



THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED
(A Government of West Bengal Enterprise)

NOTICE INVITING TENDER (NIT)

e-Procurement

NIT No: WBPDC/CORP/NIT/E1502/21-22 Dtd:-08/12/2021

National Competitive Bidding

For

E-tender cum reverse auction for Design & Engineering, Manufacture / Procurement, Supply, Erection, Testing and Commissioning of 22.5 MW Grid Connected Floating Solar Photovoltaic Power Plants on different Water Ponds at BkTPS, STPS & SgTPP of WBPDC, West Bengal including warrantee obligation with 05 (Five) years comprehensive Operation and Maintenance on turnkey basis at various locations of West Bengal.

The West Bengal Power Development Corporation Limited

(A Government of West Bengal Enterprise)

Bidyut Unnauan Bhaban, Plot No. 3/C LA-Block, Sector-III, Bidhannagar,
Kolkata-700 106

December-2021

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BID INFORMATION SHEET

Sl. 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 22.5 MW Grid Connected Floating Solar Photovoltaic Power Plants on different Water Ponds at BkTPS, STPS & SgTPP of WBPDCCL, West Bengal including warrantee obligation with 05 (Five) years comprehensive Operation and Maintenance on turnkey basis at various locations of West Bengal.
2.	NIT NO. & Date	:	WBPDCCL/CORP/NIT/E1502/21-22 Dtd:-08/12/2021
3.	Publishing Date		09.12.2021 at 9:00 Hrs
4.	Document Download start date		09.12.2021 at 9:00 Hrs
5.	Pre-bid queries submission end date		Within 27.12.2021 up to 15:00 Hrs
6.	Pre-Bid Meeting		04.01.2022 at 14:30 Hrs
7.	Bid submission start date		11.01.2022 from 11:00 Hrs
8.	Bid submission end date		24.01.2022 till 15:00 Hrs
9.	Earnest Money (B.G) physical submission at Corporate office		From 24.01.2022 to 28.01.2022 (between 11:00 a.m. to 3:00 p.m.) (except Saturday/ Sunday/ Holidays of GoWB)
10.	Technical Bid opening date		28.01.2022 at 15:30 Hrs
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

Sl. No	Aspect	:	Description of Aspect
15.	Cost of the Tender	:	Not applicable
16.	Bid Security/ EMD	:	Rs. 304.70 Lakh
17.	Name, Designation, Address and other details	:	The General Manager (M&C) , The West Bengal Power Development Corp. Ltd. Bidyut Unnayan Bhaban, Plot No. 3/C LA-Block, Sector-III, Bidhannagar,Kolkata-700 106
18.	For any Bid quarry contact Person		
19.	Date of Commencement for each contract	:	From the date of issuance of Letter Of Award (LOA).
20.	Time for Completion	:	12 (Twelve) Months from date of LOA for Project at BkTPS 12 (Twelve) Months from date of LOA for Project at STPS 10 (Ten) Months from date of LOA for Project at SgTTP
21.	Possession of Site for each contract	:	Immediately on receipt of LOA from Purchaser (WBPDCCL).
22.	Performance guarantee for execution of contract for each Contract	:	i. 3% 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 nationalized bank as per WBPDCCL approved format. ii. Should be submitted within 15 days from the date of LOA.(BG Format Annexure-2)
23.	Defects Liability Period for each contract each contract	:	Sixty (60) calendar months upto successful completion of comprehensive O&M job from the date of issue of final completion certificate of first contract of each project (Annexure-6).
24.	Minimum value of work for each RA Bill for each contract	:	Rs.20.00 Lakhs. (Rupees Ten lakhs only)
25.	Performance Warranty for each contract	:	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

