



ABRIDGED INVITATION FOR BIDS

NTPC GREEN ENERGY LIMITED
(A WHOLLY OWNED SUBSIDIARY OF NTPC LIMITED)

CONTRACTS SERVICES

INVITATION FOR BIDS (IFB) (ABRIDGED)

FOR

EPC Package for Development of 800MW/3200MWh Battery Energy Storage System (BESS) at NTPC REL Khavda park

(Domestic Competitive Bidding)

IFB No.: NRE-CS-5845-EPC-BESS

Date: 19.05.2026

ETS Portal Tender Search Code: NTPCREL-2026-TN000018

Bidding Document No: NRE-CS-5845-EPC-BESS

- 1.0** NTPC GREEN ENERGY Limited, invites online bids on Single Stage Two Envelope Bidding basis (Envelope I: Techno-Commercial Bid & Envelope II: Price Bid) followed by Reverse Auction from eligible bidders for **“EPC Package for Development of 800MW/3200MWh Battery Energy Storage System (BESS) at NTPC REL Khavda park”**

Project will be divided into blocks with location as follows:

Location	BESS Capacity
PSS-1 NTPC REL Khavda, Gujarat	800 MW/3200 MWh BESS

Note:

Further Bifurcation of BESS capacity in blocks shall be shown in detailed technical specifications. BESS capacity to be considered is the rated AC discharge capacity at Point of injection at ISTS substation. Bidder needs to consider the aux consumption of the BESS Plant(s) during discharge to arrive at the Discharge capacity of the BESS Plant(s).

- 2.0** NTPC GREEN ENERGY Limited intends to finance the subject package through Own Resources/Borrowings.

- 3.0** For the detailed IFB and bidding documents please visit https://ntpctender.ntpc.co.in_ngel.in or www.ntpc.co.in from 25.05.2026 or contact DGM(CS) / AGM (CS), NTPC RENEWBLE ENERGY LIMITED, as mentioned below:

ADDRESS FOR COMMUNICATION

Dy. General Manager (CS)/ Addl. General Manager (CS)

Contracts Services

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ABRIDGED INVITATION FOR BIDS

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Corporate Identification Number: U40100DL2022GOI396282

Brief Scope of Work for EPC Package for Development of 800 MW / 3200 MWh BESS capacity at NTPC REL Khavda Solar Project

SCOPE OF WORK: The scope of work covers the following activities and services in respect of all the equipment & works specified and covered under the specifications and read in conjunction with “Scope of Supply & services” specified in Technical Specifications

1.01 Project will be divided into blocks with location as follows:

Location	BESS Capacity
PSS-1 NTPC REL Khavda, Gujarat	800 MW/3200 MWh BESS

Note:

Further Bifurcation of BESS capacity in blocks shall be shown in detailed technical specifications. BESS capacity to be considered is the rated AC discharge capacity at Point of injection at ISTS substation. Bidder needs to consider the aux consumption of the BESS Plant(s) during discharge to arrive at the Discharge capacity of the BESS Plant(s).

- 1.02 Design, Engineering, Supply, Packing and Forwarding, Transportation, Unloading, Storage, Installation and Commissioning of grid connected Battery Energy Storage System (BESS) on turnkey basis.
- 1.03 Unloading at respective sites, Supervision of Erection, Testing, Commissioning, Integration of above equipment with BoS Infra to commission a complete BESS system integrated with Solar plant(s) and grid shall be included in scope of bidder.
- 1.04 **Design life of BESS system including that of battery shall be of 25 years (with degraded capacity as per bidder’s proposal considering daily single cycle operation) from the date of commissioning.**
- 1.05 Batteries offered shall be rated for **minimum 10,000 cycles of operation.**
- 1.06 The BESS Supplier shall take into consideration following loss parameters beyond the termination point and up to POI while sizing the nameplate capacity of the BESS for each Block:

Head	Loss to be considered in sizing
Power Trafo Losses	1%
Transmission Line Losses	0.25%

- 1.07 **Bidder will guarantee minimum 92 % of dispatchable capacity at POI across all 15 years starting with 100 % of rated dispatchable capacity (as mentioned above) at CoD and 95 % for first year. Dispatchable capacity at the time of handover shall be minimum 92%. Any augmentation required for meeting these criteria shall be included in scope of bidder.**
- 1.08 **Comprehensive O&M including associated warranty, annual maintenance contract (Service Level Agreement) to maintain performance of BESS for period of 15 years shall be included in scope of bidder.**
- 1.09 **Minimum monthly Round Trip Efficiency (RTE) shall be 80% including auxiliary consumption (Measured at Termination point/Point of Coupling)**
- 1.10 **Annual availability to be maintained is 98%.** Detailed Availability requirements and other details will be mentioned in detailed specifications.
- 1.11 BESS capacity offered shall be suitable for meeting deliverable capacity at POI including reactive power compensation.

