For 5 MW Floating Solar PV Power Plant at STPS of WBPDCL



THE WEST BENGAL POWER DEVELOPMENT CORPORATION LIMITED

(A Government of West Bengal Enterprise)

NOTICE INVITING TENDER (NIT)

e-Procurement

NIT No: WBPDCL/CORP/NIT/E1515/21-22 Dtd:-06/01/2022

National Competitive Bidding

For

E-tender cum reverse auction for Design & Engineering, Manufacture / Procurement, Supply, Erection, Testing and Commissioning of 5MW Grid Connected Floating Solar Photovoltaic Power Plant on Raw Water Pond No. 1 in Santhaldih Thermal Power Station (STPS), Purulia, West Bengal including warrantee obligation with 05 (Five) years comprehensive Operation and Maintenance on turnkey basis.

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

January-2022

These documents are meant for the exclusive purpose of bidding against this NIT and shall not be transferred, reproduced or otherwise used for purposes other than that for which they are specifically issued

CONTENTS

THE	BIDDING DOCUMENTS	12
SECT	'ION-I	13
INST	RUCTION TO THE BIDDER (ITB)	13
A.	SCOPE & QUALIFICATION	13
1.1	NAME OF THE WORK	13
1.2	SOURCE OF FUND	13
1.3	SCOPE OF WORK:	13
1.4	QUALIFYING REQUIREMENT FOR BIDDERS:	16
1.5	RESPONSIBILITY OF BIDDERS	20
1.6	EXPENDITURE OF BIDDING	21
B.	THE BIDDING DOCUMENTS	21
1.7	CONTENTS OF BIDDING DOCUMENTS	21
1.8	CLARIFICATIONS ON BIDDING DOCUMENTS	22
1.9	PRE-BID MEETING	23
1.10	AMENDMENT OF BIDDING DOCUMENTS	24
C.	PREPARATION OF BIDS	24
1.11	ABOUT THE BID	24
1.12	DEVIATION	25
1.13	GENERAL GUIDANCE FOR E- TENDER	25
1.14	SITE VISIT	25
1.15	BID PRICES	26
1.16	PERIOD OF VALIDITY OF BIDS	28
1.17	BID SECURITY	28
1.18	SIGNING OF BIDS	29
D.	SUBMISSION OF BID	29
1.19	SUBMISSION OF BID	29
1.20	DEADLINE FOR SUBMISSION OF BIDS	34
1.21	WITHDRAWAL OF BIDS	35
E.	OPENING AND EVALUATION OF TENDER	35
1.22	BID OPENING	35
1.23	PROCESS TO BE CONFIDENTIAL	36
1.24	CLARIFICATION OF BIDS	36
1.25	DETERMINATION OF RESPONSIVENESS	
1.26	TIME SCHEDULE	37

1.27	PROCEDURE OF EVALUATION OF BIDS	37
1.28	EVALUATION	38
F.	AWARD OF CONTRACT	39
1.29	AWARD CRITERIA	39
1.30	RIGHT TO REJECT BIDS	39
1.31	LETTER OF AWARD	40
1.32	SIGNING OF CONTRACT AGREEMENT	40
1.33	CONTRACT PERFORMANCE GUARANTEE	40
1.34	MISREPRESENTATION BY THE BIDDER	41
SECT	ION-II	42
BID D	ATA SHEET	42
2.1	A. SCOPE & QUALIFICATION	42
2.2	B. THE BIDDING DOCUMENTS	42
2.3	C. PREPARATION OF BIDS	43
2.4	D. SUBMISSION OF BIDS	43
SECTIO	N-III	45
GENEDA	AL CONDITION OF CONTRACT (GCC)	45
GENERA	AL CONDITION OF CONTRACT (GCC)	45
A.	CONTRACT AND INTERPRETATION	45
3.1.	DEFINITION OF TERMS	45
3.2.	CONTRACT DOCUMENTS	49
3.3.	NOTICE	51
3.4.	INTERPRETATION	51
3.5.	GOVERNING LAW	
3.6.	SATTLEMENT OF DISPUTE	53
3.7.	COMPLIANCE WITH LAWS	53
В.	SUBJECT MATTER OF CONTRACT	54
3.8.	SCOPE OF WORKS	
3.9.	VARIATION, ADDITIONS AND OMISSIONS	59
3.10.	OBLIGATIONS OF THE CONTRACTOR	59
3.11.	OBLIGATIONS OF THE PURCHASER	
C.	PAYMENT	
3.12.	CONTRACT PRICE	
3.13.	TERMS AND PROCEDURE FOR PAYMENT	
3.14.	SECURITIES	
3.15.	TAXES, DUTIES AND OTHER LEVIES	
D.	INTELLECTUAL PROPERTY	
3.16.	PATENT RIGHTS & ROYALTIES	
3.17.	CONFIDENTIAL INFORMATION	
3.18.	ADVERTISING	66