Sl. No	Aspect	:	Description of Aspect
			completion of the work i.e. up to defect liability period.
26.	Integrated project performance of Net Minimum Guaranteed Generation (NMGG) For each contract	:	Integrated project performance of minimum solar energy generation at the rate specified in Cl. No. 3.33 of NIT annually per MW with degradation of 0.7% for any reason, from second year onwards.
27.	Liquidated damages for Delay (LD Clause) For each contract	:	<p>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.</p> <p>b. Milestone Delay: Delay in attaining the milestones by the contractor shall lead to imposition of intermediary Liquidated damages @0.25% per week of delay upto the maximum extent of 5(Five) Percent of the Project Cost plus GST.</p> <p>c. Total LD value (LD for Time Delay + LD for Milestone Delay) shall not exceed 10% of total Project Cost plus GST.</p>
28.	Performance Penalty For each contract	:	<p>i) 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.</p> <p>ii) NMGG shall be considered during O&M period. This Integrated project performance of minimum solar energy at a rate specified in Cl. No. 3.33 of Section III annually per MW with degradation of 0.7% for any reason. If generated units fall short, then Rs.4.00 per unit of short fall will be deducted from performance warranty every year up to 5th year. Maximum deduction in case short fall of NMGG shall be 5% of total Project Cost plus GST.</p> <p>iii) Maximum penalty for failure of PG test and NMGG in totality shall be not more than 10% of project cost plus GST.</p>

Sl. No	Aspect	:	Description of Aspect
29.	Statutory Taxes For each contract	:	<p>Bidder shall submit the base price:</p> <p>i) GST will be reimbursed at actual by the WBPDCCL to the bidder on submission of appropriate supporting documents.</p> <p>ii) In case of any change in custom duty, BOCW, entry tax. etc. during the currency of the contract, the same shall be borne by the bidder. No reimbursement shall be allowed.</p>
30.	Operation and Maintenance Cost (Including all Consumables) For each contract	:	<p>Operation and Maintenance Cost (Including all Consumables and spares for Routine and preventive maintenance, Break down maintenance, capital maintenance):</p> <p>10% of the Project cost (excluding Taxes and Duties) for 5(five) years. Clause No. GCC 3.8.4</p>
31.	Insurance for each contract	:	<p>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 including successful completion of O&M period.</p> <p>Contractor will be responsible for maintaining the Insurance Policy for the complete Plant and Facilities during the O&M period also.</p>
32.	Mode of tendering	:	E-tendering cum reverse auction.

Note: i) E-tendering cum reverse auction is common for three projects but there will be three separate LOA for each location i.e. for BKTPS, STPS & SgTPP. Tender-cum reverse auction will be evaluated considering total base price (Project cost) of all three projects together.

ii) GST rate shall be considered according to the directive of the statutory authority during actual executive time. However, the calculation has been done on present GST as per Statutory authority.

SECTION-I

INSTRUCTION TO THE BIDDER (ITB)

A. SCOPE & QUALIFICATION

1.1 NAME OF THE WORK

E-tender cum reverse auction for Design & Engineering, Manufacture / Procurement, Supply, Erection, Testing and Commissioning of 22.5 MW Grid Connected Floating Solar Photovoltaic Power Plants on different Water Ponds at BkTPS, STPS & SgTPP of WBPDCCL, West Bengal including warrantee obligation with 05 (Five) years comprehensive Operation and Maintenance on turnkey basis at various locations of West Bengal.

1.2 SOURCE OF FUND

The West Bengal Power Development Corporation Ltd (hereinafter referred to as **WBPDCCL** or “**PURCHASER**”) intends to finance the work covered under these Bidding Documents. The Source of the fund is grant from Govt. of West Bengal.

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 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 Power Plant Raw Water Pond areas BkTPS, STPS and SgTPP of WBPDCCL 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 NMGG stipulation of Cl 3.33 of GCC 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, clearing of vegetation of the Site such as bank of the Pond and Site of the Control Building.
- j. Design and assemble of floater & mounting structure and mooring & anchoring system for Floaters with SPV panel. Detail GA and data sheet of each type of floater including its fixing arrangement. Maximum capacity of weight can withstand i.r.o. of each type of floater. Maximum DC Cable carrying capacity of floaters.
- k. Design calculation of total generation including NMGG requirement for next five years shall be substantiated with latest version of PVsyst 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 SCADA & 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 up to the terminal point at 220 kV & 33kV voltage level as specified in technical specifications for each locations.
- r. Water supply arrangement for Control Building.

