

## **Salient Technical Features for BESS package for development of 2500 MW/10000 MWh BESS At NTPC Thermal Stations**

“Salient Technical Features of the equipment/ systems/ services covered in IFB No. **NGEL-CS-5822-004(BESS)-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	<b>2500 MW/10000 MWh BESS AT NTPC Thermal Stations.</b>
Project capacity	<b>Total: 2500 MW/10000 MWh</b> <b>Capacity at Each station: 500MW/2000 MWh.</b> <b>Tentative Minimum bid Size: 250 MW 1000 MWh.</b> (Two blocks of 250 MW for each plant. All capacities measured at 400KV/220 KV interconnecting point)
BESS Service Life	Designed service life of BESS shall be of 20 years for daily single cycle operation. O&M of 10 years is included the scope of this project.
Degradation	Rated project capacity has to be demonstrated during commissioning and shall be maintained for first year of operation.  Degradation in Daily Discharge capacity and Annual Round trip efficiency shall be allowed on annual basis.

- Determination of basic design criteria for awarded capacity for grid interactive Battery Energy Storage System (**BESS**).
- The BESS shall comprise of Battery System, Battery Management System (BMS), Energy Management System (EMS) and SCADA, Power Conversion System (PCS), Protection system, Communication System, HT & LT System, Auxiliary power system, Fire Fighting, remote control and monitoring, and all other associated materials and accessories necessary for trouble free operation and maintenance of the BESS system.

- Comprehensive Operation and Maintenance (O&M) works of BESS system for 10 years from the date of successful completion of trial run.