# THE DURGAPUR PROJECTS LIMITED

# NOTICE INVITING TENDER (NIT)

## e-Procurement

**NIT No: WBDPL/PP/T/PP-435/2021/21-22/E-162 , Dated:-15/12/2021**

**National Competitive Bidding**
For

E-tender cum Reverse Auction for "Design & Engineering, Manufacture/ Procurement, Supply, Erection, Testing and Commissioning of 8 MW Phase-II Grid Connected Ground Mounted Solar Photovoltaic Power Plants at Durgapur Projects Limited (DPL), Durgapur, West Bengal on Turnkey basis with 05 (Five) years comprehensive Operation and Maintenance".

THE DURGAPUR PROJECTS LIMITED
*(A Govt. of West Bengal Enterprise)*
**CIN: "U40102WB1961SGC025250"**

**Dr Bidhan Chandra Roy Avenue, Industrial Area, Durgapur, West Bengal-713201**

# SECTION – I

# Instruction to Bidder (ITB)

# BID INFORMATION SHEET

| S. No | Aspect | : | Description of Aspect |
|---|---|---|---|
| 1. | **Title of the NIT** | : | **E-tender cum Reverse Auction** for "Design & Engineering, Manufacture/Procurement, Supply, Erection, Testing and Commissioning of 8 MW Phase-II Grid Connected Ground Mounted Solar Photovoltaic Power Plants at Durgapur Projects Limited(DPL), Durgapur, West Bengal on Turnkey basis with 05 (Five) years comprehensive Operation and Maintenance". |
| 2. | **NIT NO. & Date** | : | **WBDPL/PP/T/PP-435/2021/21-22/E-162 dated 15/12/2021** |
| 3. | Publishing Date | | 15/12/2021 |
| 4. | Document Download start date | | 15/12/2021 |
| 5. | Pre-bid queries submission end date | | 05/01/2022 |
| 6. | Pre-Bid Meeting | | 06/01/2022 |
| 7. | Bid submission start date | | 11/01/2022 |
| 8. | Bid submission end date | | 21/01/2022 |
| 9. | Submission of all documents: Xerox | | Upto 27-01-2022; 16:00 Hrs. |

| S. No | Aspect | : | Description of Aspect |
|---|---|---|---|
| | copies of all un priced uploaded documents (hard copy like credential, statutory documents, balance sheet etc) | | |
| **10.** | **Technical Bid opening date** | | **28/01/2022** |
| **11.** | Uploading of Technical Bid Evaluation sheet | | To be notified through system generated message |
| **12.** | Financial Bid opening date | | To be notified through system generated message |
| **13.** | Uploading of Financial Bid evaluation sheet | | To be notified through system generated message |
| **14.** | **Scope of Work** | **:** | Clause No.ITB1.3 |
| **15.** | **Qualifying Requirement** | | **Technical:**<br>**Job Experience :**<br>a) At least **one (01) number 8(Eight ) MW** capacity or **two(2) number Four(4) MW** Capacity or higher capacity Solar PV project installation at a single location during preceding 07 (Seven) years.<br>b) Minimum **01 (one)** number **7 (Eight) MW or** or **two(2) number Four(4) MW**<br>or **higher** capacity Solar PV Power Plant Operation and Maintenance (O&M) |
| | | | **Financial :**<br>**MAAT : Last 3 FY shall be Rs. 11.84 Cr** |

| S. No | Aspect | : | Description of Aspect |
|---|---|---|---|
| | | | **1 Order : INR 31.58 Crores**<br>**2 Order: INR 19.74 Crores**<br>**3 Order : INR 15.79 Crores** |
| **16.** | **Cost of the Tender** | **:** | **Not applicable** |
| **17.** | **Bid Security/ EMD** | **:** | **Rs. 78,94,000/- (Rupees Seventy Eight Lakhs Ninety Four thousand only) [By Online)** |
| **18.** | **Name, Designation, Address and other details** | **:** | Partha De SM (Contract Cell)<br>Sr. Manager(Contract Cell)<br>Email adress:- contractcelldpl@gmail.com<br>Phn no.:-94347 13057 |
| **19.** | **For any Bid quarry contact Person** | | 1. Partha Dey SM (Contract Cell) , 9434713057,email: contractcelldpl@gmail.com<br>2. Sudipto Pal (Projects),9434735849,email:sudiptopal1971@gmail.com |
| **20.** | **Date of Commencement** | **:** | From the date of issuance of Letter Of Award (LOA). |
| **21.** | **Time for Completion** | **:** | **12 (Twelve) Months from date of LOA** |
| **22.** | **Possession of Site** | **:** | Immediately on receipt of LOA from Purchaser (DPL). |
| **23.** | **Performance guarantee** | **:** | i. 10% of the Project Cost **plus GST** in the form of bank guarantee valid for a period of Seventy Two (72) months with further claim period for ninety (90) days thereafter and as per clause from 3.14.2 & 4.2 of general instructions from Scheduled bank as per |

