

## **SALIENT FEATURES OF DURGAPUR SOLAR PV POWER PROJECT ( 20 MWp )**

### **1.0 INTRODUCTION**

NTPC – SAIL Power Company Limited (NSPCL) is a 50:50 joint venture of two Maharatna PSUs i.e. NTPC LTD, an integrated power major and SAIL, one of the largest steel producing companies of India.

It has an installed capacity of coal based 814 MW at different SAIL locations i.e Bhilai, Rourkela & Durgapur. Out of 814 MW of installed capacity 564 MW capacity is for captive use of SAIL plant at respective locations. It is also undertaking the development of Coal based units of 1X250 MW at SAIL, Rourkela (RSP) & 2X20 MW at SAIL, Durgapur (DSP), which are under construction phase by BHEL & ISGEC Ltd respectively.

NSPCL is intending to set up a 20 MWp solar PV plant at it's Durgapur Project . The 20 MWp solar PV power project shall be implemented in a single EPC package under domestic competitive bidding using Non DCR manufactured PV modules and cells.

Further this EPC package is proposed to be awarded to single bidder in single block of 20 MWp with suitable award criteria intimated separately in the bidding documents.

“Salient Technical Features of the equipment/ systems/ services covered in IFB No. ----- 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.”

### **2.0 LOCATION AND APPROACH**

District	Burdwan, West Bengal
Nearest Highway	Durgapur (NH-2)
Nearest Railway Station	Durgapur ( 7 km)
Nearest Commercial Airport	Kolkata- 180 Km, Durgapur- 15Km

### 3.0 LAND AVAILABILITY

Land Availability (in Acres)	SAIL/DSP has given "Right to Use" of the identified land measuring 100 acres for development of 20 MWp Solar PV Power Plant.
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### 4.0 PROJECT CAPACITY

Name of the project	<b>Durgapur Solar PV Power Project (20 MWp) in Burdwan district of West Bengal</b>
Project capacity	20 MWp Solar PV Project (To be awarded to single bidder in single block of 20 MWp.)

### 5.0 BRIEF SCOPE OF WORK

The brief scope of the package is as follows :

1. Design, engineering, manufacturing, supply, packing and forwarding, transportation, unloading storage, installation, testing and commissioning of Solar Photo Voltaic Plant based on open category PV modules and cells.
2. Geo-Technical Investigation and Topographic Survey of site.
3. Site-grading, clearing of vegetation
4. Design and construction of foundation & mounting structure for SPV panels.
5. Water supply arrangement including supply and installation of water washing system, pipe line for drawl of water from its source and associated
6. Power supply for water washing & construction purposes.

7. Construction of Pre-Engineered type Inverter room with Power conditioning unit associated LT and HT switchgear. In case of String Inverter, Construction of Pre-Engineered type HT Switchgear room.
8. Construction of Central Monitoring and Control Station with switchgear room, SCADA room, Store room, Battery room with all electrical fitting and furniture, fencing of SPV plant, security cabin etc.
9. All associated electrical and civil works required for interfacing with grid (i.e. transformer(s), breakers, isolators, panels, protection system, cables. metering at 11 kV level, earthing of transformer etc.) and evacuation of power to 11 kV Bulk-Supply Sub-Station of Durgapur Steel Plant Township through 2X75% capacity 11 kV overhead lines /cables.
10. Construction of internal roads, pathways, fencing, peripheral boundary wall and drainage system.
11. SCADA system for remote monitoring and control of Inverters with all hardware & software.
12. Operation & maintenance of SPV Plant along with electrical equipment, associated power evacuation lines, consumables and spare parts for a period of five years from the date of successful completion of trial run.
13. Supply of Mandatory spares.

## **6.0 TECHNOLOGY**

In Solar Photo Voltaic Power Generation the direct conversion of solar radiation into electricity is achieved by using semiconductor devices "Solar Cells" which work on the principles of photo electric effect.

## **7.0 POWER EVACUATION SYSTEM**

The entire power generated from the proposed Durgapur Solar PV Power Project (20 MWp) will be supplied to DSP/SAIL after meeting the auxiliary power consumption of the proposed plant. Generated Power shall be evacuated by means of two separate lines . This will be generally 11 KV O/H lines , however underground cable shall be necessary to be laid through some patches of the route where available corridor width is not sufficient for overhead lines. The power evacuation lines shall be

terminated at 11 KV Bulk Supply Substation of DSP, which is located at about 2 KM away from the proposed solar PV power plant in the DSP Township. Battery limit for the successful bidder shall be the input termination point with DSP Bulk supply sub-station

**8.0 OTHER DETAILS**

<b>SL</b>	<b>ITEM</b>	<b>DETAILS</b>
01	Water Requirement during construction	To be arranged by bidder from the identified source point.
02	Power Requirement during construction	To be arranged by bidder
03	MOEF Clearance	Not Applicable
04	Chief Electrical Inspector clearance	To be facilitated by bidder
05	Vegetation Clearance from State Forest Department	Clearance to be arranged by owner, however vegetation removal is to be done by bidder.