- s. Construction of roads, walkways and drainage system of Control Building.
- t. SCADA system for remote monitoring and control of SPV panels with all hardware & software.
- u. Till the commissioning of the plant and handing over the same to the Purchaser, the necessary security arrangement of all the materials and equipment will be the sole responsibility of the Contractor.
- v. Final check-up of equipment, installation, and commissioning of power plant and putting the system into successful functional operation.
- w. Reliability tests, performance and guarantee tests, wherever applicable, on completion of commissioning.
- x. Insurance of all the Equipment/ Materials.
- y. Supply of Mandatory Spares.
- z. Providing training up to the satisfaction of the purchaser operating personnel at Manufacturers works, Operating power stations and at site or abroad.
 - a. Providing training material to the end users during onsite training for end users.
 - b. Preparing commissioning certificate and documentation as per MNRE, GoI
 - c. Handing over of power plant.
 - d. Operation & maintenance manpower of SPV Plant along with electrical equipment, consumables and spare parts for a period of five years from the date of successful completion of trial run.
 - e. Providing of routine and break down maintenance of grid connected floating solar PV power plants during comprehensive maintenance period.
 - f. Fulfilment of guarantee obligation.

Note: All the engineering drawing, documents, design, sizing calculation, layout etc. shall be submitted for approval from WBPDCCL or Consultant of WBPDCCL.

1.3.2. SUPPLY:

a) The Supply scope includes the following but not limited to:

Design, Manufacture / Procurement, Supply and delivery of all the materials like Floater, PV Module, Module Mounting Structure, Anchors, Grid Connected Inverters, Transformer, String Monitoring Boxes, Inverter LT Panel, HT Panel, LT Panel, other LT boards, Web based monitoring systems, Weather Monitoring Systems, PLC/DCS, Cables, System

protection and other accessories conforming to the Technical Specification as required for successful Installations & commissioning of Floating Solar PV Power Plant on different Water Ponds of BKTPS, STPS & SgTPP of WBPDCCL.

- b)** Latest licensed version of PVsyst software (minimum 2 users). Pre activated License is not acceptable. License to be handed over to WBPDCCL.
- c)** Mandatory Spares as per list E of Section V.

1.3.3. SURVICE, ERECTION & OTHER SEVICES:

The Erection and Commissioning scope includes the following but not limited to:

Installation, Testing and Commissioning of Grid connected Floating Solar Photovoltaic Power Plants on different Water Ponds of BKTPS, STPS & SgTPP of WBPDCCL on turnkey basis including warrantee obligation with 05 (Five) years comprehensive Operation and Maintenance.

1.3.4. OPERATION AND MAINTENANCE:

Five (5) years comprehensive Operation & Maintenance(O&M) of the Solar PV Plant including power evacuation along with electrical equipment, consumables and spare parts from the date of successful completion of trial run and completion of all facilities of each project. PG test shall be completed within six months from the Start date of O&M Contract in line with Cl. no. 4.27.

1.4 QUALIFYING REQUIREMENT FOR BIDDERS:

The Bidder shall meet the following minimum qualification for 22.5 MW grid connected Floating Solar PV Power Plants of WBPDCCL:

1.4.1. GENERAL :

The Bidder, who intends to participate in the Bid, must have to meet the following criteria:

1.4.1.1 The Bidder shall be a Sole Proprietorship / Partnership Firm or Comp any incorporated in India under The Indian Partnership Act 1932 or LLP Act 2008 or Companies Act, 2013.

1.4.1.2 Bidders shall have to submit: