

Salient Technical Features
for
EPC Package for Development of 1000 MWh BESS Capacity at NTPC
REL Bikaner Solar Plant

“Salient Technical Features of the equipment/ systems/ services covered in IFB No. **NREL-CS-5800-004(BESS1)-9** are mentioned below. These Salient Technical Features are mentioned only to facilitate the prospective bidders to *prima-facie* understand the requirements under the tender and shall not in any way limit or alter the scope of work and technical features/specification of equipment/ systems/ services covered in the Bidding Documents. 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.”

Name of the Project	EPC Package for Development of 1000 MWh BESS Capacity at NTPC REL Bikaner Solar Plant
Project capacity	Project is in a single block as follows: Block-1: 250 MW / 1000 MWh (Single cycle 4-hour discharge) at NTPC REL Bikaner Solar Plant.
BESS Service Life	Design life of BESS (with degraded capacity) shall be of 25 years for daily single cycle operation. Comprehensive O&M along with augmentation for 15 years to meet performance parameters as mentioned in Technical specifications is included in the scope of this project.
Degradation	As mentioned in Technical Specifications

- Design, Engineering, Supply, Packing and Forwarding, Transportation, Unloading, Storage, Installation and Commissioning of grid connected Battery Energy Storage System (BESS) on turnkey basis.
- Unloading at respective site, Erection, Testing, Commissioning, Integration of above equipment with existing 33 kV System to commission a complete BESS integrated with owner's Solar plant and grid shall be included in scope of bidder.
- Comprehensive Operation and Maintenance (O&M) works of BESS system for period of 15 years from the date of commissioning shall be included in scope of bidder.
- Augmentation of BESS required for meeting performance criteria mentioned in Technical Specifications shall be included in scope of bidder.

- BESS shall be handed over to owner at the end of period of 15 years in working condition meeting the requirement mentioned in technical specifications.
- The BESS shall comprise of BESS containers with Battery Racks, Battery Management System (BMS), Energy Management System (EMS) and SCADA, Power Conversion System (PCS), Inverter Duty Transformers , Protection system, Power Evacuation system upto owner's 33 KV pooling switchgear, Cables, Communication System, HT & LT System, Auxiliary power system, Monitoring & Control system, Fire Fighting, remote control and monitoring, any other associated materials and services necessary for trouble free operation and maintenance of the BESS.