as per Purchase order agreement with Bidder/Contractor for the Battery portion till the expiry of defect liability period and undertake to carry out all the obligations and responsibilities under this Deed of Undertaking in order to discharge the Bidder's obligation and responsibilities in respect of Battery Portion stipulated in the contract. Further if the Employer sustains any loss or damage on account of any breach of the Contract in respect of Battery portion (for scope of supply and work as per Purchase Order between Bidder/Contractor and Associate/ Collaborator), we the Associate/ Collaborator and Bidder jointly and severally undertake to promptly indemnify, and pay such loss/damages caused to the Employer on its written demand without any demur, reservation, contest or protest in any manner whatsoever. This is without prejudice to any rights of the Employer against the Bidder under the Contract and/or guarantees. It shall not be necessary or obligatory for the Employer to first proceed against the Bidder, nor any extension of time or any relaxation by the Employer to the Bidder shall prejudice any rights of the Employer under this Deed of Joint Undertaking to proceed against the Associate.
3. Without prejudice to the generality of the Undertaking in paragraph 1 above, the manner of achieving the objective set-forth in paragraph 1 above shall be as follows:
 - a) The Associate/ Collaborator will be fully responsible for manufacturing, supply, erection/supervise erection, testing commissioning/supervise commissioning, putting into satisfactory operation, carrying out the performance testing of Battery portion of Battery Energy Storage System EPC Package, fully meeting the guaranteed parameters and characteristics as declared by Bidder /associate/collaborator (Battery Manufacturer).

Further, the Associate/ Collaborator, shall depute their technical experts from time to time to the Employer's project site as required by the Employer/Bidder and agreed to the Bidder/Employer to facilitate the successful performance of the Battery portion of Battery Energy Storage System EPC Package as stipulated in the Bid Documents.

Further, Associate/ Collaborator shall ensure proper manufacturing, supply, erection / supervise erection, testing commissioning/supervise commissioning

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and successful performance of the Battery portion as declared by Bidder/associate/collaborator (Battery Manufacturer) and if necessary the Associate/ Collaborator shall advise the Bidder suitable modification and implement necessary corrective measures to discharge the obligations under the contract for Battery Portion.

- b) In the event the Associate/ Collaborator and the Bidder fail to demonstrate successful performance of the Battery portion of the Battery Energy Storage System EPC Package, The Associate/ Collaborator shall promptly provide all technical assistance/ services/support to analyse and suggest corrective measures/ modifications and jointly carry out all the corrective measures at their own expense.
 - c) Implementation of the corrected design and all other necessary repairs, replacements, rectifications or modifications to the Battery portion of Battery Energy Storage System EPC Package and payment of financial liabilities, penalties and any other obligations as provided under the Contract related to battery portion shall be the joint and several responsibility of the Bidder and Associate/ Collaborator during Defect Liability period.
4. We, the Bidder and the Associate/ Collaborator do hereby undertake and confirm that this undertaking shall be irrevocable and shall not be revoked till the expiry of the Defect Liability Period of Battery Energy Storage System EPC Package under Contract, and further stipulate that the Undertaking herein contained shall terminate upon satisfactory completion of such period. We further, agree that this Undertaking shall be without any prejudice to the various liabilities of the Bidder, including Contract Performance Guarantee as well as other obligations of the Bidder / Contractor in terms of the Contract.
 5. The Bidder and Associate/ Collaborator will be fully responsible for the quality of all the equipment manufactured at their works or at their Vendors works or construction at site, and their repair or replacement, if necessary, for incorporation in the Battery portion of Battery Energy Storage System EPC Package and timely delivery thereof to meet the completion schedule under the Contract.
 6. In order to achieve the successful completion of the Battery portion for Battery Energy Storage System EPC Package as per schedule and the performance and guarantee tests at site from time to time, the detailed planning for design, engineering procurement, supply, erection and commissioning and O&M activities shall be drawn by the Bidder and vetted by Associate/ Collaborator.
 7. Apart from the Bidder's Performance Bank Guarantee, the Associate/ Collaborator shall, furnish 'as security' a separate On Demand Performance Bank Guarantee from any reputed Commercial Bank as specified in the bid document in favour of the Employer in a form acceptable to the Employer.