- 1.12 Grid compliance study for complete project (Solar + BESS + Power Evacuation) is included in scope of bidder. However, inputs for conducting grid power study to be provided by owner for Solar & Power evacuation package. Grid compliance study, if required, for each augmentation shall be in scope of bidder.
- 1.13 Power quality compliance for entire Solar + BESS + Power Evacuation system up to grid interconnection point (POI) at ISTS switchyard is included in scope of bidder.
- 1.14 Aux supply system for the BESS Plant(s) from 33 kV termination point/Point of Coupling shall be in the scope of Bidder. The aux supply required for Battery Container at site up to final commissioning shall be also in the scope of Bidder. Bidder to ensure the delivery of items at site and other works related to BESS plant(s) accordingly.
- 1.15 Bidder shall design the system in such a way that during non-Solar hours the standby aux consumption of the BESS Plant(s) shall be in the scope of Bidder. Accordingly, the Bidder should design its BESS capacity for the entire contract period.
- 1.16 During operation of the BESS Plant(s), in case of grid failure, emergency supply requirement for BESS Plant(s) shall be in the scope of Bidder.
- 1.17 DSM Charges applicable corresponding to the metering and scheduling of BESS Plant(s) and attributable to Bidder shall be paid by bidder, during the Contract duration.
- 1.18 Bidder shall carry out Engineering and execution works of civil, erection, installation and commissioning work of all the supplied equipment and equipment system(s) including extension of existing HT Switchgear, construction of CMCS building etc. to make the BESS operational.
- 1.19 Bidder shall provide engineering drawings, data, process calculations, test procedures, Equipment layout, Drawings/Data sheets of bought out items, Performance & Guarantee Test procedure etc for review and approval of NTPC REL.
- 1.20 Provide documentation for design and expected performance through design calculations, software, design drawings, equipment drawings, and modifications to the existing drawings.
- 1.21 Complete manufacturing including conducting all type, routine and acceptance tests, Pre-assembly, (if any), testing, pre-commissioning and commissioning and putting into satisfactory operation all the equipment including successful completion of initial operation.
- 1.22 Scope shall include EMS configuration to operate BESS at various modes as per Grid requirement mentioned in specification and integrated operation with Solar plant(s) and Plant(s) Scheduling as per Grid/RLDC requirement during O&M. Bidder is required to provide Hybrid PPC/EMS which shall control the generation of Solar Plant(s) as well BESS Plant(s) and shall be properly integrated with Solar Plant(s). Further details shall be shared during detailed specification.
- 1.23 Develop detailed start up and site acceptance plan. Reliability and Functional/Performance guarantee tests after successful completion of commissioning.
- 1.24 Provide training for the operators, engineers, technicians, and maintenance personnel.
- 1.25 Special tools and tackles, if any, required for maintenance of the plant(s)

- 1.26 BESS should be in line with latest guidelines of CEA, CERC and LDC. BMS, EMS, Fire Safety of the BESS should comply with the latest IS or/and IEC or/and IEEE standards and guidelines issued by statutory authorities. Fire safety of the Battery and container should be in line with latest Indian or/and international standards.
- 1.27 All equipment, materials and services, whether explicitly stated or otherwise and that are necessary for the satisfactory operation of the BESS system and all material & services required for its integration with owner's system at 33 KV, as described in the specification shall be deemed to be included in the scope of work.
- 1.28 Further the bidder has to obtain site-specific data from the owner in preparation for developing installation and implementation plans. All other details will be provided in the IFB.

Detailed provisions in regard of scope of work and technical features/specification of equipment/ systems/ services, contained in the Bidding Document shall be final and binding.

TERMINAL POINT/ Point of Coupling (POC)

The terminal point/ Point of Coupling (POC) under the scope of this assignment shall be up to commissioning and Integration with Owner's 33 KV pooling switchgear. Extension of owner polling switchgear if required, to be considered in the scope of Bidder with all material & services.