**ABRIDGED INVITATION FOR BIDS**

**NTPC GREEN ENERGY LIMITED**
***(A SUBSIDIARY OF NTPC LIMITED)***

**CONTRACTS SERVICES**

**INVITATION FOR BIDS (IFB)**

**FOR**

# EPC PACKAGE FOR DEVELOPMENT OF 3200 MWH BESS CAPACITY BY NGEL AT NTPC REL FATEHGARH SOLAR PLANT

**(DOMESTIC COMPETITIVE BIDDING)**

**IFB No.: NGEL-CS-5787-004(BESS1)-9** **Date: 29.05.2026**

**NTPC GREEN ENERGY LIMITED (NGEL)** invites online bids from eligible bidders on Single Stage Two Envelope (i.e. Envelope-I: Techno-Commercial Bid and Envelope-II: Price Bid) basis, followed by Reverse Auction for "**EPC PACKAGE FOR DEVELOPMENT OF 3200 MWH BESS CAPACITY BY NGEL AT NTPC REL FATEHGARH SOLAR PLANT".**

For the detailed IFB, please visit https://www.bharat-electronictender.com **or** https://ntpctender.ntpc.co.in **or** https://www.ngel.in **or** https://www.ntpc.co.in or may contact:

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Document Sale Start Date and Time :05.06.2026, 17:00 hrs
Document Sale Closing Date and Time : 15.06.2026, upto 17:00 hrs
Bid Submission End Date and Time : 25.06.2026 upto 14:00 hrs
Bid Opening Date and Time : 25.06.2026 at 14:30 hrs

Registered Office:
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## Brief Scope of Work for EPC PACKAGE FOR DEVELOPMENT OF 3200 MWH BESS CAPACITY BY NGEL AT NTPC REL FATEHGARH SOLAR PLANT

**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 is divided into three blocks with location as follows:

**Table 01**:

| Blocks | Location | BESS Capacity* |
|---|---|---|
| Block-1 | NTPC REL Fatehgarh, Rajasthan | 300 MW /1200 MWh |
| Block-2 | NTPC REL Fatehgarh, Rajasthan | 300 MW /1200 MWh |
| Block-3 | NTPC REL Fatehgarh, Rajasthan | 200 MW /800 MWh |

**Note:**

**Each BESS Block shall be connected at 33 kV Level of designated Solar Plants as indicated in the Detailed Technical Specification and Tender SLD.**

*** "BESS capacity" mentioned in Table 01, above, is the deliverable capacity to be demonstrated by Bidder at the time of COD at the Point of Interconnection (POI)**.

**Bidder needs to consider the aux consumption of the BESS Plant(s) in addition to other losses 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%.**

1.08 **Any augmentation required for meeting above criteria shall be included in scope of bidder.**

Bidder to ensure that the minimum nameplate rated installed capacity for each BESS Block shall be at least 110% of the MWh Capacity mentioned under "BESS Capacity" in Table 01, above.

1.09 **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.**

1.10 **Minimum monthly Round Trip Efficiency (RTE) shall be 80% including auxiliary consumption (Measured at Termination point/Point of Coupling)**

1.11 **Annual availability to be maintained is 98%.** Detailed Availability requirements and other details will be mentioned in detailed specifications.

1.12 BESS capacity offered shall be suitable for meeting deliverable capacity at POI including reactive power compensation.

1.13 Grid compliance study for complete project (designated 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.

1.14 Power quality compliance for entire designated Solar + BESS + Power Evacuation system up to grid interconnection point (POI) at ISTS switchyard is included in scope of bidder.

1.15 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.

1.16 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.

1.17 Required bus extension work and any other associated work for integrating BESS plant into the 33 kV Switchgear of each designated Solar Plant shall be in the scope of Bidder.

1.18 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.

1.19 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.

1.20 Bidder shall carry out Engineering to execution works of civil, erection, installation and commissioning work of all the supplied equipment and equipment system(s).

1.21 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 owner.

1.22 Provide documentation for design and expected performance through design calculations, software, design drawings, equipment drawings, and modifications to the existing drawings.

1.23 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.

1.24 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. EMS Scope shall include the BESS to be operated as per charging from Grid and with future provision to be integrated with Solar Plant(s). Further details shall be shared during detailed specification.

1.25 Develop detailed start up and site acceptance plan. Reliability and Functional/Performance guarantee tests after successful completion of commissioning.

1.26 Provide training for the operators, engineers, technicians, and maintenance personnel.

1.27 Special tools and tackles, if any, required for maintenance of the plant(s)

1.28 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.

1.29 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.

1.30 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 pooling switchgear, to be considered in the scope of Bidder with all material & services.