The value of such Bank Guarantee shall be equal to **two percent (2%)** of the total value of the contract as specified at Note (a) of Clause 1.0 of Item No. 3.0, Section-III (Bid Data Sheet) of bidding documents, as awarded by the Employer and it shall be guaranteed towards the faithful performance/ compliance of this Deed of Undertaking in accordance with the terms and conditions specified herein. The Bank Guarantee shall be unconditional, irrevocable and valid till the expiry of defect liability period period of the Plant under the Contract. The guarantee amount shall be promptly paid to the Employer on demand without any demur, reservation, protest or contest.

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8. This DEED OF UNDERTAKING shall be construed and interpreted in accordance with the laws of India and the courts in Delhi shall have exclusive jurisdiction.
9. We, the Associate/ Collaborator and the Bidder agree that this undertaking shall be irrevocable and shall form an integral, part of the Contract. We further agree that this undertaking shall continue to be enforceable till the expiry of defect liability period and till the Employer discharges it.
10. That this Deed shall be operative from the effective date of the Contract to the end of Defect Liability Period.

IN WITNESS WHEREOF, the Associate and the Bidder through their authorized representatives, have executed these presents and affixed common seal of their respective companies on the day, month and year first mentioned above.

Witness :

For M/s

(Associate/Collaborator)

2.
. (Signatures/Name/Address)

.....
(Signature of the authorised
representative)

Name :

Designation :

Common Seal of the Company

.....

For M/s..... **Witness :**
(Bidder)

.

.....
(Signature of the authorised
representative)

Name :

Designation :

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Note :

1. Power of Attorney of the Persons Signing on behalf of Associate/Collaborator and Bidder is to be furnished by the Bidder and to be attached with this signed Deed of Joint Undertaking.
2. The Defect Liability period is as per GCC Cl. No. 27.0 and its subsequent amendments if any.
3. Certified Purchase Order between Bidder and Associate shall be submitted by Bidder at the time of placement of order.
4. In case Bidder proposes an integrated solution which is combination of two different battery technologies from two different manufacturers so as to meet the technical requirements as per specification, then Bidder has to necessarily submit two separate DJU with two different battery manufacturer.

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**ATTACHMENT - 4A
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BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN IN SOUTH ANDAMAN, A&N ISLANDS

BID DOCUMENT NO. : RE-CS-5728-004(B)-9

(Not Applicable)

List of Special Maintenance Tools & Tackles

We are furnishing below the list of special maintenance tools & tackles for various equipment under the subject package. The prices for these tools & tackles are already included in the lump-sum bid price. We further confirm that this list of special maintenance tools & tackles includes all the items as per the requirement of Technical Specifications.

Notwithstanding what is stated above we further confirm that any additional special maintenance tools and tackles required for the equipment supplied under this package shall be furnished by us at no extra cost to the Employer.

Sl.No.	Description of Equipment	Description of Tools & Tackles	Unit	Quantity
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**ATTACHMENT - 8
PAGE 1 OF 1**

**BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT
MANGLUTAN IN SOUTH ANDAMAN, A&N ISLANDS**

BID DOCUMENT NO. : RE-CS-5728-004(B)-9

TECHNICAL DATA SHEET

Bidders are required to fill in the Technical Data as per their own format and ATTACH the same in C Folder as Attachment – 8 for the following Items.

1. Battery & BMS
2. PCS
3. Transformer
4. EMS with Architecture
5. Plant Layout & Architecture Drawings
6. Any other relevant drawings of system

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**ATTACHMENT – 12
PAGE 1 OF 1**

**BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN IN
SOUTH ANDAMAN, A&N ISLANDS**

BID DOCUMENT NO. : RE-CS-5728-004(B)-9

(Declaration on Demonstration Parameters)

1.0 We declare that the ratings and performance figures of the equipments furnished by us under the subject Package are guaranteed. We further declare that in the event of any deficiencies in meeting the guarantees in respect of the characteristic as established after conducting the performance test, you may at your discretion reject the equipment / systems in which case we shall replace the same with equipment as per specifications and meeting the guarantee, free of charge and within a reasonable time, to be mutually agreed.