| S. No | Aspect | : | Description of Aspect |
|---|---|---|---|
| | | | DPL approved format.<br>ii. Should be submitted within 21 days from the date of LOA.(BG Format **Annexure-2**) |
| **24.** | **Defects Liability Period each contract (** | **:** | Sixty (60) calendar months up to successful completion of Comprehensive O&M job from the date of issue of final completion certificate of first contract of each project (**Annexure-6**). |
| **25.** | **Minimum value of work for each RA Bill of each contract** | **:** | Rs.20.00 Lakhs. (Rupees Twenty lakhs only) |
| **26.** | **Performance Warranty** | **:** | 5% of the **Project Cost plus GST** will be retained by the Purchaser for the performance warranty and the same will be paid in 1% yearly after successful completion of the work i.e. up to defect liability period. |
| **27.** | **Integrated project performance of Net Minimum Guaranteed Generation (NMGG)** | **:** | Integrated project performance of minimum solar energy generation at the rate of 1.6 MU annually per MW AC with degradation of 0.7% for any reason, from second year onwards. |
| **28.** | **Liquidated damages for Delay (LD Clause)** | **:** | a. **Time Delay:** 0.5 % of Project Cost plus GST for per week delay or part there of subject to a maximum of 10% of the Project Cost **plus GST**.<br>b. **Milestone Delay:** Delay in attaining the milestones by the contractor shall lead to imposition of intermediary Liquidated damages @0.25% per week |

| S. No | Aspect | : | Description of Aspect |
|---|---|---|---|
| | | | of delay upto the maximum extent of 5(Five) Percent of the Project Cost **plus GST**.<br>c. **Total LD value (LD for Time Delay + LD for Milestone Delay) shall not exceed 10% of total Project Cost plus GST.** |
| **29.** | **Performance Penalty** | **:** | Penalty shall be levied for performance shortfall on PG test. Maximum penalty for failure of PG test shall be 5% of Project cost plus GST. |
| **30.** | **Statutory Taxes** | **:** | **Bidder shall submit the base price excluding GST:**<br>i) GST will be reimbursed at actual by the DPL to the bidder on submission of appropriate supporting documents.<br>ii) In case of any change in custom duty, entry tax. etc. during the currency of the contract, the same shall be borne by the bidder. No reimbursement shall be allowed. |
| **31.** | **Operation and Maintenance Cost (Including all Consumables)** | **:** | **Operation and Maintenance Cost (Including all Consumables and spares for Routine and preventive maintenance, Break down maintenance, capital maintenance)**:<br>**7.5 %** of the Project cost (excluding Taxes and Duties) for 5(five) years. Clause No. GCC 3.8.4 |
| **32.** | **Insurance** | **:** | Insurance of supply, erection work and workmen including third party insurance of each equipment are applicable and to be borne by the Contractor until final handover of the project upto defect liability period |

| S. No | Aspect | : | Description of Aspect |
|---|---|---|---|
| | | | including successful completion of O&M period.<br><br>Contractor will be responsible for maintaining the Insurance Policy for the complete Plant and Facilities during the O&M period also. |
| **33.** | **Mode of Tendering** | **:** | **E-tendering cum Reverse Auction** |
| **34.** | **Payment Terms** | | **Supply**:<br>70% after delivery (Prorata basis, Mobilization Advance paid as per Clause 4.04.02 will be recovered proportionately from bills under this phase of payment )<br>15% after Erection (Prorata basis)<br>5% after commissioning (Prorata basis)<br>5% after PG Test<br>5% will be retained for performance securities<br><br>**Service:**<br><br>65% of the contract value will be given pro rata basis after erection of the material (Mobilization Advance paid as per Clause 4.04.02 will be recovered proportionately from bills under this phase of payment).<br>20% after Testing & Commissioning<br>5% after PG Test<br>5% after successful completion<br>5% will be retained for performance securities<br><br>**Mandatory Spares:**<br><br>70% of the Supply price production of MDCC<br>30% of the Supply price production of MRC |

**Note : GST rate shall be considered at actual according to directive during actual execution time**

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# A. Scope of Work & Qualifying Requirements

**1.1.Project particulars**

| **Particulars** | **Description** |
|---|---|
| **Design & Engineering** | |
| AC capacity of the solar power plant | 8 MW AC |
| Technology | (Si Mono crystalline) |
| O&M Period | 05 Years |
| Estimated life of PV Power plant | 25 years |
| Area available for Plant | 27 Acres (Near 220 KV Switchyard of DPL) |
| **Location/Site Details** | |
| Location | The Durgapur Projects Limited premises |
| Type of Land | Government Land |
| Ownership | The Durgapur Projects Limited |
| District | Paschim Bardhaman |
| State | West Bengal |
| **Electrical Interconnection details** | |
| Power Evacuation & Nearest Substation details | The inverter outputs are transformed at 6.6kV. 6.6 kV indoor type switchgear to be installed in the Power plant control room. It will have two number of outgoing feeder; |

| | |
|---|---|
| | 6.6kV 400Ams, 3C Al Armoured cable will be used for these feeders and it will be connected with the existing 6.6kV Unit 8 Reserve bus approx 2 Km away from site. |
| **Performance Parameters** | |
| **Minimum** values of Performance Ratio(PR ) and CUF of the plant after netting off the auxiliary consumption. | PR : 80%<br>CUF : 18.2% |
| Other Details | |
| Water and Power for Construction | To be arranged by the Contractor, however tapping will be provided within 100 metrs from site boundary by the Owner. |