E.	WORK EXECUTION	66
3.19.	PURCHASER'S REPRESENTATIVE	66
3.20.	CONTRACTOR'S REPRESENTATIVE	67
3.21.	MILESTONE OF PROJECT	68
3.22.	SUBMISSION OF DETAILED DESIGN REPORT	69
3.23.	PROGRAMME	69
3.24.	DESIGN AND ENGINEERING	71
3.25.	PROCUREMENT	73
3.26.	CONTRACTOR'S CONSTRUCTION MANAGEMENT:	74
3.27.	INSPECTION & TESTING	77
3.28.	TESTS ON COMPLETION.	79
3.29.	REJECTION	80
3.30.	PERMISSION TO DELIVER	80
3.31.	COMPLETION OF WORKS	81
3.32.	TAKING OVER	82
F.	GUARANTEES AND LIABILITIES	83
3.33.	NET MINIMUM GUARANTEED GENERATION (NMGG)	83
3.34.	LIQUIDATED DAMAGES	
3.35.	DEFECTS LIABILITY	86
3.36.	LIMITATIONS OF LIABILITY	88
G.	RISK DISTRIBUTION	88
3.37.	TRANSFER OF PURCHASERSHIP	88
3.38.	RISK AND RESPONSIBILITY	89
3.39.	CARE OF WORKS	90
3.40.	ACCEDENT OF INJURY	91
3.41.	INSURNCE	91
3.42.	CHANGE IN LAWS AND REGULATIONS	92
3.43.	FORCE MAJEURE	93
3.44.	WAR RISKS	94
н.	CHANGE IN CONTRACT ELEMENTS	94
3.45.	VARIATIONS	94
3.46.	EXTENSION OF TIME FOR COMPLETION	96
3.47.	TERMINATION	97
3.48.	ASSIGNMENT & SUB-CONTRACTING	102
3.49.	JOINT AND SEVERAL LIABILITY	102
SECTION	ON -IV	104
	AL CONDITION OF CONTRACT (SCC)	
i)	DEFINITION	
ii)	CONTRACT PERFORMANCE GUARANTEE	
iii)	PAYMENTS	
4.4	ESCALATION	