Date :

Place : (Name of Authorized Person
having Power of Attorney).....

(Designation).....

Note: Any variation to the stipulated conditions under which guarantee are to be met will not be permitted and bids with such variations are liable to be rejected.

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**ATTACHMENT – 13
PAGE 1 OF 1**

BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN IN SOUTH ANDAMAN, A&N ISLANDS

BID DOCUMENT NO. : RE-CS-5728-004(B)-9

MILESTONE SCHEDULE

We hereby confirm the acceptance to the time schedule **(15 Months for completion of facilities)** for the subject package as specified in the bidding documents. Further, we confirm that we shall adhere with the time schedule for the subject package as specified in the bidding documents.

Further we confirm to carry out comprehensive Operation & Maintenance (Q&M) of entire Battery Energy Storage System for twenty five (25) years as specified in the Technical Specifications.

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OPEN TENDER FOR SELECTING ASSOCIATE FOR PARTICIPATION IN NTPC TENDER AS BHEL's ASSOCIATE
FOR
**BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN IN
SOUTH ANDAMAN, A&N ISLANDS**

BHEL NIT No. _____, RFQ RCKMOU02 Dt. 22.08.2017 Due Dt. 30.08.2017

CHECK LIST FOR COMPLIANCE

BIDDER NAME: _____

BID REFERENCE NO. _____

Sl.No.	NIT Requirement	Information / Document provided by Bidder	Reference page in Bid	Remarks
A	GENERAL INFORMATION			
1	BIDDER NAME & ADDRESS			
2	INDIAN COMPANY OR FOREIGN			
3	IF FOREIGN COMPANY, COMPANY LOCATION & ADDRESS			
4	BIDDER SIGNATORY / AUTHORISED REPRESENTATIVE NAME & CONTACT No.			
5	POWER OF ATTORNEY BY COMPETENT AUTHORITY			Check the Powers Conferred and Delegation of powers.
6	PoA ISSUED IN NAME OF			
7	DELEGATION OF POWER FOR ISSUING PoA INCLUDED?			Check who has Issued the PoA and his authority to issue.

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Sl.No.	NIT Requirement	Information / Document provided by Bidder	Reference page in Bid	Remarks
7	BIDDER HAS SUBMITTED BIDS IN 2 PARTS?	PART-1	YES / NO	
		PART-2	YES / NO	
7	NO DEVIATION CERTIFICATE FURNISHED BY BIDDER	FOR TECHNICAL	YES / NO	
		FOR COMMERCIAL TERMS & CONDITIONS?	YES / NO	
B	PRE-QUALIFICATION REQUIREMENTS			
1	BIDDER IS MANUFACTURER OR SUPPLIER OF BESS?	MANUFACTURER / SUPPLIER		Strike out which is not applicable
2	IS MANUFACTURER, PLACE OF MANUFACTURE			
3	BIDDER HAS CUMULATIVE INSTALLED CAPACITY OF 3.6 MW OR HIGHER?	YES / NO		Should have manufactured, supplied, installed/ supervised installation and Commissioned/ supervised commissioning of grid interactive battery energy storage system(s) of cumulative installed capacity of 3.6 MW or higher
4	DOCUMENTARY EVIDENCE FOR B-3 ABOVE?	FURNISHED AT		

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Sl.No.	NIT Requirement	Information / Document provided by Bidder	Reference page in Bid	Remarks
5	BIDDER HAS EXECUTED AT LEAST ONE GRID INTERACTIVE BATTERY ENERGY STORAGE SYSTEM OF 1.2MW OR HIGHER AND IN SUCCESSFUL OPERATION FOR AT LEAST SIX(6) MONTHS	YES / NO		at least one grid interactive battery energy storage system should be of 1.2 MW capacity or higher. The reference grid interactive battery energy storage system of 1.2 MW or higher capacity must have been in successful operation for at least six (6) months prior to the date NTPC bid opening.
6	DOCUMENTARY EVIDENCE PROVIDED FOR B-5?	FURNISHED AT		
7	HAS THE INSTALLATION AT B-5 COMPLETED 6 MONTHS AS ON DATE?	YES / NO		
8	DOCUMENTARY EVIDENCE PROVIDED FOR B-7?	FURNISHED AT		
9	DOES THE BIDDER HAVE ANY MAJOR LEGAL CASES AND / OR STATUTORY LIABILITIES?.	YES / NO		
10	BIDDER MEETS PRE-QUAL REQUIREMENTS WITH REG TO EXPERIENCE?	YES / NO		
C	FINANCIAL CRITERIA			

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Sl.No.	NIT Requirement	Information / Document provided by Bidder	Reference page in Bid	Remarks
1	AVERAGE ANNUAL TURNOVER OF THE BIDDER IN LAST 3 YEARS			Average Annual Turn Over of the Bidder, shall not be less than INR 840 Million (Indian Rupees Eight Hundred Forty Million Only) in preceding three (3) consecutive financial years as on the original scheduled date of tender opening.
2	DOCUMENTARY EVIDENCE FOR C-1 OF LAST 3 YEARS • AUDITED FINANCIAL RESULTS • BALANCE SHEET • P&L ACCOUNT			Check for Auditors signature and Certified by CA in India
3	BIDDER HAS A POSITIVE NET WORTH?	YES / NO		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.
4	DOCUMENTARY EVIDENCE FOR C-3 ?	FURNISHED AT		
5	BIDDER MEETS PRE-QUAL REQUIREMENTS WITH REG TO FINANCIAL CRITERIA?	YES / NO		

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Sl.No.	NIT Requirement	Information / Document provided by Bidder	Reference page in Bid	Remarks
D	EXCLUSIVITY CRITERIA			
1	BIDDER HAS FURNISHED UNDERTAKING FOR EXCLUSIVE TIE-UP?	YES / NO		
2	BIDDER HAS FURNISHED UNDERTAKING FOR PREFERENTIAL PRICING & PREFERRED PARTNER TIE-UP?	YES / NO		
3	BIDDER MEETS PRE-QUAL REQUIREMENTS WITH REG TO EXCLUSIVITY CRITERIA?	YES / NO		
E	MANPOWER CRITERIA			
1	BIDDER HAS A LOCAL INDIAN OFFICE FOR PROVIDING SERVICES TO BHEL FOR BESS?	YES / NO		
2	IF YES, ADDRESS OF THE LOCAL INDIAN OFFICE AND NUMBER OF ENGINEERS WORKING HERE			
3	IF BIDDER HAS NO INDIAN OFFICE, HAS BIDDER PROVIDED AN UNDERTAKING TO SET UP LOCAL INDIAN OFFICE WITH AT LEAST 10 ENGINEERS WITHIN 30 DAYS OF NOA ?	YES / NO		

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Sl.No.	NIT Requirement	Information / Document provided by Bidder	Reference page in Bid	Remarks
4	HAS BIDDER FURNISHED UN-PRICED PRICE SCHEDULE IN PART-1?	YES / NO		
5	DOES BIDDER MEET ALL CONDITIONS FOR EVALUATING TECHNO-COMMERCIAL BID?	YES / NO		
1	BIDDER HAS QUOTED F.O.R SITE?	YES / NO		
2	BID INCLUDES THE FOLLOWING ?	YES / NO		
a	CUSTOMS DUTY & CUSTOMS CLEARANCE	YES / NO		
b	PORT HANDLING, PORT CHARGES & PORT CLEARANCE CHARGES	YES / NO		
c	MARINE FRIEGHT?	YES / NO		
d	MARINE INSURANCE?	YES / NO		
e	TRANSIT FRIEGHT TO SITE & INSURANCE	YES / NO		
f	SITE STORAGE & ERECTION INSURANCE?	YES / NO		
8	BIDDER INDICATED & INCLUDED ALL APPLICABLE TAXES & DUTIES IN PRICE?	YES / NO		