**1.1.2. Name of Work :** ***E-tender cum Reverse Auction*** for "Design & Engineering, Manufacture/Procurement, Supply, Erection, Testing and Commissioning of 8 MW Phase-II Grid Connected Ground Mounted Solar Photovoltaic Power Plants at Durgapur Projects Limited(DPL), Durgapur, West Bengal on Turnkey basis with 05 (Five)years comprehensive Operation and Maintenance".

**1.1.3 . Nature of Job :** Design & Engineering, Manufacture , Supply, Erection, Testing and Commissioning of 8 MW AC Grid Connected Ground Mounted Solar Photovoltaic Power Plant at Durgapur Projects Limited , Durgapur, West Bengal including warrantee obligation with 05 (Five) years comprehensive Operation and Maintenance.

**1.**2. **SOURCE OF FUND**

The Durgapur projects Ltd (hereinafter referred to as **DPL** or "Purchaser") intends to finance the Work covered under these Bidding Documents from the Source as mentioned in the Bid Data Sheet (BDS).

## 1.3. SCOPE OF WORK:

The brief scope of work covered under this Tender shall be included but not limited to the following:-

**1.3.1.**The scope of work for each project shall be on the basis of single source responsibility, completely covering all the Equipment/Material specified under the **Technical Specifications**. The work is to be executed on turnkey basis. The Purchaser will not supply any material departmentally. It shall include the following:

a. Detailed Site Survey of the proposed solar plant area of DPL for Designing and Engineering.

b. Submission of Detailed Design Report indicating technical suitability of site for installation of the Power Plant with layout plan.

c. Detail calculation of Solar Energy generation (MWp and MW ac) and selection of Module considering Net Minimum Guaranteed Generation (NMGG) stipulation for the first five year as well as 25 years of life.

d. Detailed Design of the Equipment/ Materials and Submission of Billing Breakup (BBU) with matching the project cost.

e. Obtaining approval of engineering drawing, technical data, operational manual etc. and necessary inspection from the Purchaser.

f. Complete manufacturing including shop testing.

g. Procurement, Packing, forwarding, transportation and insurance of Equipment/ Material from the manufacturer's works to the Site.

h. Material Supply, Receipt, storage, preservation, insurance and conservation of Equipment/ Material at the Site.

i. Grading of site to even out the surface and provide a solid foundation , clearing of vegetation of the Site .

j. Design and assemble of Module mounting structure (MMS). Detail GA and data sheet of each type of MMS with its fixing arrangement to be provided by the vendor before job execution.

k. Design calculation of total generation including NMGG requirement for next five years shall be substantiated with latest version of PV system for approval with maximum accurate weather data **like latest version of Solargis.**

l. Providing power supply for construction purposes.

m. Construction of RCC/PEB type Inverter room with Power conditioning unit and associated RCC type LT and HT switchgear cum control room.

n. Construction of Equipment for switchgear room, **SCADA room**, store room, battery & Battery Charger room with all electrical fitting and Control room with Central Monitoring and Control Station, security cabin etc.

o. Installation and commissioning of equipment as per technical design.

p. All associated electrical and civil works required for interfacing with grid i.e. transformer(s), breakers, isolators, panels, protection system, cables. metering, earthing etc.

q. Power evacuation : The solar modules produce Direct Current (DC), which would be converted to Alternating Current (AC) through the use of inverters. The inverters used as a part of the Solar power plant is envisaged to produce current at 415V,which would be further stepped up to 6.6kV for integration with the 6.6kv bus.

r. The DC from modules is converted to AC by inverters. The inverter outputs are fed into a junction box, which in turn is connected to the common 415 V AC bus bar and further transformed at 6.6kV. 6.6 kV indoor type switchgear to be installed in the Power plant control room. It will have two number of outgoing feeder; 6.6kV 400Ams, 3C Al Armoured cable will be used for these feeders and it will be connected with the existing 6.6kV Unit 8 bus which is aprox 2000m from the plant site. The LV and the HT panels will have all necessary metering and protection.

s. This 8 MW power would be evacuated through two number 6.6kV 400Ams,Armoured underground XLPE cable from this indoor switchgear to 6.6kV DPL unit no.7 Reserve Switch Gear. This cable will be laid down

t. through underground cable trance covered by concrete slab. Approximate

u. length of the cable will be 2 km.

v. Water supply arrangement for Control Building, cleaning water for PV modules etc.

w. Preparation of Land, Grading of Land ,covering the land with CLSM.

x. Construction of roads, walkways and drainage system of Control Building.

y. Modules should be so mounted and foundation structure should be such that it can withstand wind-speed of 180 kmph as well as seismic effects