NTPC Renewable Energy Limited
(A wholly Owned Subsidiary of NTPC Limited)
Corporate Centre

EPC PACKAGE FOR DEVELOPMENT OF 225MW GRID CONNECTED SOLAR PV PROJECTS AT GSECL SOLAR PARK (STAGE-III), KHAVDA

(Domestic Competitive Bidding)

IFB No.: NRE-CS-5809-004-9 Date: 16-05-2024

ETS Portal Tender Search Code: NTPCREL-2024-TN000011

Bidding Document No: NRE-CS-5809-004-9

Brief Scope of Work for "EPC PACKAGE FOR DEVELOPMENT OF 225MW GRID CONNECTED SOLAR PV PROJECTS AT GSECL SOLAR PARK (STAGE-III), KHAVDA"

1. Design, engineering, manufacturing, supply, packing and forwarding, transportation, unloading storage, installation, testing and commissioning of Solar Photovoltaic plant ***including Supply of Solar PV modules***.

2. Site - Grading & Clearing of Vegetation, Topographical Survey, Geotechnical Investigation.

3. Design and Construction of foundation & erection of **Tracker Based Module Mounting Structure** (MMS) for SPV panels, including fixing of PV Modules on MMS (Tracker based) and PV Modules interconnection.

4. Arranging power supply and water supply for construction purposes.

5. Construction of Pre-Engineered type Inverter room (if applicable) with Power conditioning unit associated LT and HT switchgear. In case of String Inverter, Construction of Pre-Engineered type HT Switchgear room.

6. All associated electrical and civil works required for interfacing with grid (i.e., transformers, panels, protection system, cables, metering at 33kV level, grid compliance study as per regulation, CMCS buildings etc.). Power evacuation in scope of the package shall be up to 33kV Pooling Switchgear at 400kV/33kV Park pooling substation of SPPD. 33kV Park pool Pooling switchgear is not in the scope of the contract, however supply and installation of energy meters at 400 KV side and 33 KV side at SPPD PSS shall be in the scope of the bidder.

7. Laying and termination of HT Cables (including supply) from solar blocks to 33kV Park Pooling substation as per specification.

8. Module cleaning system including supply and installation of all accessories.

9. Construction of internal roads, pathways, construction of Drainage system as per General Layout and Topography, project boundary fencing and any internal / temporary fencing, security cabin etc.

10. SCADA system for remote monitoring and control of Inverters with all hardware & software and complete set of Weather Monitoring Station including cloud cover.

11. Power Plant Controller(s) (PPC) with associated equipment for the solar project(s) and integration of the PPC with GSECL's master PPC at Park Pooling Substation.

12. Dynamic reactive power compensation equipment and Harmonic filters to comply with the requirements of dynamic reactive power capability at 33kV level of Park Pooling Substation as per the "Report of the Working Group in respect of Data Submission Procedure and Verification of Compliance to CEA Regulations on Technical Standards for Connectivity to the Grid by RE Generators July 2022".

13. CCTVs along with remote monitoring system with coverage of 100% periphery fencing, entry/exit gates of the solar blocks, WMS, inverter stations
14. Comprehensive Operation & maintenance of SPV Plant along with electrical equipment, consumables and spare parts for a period of Three years from the date of commissioning of full Project capacity.

15. Supply of Mandatory spares.

SALIENT TECHNICAL FEATURES

"Salient Technical Features of the systems /equipment/ services 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."

Salient technical features of the proposed project are as follows:

Name of the Project	Development of **"EPC PACKAGE FOR DEVELOPMENT OF 225MW GRID CONNECTED SOLAR PV PROJECTS AT GSECL SOLAR PARK (STAGE-III), KHAVDA"**
Project capacity	**225MW (100MW + 60.24MW+ 64.76MW), Timeline ~16 Months**
Block/Plot capacity	100MW + 60.24MW+ 64.76MW (Bidders shall quote for total capacity of 225MW)

1. Three blocks (with cumulative capacity of 225MW) of Solar Photovoltaic Power Projects as a single EPC Package.
2. Complete Design, engineering, manufacturing, supply, packing and forwarding, transportation, unloading storage, installation, testing and commissioning of Solar Photo Voltaic Plant **including** supply of Solar PV Modules.
3. **MMS** as per Technical Specification – Tracker based **(Cost per MU Based Bidding)**
4. String / Central Inverter with minimum cumulative capacity to meet the respective block capacities with Maximum Power Point Tracking technology along with associated cables, cabling, Transformer & Switchgears.
5. PPC, SCADA, CCTV & Weather Monitoring System.
6. Electrical works and associated switchgear equipment as per technical specification.
7. Evacuation of power to 33kV Switchgear of SPPD's 33/400kV Substation(s), as per SLD.
8. Module cleaning system including supply and installation of all accessories.