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Sl.No.	NIT Requirement	Information / Document provided by Bidder	Reference page in Bid	Remarks
10	BIDDER HAS INDICATED GST REGISTRATION NUMBER?	YES / NO		
19)	BIDDER COMPLIES TO NIT TERMS & CONDITIONS?	YES / NO		
20)	BIDDER CONFIRMS COMPLIANCE TO NTPC TERMS & CONDITIONS (GCC & SCC OF SECTION 4)?	YES / NO		

Note:

- Bidders shall fill in this Check List and submit it along with their Bid duly signed and with company seal.
- Bidders shall check whether requisite supporting documents have been submitted in Bid as per this Check List

BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN IN SOUTH ANDAMAN, A&N ISLANDS							
Bidder's Name and Address :							
SCHEDULE OF RATES AND PRICES							
Schedule No. 1 (REV.01) : PLANT AND EQUIPMENT INCLUDING TYPE TEST CHARGES AND MANDATORY SPARES TO BE SUPPLIED FROM ABROAD.							
Item	Description	Unit	Qty. to be mentioned by Bidder	UNIT PRICE (IN INR) (FOB)	UNIT PRICE (IN INR) (CIF) (Indian port of entry)	TOTAL PRICE (IN INR) (FOB)	TOTAL PRICE (IN INR) (CIF) (Indian port of entry)
1	2		3	4	5	(6) = (4) x (3)	(7) = (5) x (3)
A	Main Equipment						
1	Battery Bank & Battery Management System			-----Lot-----			
2	PCS			-----Lot-----			
3	DC Cables			-----Lot-----			
4	HT Switchgear			-----Lot-----			
5	LT Switchgear			-----Lot-----			
6	PCS Transformer			-----Lot-----			
7	Energy Management System with SCADA			-----Lot-----			
8	AC Cable			-----Lot-----			
9	HT Cables			-----Lot-----			
10	Battery Charger/UPS with Battery Bank			-----Lot-----			
11	Fire Detection and Protection System			-----Lot-----			
12	Solar Generation Forecasting	No.	1				
13	Misc. Equipments(Other than specified above)			-----Lot-----			
	TOTAL (A) (MAIN EQUIPMENT)						
B	Mandatory Spares						
1	Electronic Cards for PCS	5% of total population for each type		Lumpsum	Lumpsum		
2	IGBT Unit for PCS	5% of total population for each type		Lumpsum	Lumpsum		
3	Semiconductor Fuse	5% of total population for each type		Lumpsum	Lumpsum		
4	PCS Contactor, cooling fan, SPD, Aux transformer, current sensor, current transformer, Power fuse, semiconductor fuse, control fuse, AC filter chock & capacitor, DC capacitor, SMPS (power supply unit), MCB	5% of total population for each type		Lumpsum	Lumpsum		
5	AC Fuse of all type	5% of total population for each type		Lumpsum	Lumpsum		
6	Ethernet switch	5% of total population for each type		Lumpsum	Lumpsum		
7	DC Cable of highest size	KM	1				
8	LT Cable of highest size	KM	1				
9	HT Cable of highest size	KM	1				
10	PCS Transformer	No.	1				
11	Set of Valves for Inverter transformer	No.	2				
12	WTI with contacts of Inverter transformer	No.	2				
13	OTI with contacts of Inverter transformer	No.	2				
14	Buchholz relay complete of Inverter transformer	No.	2				
15	Pressure Relief Device of Inverter Transformer	No.	2				
16	Magnetic Oil Gauge (MOG) of Inverter Transformer	No.	2				
17	HV/LV Bushing with metal parts and gaskets for PCS transformer	Set	1				
18	Numerical Protection Relay (each type)	No.	1				
19	Energy Meter, MFM and transducer (each type)	No.	1				
20	MCB and MCCB (each type)	No.	1				
21	LT Breaker (if supplied) (each type)	No.	1				
22	33kV Circuit Breakers (each type)	No.	1				
23	33 kV Current Transformer (each type)	Set	1				
24	33 kV Voltage Transformer (each type)	Set	1				
25	33 kV Surge Arrestor (if supplied) (each type)	Set	1				
26	33kV Switchgear Aux Relays, contactors, fuses, MCBs , power packs, trip coils, closing coils and spring charging motors	5% of total population for each type		Lumpsum	Lumpsum		
27	33kV Earthing Trolley (each type)	No.	1				
	TOTAL (B) (MANDATORY SPARES)						
C	Year-wise Replacement Equipment cost for complete 25 years life of plant##						
1	Year-1	Lot / Number					
2	Year-2	Lot / Number					
3	Year-3	Lot / Number					
4	Year-4	Lot / Number					
5	Year-5	Lot / Number					
6	Year-6	Lot / Number					
7	Year-7	Lot / Number					
8	Year-8	Lot / Number					
9	Year-9	Lot / Number					
10	Year-10	Lot / Number					
11	Year-11	Lot / Number					
12	Year-12	Lot / Number					
13	Year-13	Lot / Number					
14	Year-14	Lot / Number					
15	Year-15	Lot / Number					
16	Year-16	Lot / Number					
17	Year-17	Lot / Number					
18	Year-18	Lot / Number					
19	Year-19	Lot / Number					
20	Year-20	Lot / Number					

BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN IN SOUTH ANDAMAN, A&N ISLANDS							
Bidder's Name and Address :							
SCHEDULE OF RATES AND PRICES							
Schedule No. 1 (REV.01) : PLANT AND EQUIPMENT INCLUDING TYPE TEST CHARGES AND MANDATORY SPARES TO BE SUPPLIED FROM ABROAD.							
Item	Description	Unit	Qty. to be mentioned by Bidder	UNIT PRICE (IN INR) (FOB)	UNIT PRICE (IN INR) (CIF) (Indian port of entry)	TOTAL PRICE (IN INR) (FOB)	TOTAL PRICE (IN INR) (CIF) (Indian port of entry)
1	2		3	4	5	(6) = (4) x (3)	(7) = (5) x (3)
21	Year-21	Lot / Number					
22	Year-22	Lot / Number					
23	Year-23	Lot / Number					
24	Year-24	Lot / Number					
25	Year-25	Lot / Number					
	TOTAL (C) Year-wise Replacement cost for complete 25 years life of						
	TOTAL (A+B+C) (Total of Schedule-1 to be filled in Item Data)						
	Local Agent's Commission (if any).....						
(i)	(included in FOB Price indicated above)						
	Total Weight of Main Equipment (Excluding Mandatory Spares).....MT.						
(ii)							
	Total Weight of Mandatory Spares.....MT.						
(iii)							
#	Stands for (Indian port of Entry)						
*	Please state the currency and fill in the amount in figures and words.						
	* Bidder shall enter a code representing the country of origin of all plant and equipment including mandatory spares. The names of the countries with their respective codes shall be given as under:						
Sl.No.	Code		Country				
1							
2							
3							
4							
5							
Notes							
	1. Item listed above but priced in Schedule 2 will be struck off by the Bidders in this Schedule 1.						
	2. Wherever quantity has been specified as percentage (%), the quantity of mandatory spares to be provided by the bidder shall be the specified percentage (%) of the total population required to meet the specification requirements. In case the quantity of mandatory spares so calculated happen to be a fraction, the same shall be rounded off to next higher whole number.						
	3. Wherever the quantities have been indicated for each type, size, thickness, material, radius, range etc. these shall cover all the items supplied and installed and the breakup for these shall be submitted in the bid.						
	4. In case spares indicated in the list are not applicable to the particular design offered by the bidder, the bidder should offer spares applicable to offered design with quantities generally in line with approach followed in the above list.						
	5. In case the description/quantity for any items mentioned in this schedule is at variance from what has been stated in the technical specifications and its subsequent clarifications the stipulations of the Technical Specification and its subsequent amendment and clarification shall prevail.						
	6. Interchangeability and Packing: All spares supplied under this contract shall be strictly interchangeable with parts for which they are intended replacements.						
	7. Identification : Each spare shall be clearly marked and labeled on the outside of the packing with its description when more than one spare part is packed in single case, a general description of the contents shall be shown on the outside of such case and a detailed list enclosed. All cases, containers and other packages must be suitably marked and numbered for the purpose of identification.						
	8. ##Payment not to be released before declared replacement schedule.						
	9. Bidders are required to indicate the Main Equipment prices including Type Test Charges as per provisions of Technical Specifications Documents, no separate charges for Type Test will be paid.						
	10. As such the Item Schedule includes all items/equipment necessary to complete the entire scope of works indicated in the Technical Specification & drawings and Bidding Documents , Bidder shall ensure that items not covered here but required to make the equipment / system complete in all respect for its safe and reliable, efficient and troublefree working / operation without any extra cost to NTPC.						

DOCUMENT NO: RE-CS-5728-004(B)-9 -CLRF.02
CLARIFICATION NO-2 TO TECHNICAL SPECIFICATIONS/AMENDMENT-01 (SECTION-VI)
PACKAGE: BATTERY ENERGY STORAGE SYSTEM FOR 17 MW SOLAR PV PROJECT AT MANGLUTAN AT SOUTH ANDAMAN, A&N ISLANDS

Sl No.	Para/ Chapter	Page No.	Clause No.	Requirement as per tender/Amendment Specification in brief	Bidder's Queries	NTPC Reply
1	Doc. No. RE-CS-5728-004(B)-9-AMDT-01, Annexure - B	2 of 9	1.0 A (Energy Time Shift Mode) Paragraph 1	...The BESS discharge power (MW) level shall be any value as per grid operator requirement based on generation scheduling (maximum upto 6MW continuous at PCC).	We kindly request NTPC to amend the clause into the following. " ... The BESS discharge power (MW) level shall be any value as per grid operator requirement based on generation scheduling (maximum upto 6MW at PCC)."	Pl. Refer to Amendment at Sl. No:-01 of Doc. No: RE-CS-5728-004(B)-AMDT-03 for clarity on the subject.
2	Doc. No. RE-CS-5728-004(B)-9-AMDT-01, Annexure - B	1 of 9	1.0 A (Solar Generation Smoothening Mode) Paragraph 1 and 2	Smoothen action to be carried out by BESS shall be based on 30 minutes moving average algorithm or 30 minutes moving average along with SOC control algorithm. The moving average values is the last 30 minutes average value of Solar PV plant output power. The reference target power in this mode shall be the 30 minutes moving average value or grid reference power set point as generated with 30 minutes moving average along with SOC control algorithm.	1. Please explain the specification of SOC control algorithm. 2. Please explain what the ' grid reference power set point ' means and how the value is generated.	The grid reference power set point is the output either from 30 minutes moving average or 30 minutes moving average with SOC control.The bidder may propose better algorithm to create the reference grid power set point.
3	Doc. No. RE-CS-5728-004(B)-9-AMDT-01, Annexure - B	1 of 9	1.0 A (Solar Generation Smoothening Mode) Paragraph 2	BESS shall ensure that the combined Solar PV and BESS output to grid (injected grid power) follows the reference target power and shall be within the band of ±5% of reference target power at any time instant for smooth injection power to grid.	1. The BESS will not be able to maintain the gird export power within +/- 5% of 30 minute moving average for every time instant. Request you to relax this clause to maintain grid export power within +/- 5% of 30 minute moving average of reference power for 90% of the time.	Reason for Limitation not clear. Bidder may submit any specific reason for limitation in detail with stage-1 techno-commercial bid.
4	Doc. No. RE-CS-5728-004(B)-9-AMDT-01, Annexure - B	2 of 9	1.0 A (Energy Time Shift Mode) Paragraph 1	The Generation Scheduling shall be done in such a way that the BESS Battery shall be fully charged at the end of the solar generation hours (subjected to sufficient power generation from solar PV plant) and BESS shall be able to deliver rated 24MWh energy at PCC. In case the BESS battery discharged due to prolonged intermittency, then the BESS needs to deliver at least 80% of rated 24MWh energy at PCC.	1. The scheduling of solar PV export power to the grid during this mode is extremely subject to the generation forecast for the day. Hence, maintaining a minimum of 80% of rated 24 MWh energy may be very difficult for every day. Simulation study is being carried out to determine the percentage value. Hence kindly request you to relax this clause by removing the 80% specification.	1. Technical Document is clear on the subject. So, Bidder to comply the requirement as per specification. 2. No restriction on duration of particular mode. Bidder can choose as per their requirement so that requirement of technical specification can be met.

DOCUMENT NO: RE-CS-5728-004(B)-9 -CLRF.02
CLARIFICATION NO-2 TO TECHNICAL SPECIFICATIONS/AMENDMENT-01 (SECTION-VI)
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					2. Also, to maximize the energy stored in BESS by end of solar generation hours, this mode should be made active at the start of the day (for the whole duration).	
5	Doc. No. RE-CS-5728-004(B)-9-AMDT-01, Annexure - B	3 of 9	1.0 A (Manual Mode) Note for Clause A, B, C	Under normal operation the control of solar plant Inverters and circuit breakers are not allowed to achieve the solar power smoothening requirement as described 1.0 A, B & C above. However, as per grid operator requirement or under special emergency grid condition requirement the same shall be allowed for smoothening of solar PV plant output power intermittency.	For solar power smoothening application, inverter control is not needed to achieve the application but for 'energy time shift' and 'manual mode', inverter control (and circuit breaker control) may be needed because scheduled and dispatched power is to be maintained at grid PCC. If the intermittency (sudden rise or dip in solar generation) is more than the rated PCS capacity of 6 MW, inverter control (clipping) may be needed to maintain the application specification. Kindly confirm.	Control of solar Inverter can only be allowed by grid operator in association with NTPC depending upon any emergency grid situation as special requirement only. However Bidder may control the solar inverter during Black Start/island mode depending upon requirement when it is not connected to grid.
6	Doc. No. RE-CS-5728-004(B)-9-AMDT-01, Annexure - D	2 of 2	6.0, section 2.3.1	In case, there more than one equipment in the same branch is out at the same time, then the equipment having higher weightage shall be taken.	Weightage in the table is provided with respect to time of outage. Please explain what equipment outage means.	Technical document is clear on the subject.
7	Doc. No. RE-CS-5728-004(B)-9-AMDT-01, Annexure - D	2 of 2	6.0, section 2.3.3	Efficiency shall calculated at the end of the year based on total measured cumulative incoming and outgoing energy of BESS system at PCC during entire one year period.	During normal operation, in the usage of VAR support mode, providing reactive power support uses active energy in terms of switching losses, equipment and cable losses. But the active energy will not be counted in the parameter 'G _{out} '. Thus it causes measured efficiency to come down. Kindly request you to retain the earlier specification of efficiency test for 15 days time period during which VAR support mode is not used.	As per statutory requirement VAR support is needed for Grid. So, Bidder to comply with the technical specification requirement.

Technical Amendment No. 02 to Technical Specifications/Amendment-01 (Section-VI) for Battery Energy Storage System for 17MW Solar PV Project at Manglutan in South Andaman, A&N Islands

Sl No.	Sec.	Part	Chapter	Clause No.	Page No.	Original Clause	Read As
1.	Doc. No. RE-CS-5728-004(B)-0-AMDT-01	Annexure -B	B-1	10 (B)	10 of 44	→The BESS discharge power (MW) level shall be any value as per grid operator requirement based on generation scheduling (maximum upto 6MW continuous at PCC).	*...The BESS discharge power (MW) level shall be any value as per grid operator requirement based on generation scheduling (maximum upto 6MW at PCC).