4.5	LIQUIDATED DAMAGES	115
4.6	NOTICES	115
4.7	LABOUR	116
4.8	SAFETY MEASURES	118
4.9	FIRE FIGHTING MEASURES	118
4.10	DEPLOYMENT OF MANPOWER	118
4.11	QUANTITY OF WORK	119
4.12	PROJECT MANAGEMENT	119
4.13	ACCIDENT OR INJURY TO WORKMEN	120
4.14	REGULATIONS & STANDARDS	120
4.15	INSPECTION AND TESTING	121
4.16	DESIGN AND ENGINEERING	121
4.17	COMPLETION OF WORK	121
4.18	TRAINING OF OWNER'S ENGINEER	122
4.19	TAKING OVER	122
4.20	COMPREHENSIVE MAINTENANCE	123
4.21	FUNCTIONAL WARRANTY	124
4.22	PERFORMANCE GUARANTEE OF PV MODULE:	126
4.23	KICK OFF MEETING	126
4.24	CLEAN-UP AND WASTE DISPOSAL	127
		404
TECHN	IICAL SPECIFICATION	134
TECHN A.	GENERAL REQUIREMENTS:	
		134
A.	GENERAL REQUIREMENTS:	134
A. 5.1	GENERAL REQUIREMENTS: NAME OF THE WORK:	134 134 134
A. 5.1 5.2	GENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK:	134 134 134
A. 5.1 5.2 5.3	GENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK: PROJECT SCHEDULE:	134 134 134 134
5.1 5.2 5.3 5.4	GENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK: PROJECT SCHEDULE: MODE OF EXECUTION	134 134 134 134 135
5.1 5.2 5.3 5.4 5.5	GENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK: PROJECT SCHEDULE: MODE OF EXECUTION SITE INSPECTION	134 134 134 134 135
5.1 5.2 5.3 5.4 5.5 5.6	GENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK: PROJECT SCHEDULE: MODE OF EXECUTION SITE INSPECTION FACILITIES AT SITE	134 134 134 134 135 135
5.1 5.2 5.3 5.4 5.5 5.6 B.	GENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK: PROJECT SCHEDULE: MODE OF EXECUTION SITE INSPECTION FACILITIES AT SITE SYSTEM DESCRIPTION:	134 134 134 135 135 135
5.1 5.2 5.3 5.4 5.5 5.6 B. 5.7	GENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK: PROJECT SCHEDULE: MODE OF EXECUTION SITE INSPECTION FACILITIES AT SITE SYSTEM DESCRIPTION: LAYOUT:	134134134134135135135
5.1 5.2 5.3 5.4 5.5 5.6 B. 5.7 C.	GENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK: PROJECT SCHEDULE: MODE OF EXECUTION SITE INSPECTION FACILITIES AT SITE SYSTEM DESCRIPTION: LAYOUT: TECHNICAL SPECIFICATION (CIVIL)	134134134135135135135
5.1 5.2 5.3 5.4 5.5 5.6 B. 5.7 C. 5.8	RENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK: PROJECT SCHEDULE: MODE OF EXECUTION SITE INSPECTION FACILITIES AT SITE SYSTEM DESCRIPTION: LAYOUT: TECHNICAL SPECIFICATION (CIVIL) TECHNICAL SPECIFICATION FOR CIVIL JOB	134134134134135135135140140
5.1 5.2 5.3 5.4 5.5 5.6 B. 5.7 C. 5.8 5.9	GENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK: PROJECT SCHEDULE: MODE OF EXECUTION SITE INSPECTION FACILITIES AT SITE SYSTEM DESCRIPTION: LAYOUT: TECHNICAL SPECIFICATION (CIVIL) TECHNICAL SPECIFICATION FOR CIVIL JOB SWITCHGEAR CUM CONTROL BUILDING:	134134134134135135135140147151
5.1 5.2 5.3 5.4 5.5 5.6 B. 5.7 C. 5.8 5.9 5.10	GENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK: PROJECT SCHEDULE: MODE OF EXECUTION SITE INSPECTION FACILITIES AT SITE SYSTEM DESCRIPTION: LAYOUT: TECHNICAL SPECIFICATION (CIVIL) TECHNICAL SPECIFICATION FOR CIVIL JOB SWITCHGEAR CUM CONTROL BUILDING: PV ARRAY O&M MAINTENANCE ARRANGEMENT	134134134135135135140140151
5.1 5.2 5.3 5.4 5.5 5.6 B. 5.7 C. 5.8 5.9 5.10 5.11	GENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK: PROJECT SCHEDULE: MODE OF EXECUTION SITE INSPECTION FACILITIES AT SITE. SYSTEM DESCRIPTION: LAYOUT: TECHNICAL SPECIFICATION (CIVIL) TECHNICAL SPECIFICATION FOR CIVIL JOB SWITCHGEAR CUM CONTROL BUILDING: PV ARRAY O&M MAINTENANCE ARRANGEMENT APPROCH ROAD FOR SOLAR POWER PLANT	134134134135135135140140151152
5.1 5.2 5.3 5.4 5.5 5.6 B. 5.7 C. 5.8 5.9 5.10 5.11	GENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK: PROJECT SCHEDULE: MODE OF EXECUTION SITE INSPECTION FACILITIES AT SITE. SYSTEM DESCRIPTION: LAYOUT: TECHNICAL SPECIFICATION (CIVIL) TECHNICAL SPECIFICATION FOR CIVIL JOB SWITCHGEAR CUM CONTROL BUILDING: PV ARRAY O&M MAINTENANCE ARRANGEMENT APPROCH ROAD FOR SOLAR POWER PLANT WATCHMEN / SECURITY CABIN	134134134135135135135140140147151152
5.1 5.2 5.3 5.4 5.5 5.6 B. 5.7 C. 5.8 5.9 5.10 5.11 5.12	RENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK: PROJECT SCHEDULE: MODE OF EXECUTION SITE INSPECTION FACILITIES AT SITE. SYSTEM DESCRIPTION: LAYOUT: TECHNICAL SPECIFICATION (CIVIL) TECHNICAL SPECIFICATION FOR CIVIL JOB SWITCHGEAR CUM CONTROL BUILDING: PV ARRAY O&M MAINTENANCE ARRANGEMENT APPROCH ROAD FOR SOLAR POWER PLANT WATCHMEN / SECURITY CABIN. MODULE WASHING SYSTEM:	134134134135135135135140140151152152
5.1 5.2 5.3 5.4 5.5 5.6 B. 5.7 C. 5.8 5.9 5.10 5.11 5.12	GENERAL REQUIREMENTS: NAME OF THE WORK: SCOPE OF THE WORK: PROJECT SCHEDULE: MODE OF EXECUTION SITE INSPECTION FACILITIES AT SITE SYSTEM DESCRIPTION: LAYOUT: TECHNICAL SPECIFICATION (CIVIL) TECHNICAL SPECIFICATION FOR CIVIL JOB SWITCHGEAR CUM CONTROL BUILDING: PV ARRAY O&M MAINTENANCE ARRANGEMENT APPROCH ROAD FOR SOLAR POWER PLANT WATCHMEN / SECURITY CABIN MODULE WASHING SYSTEM: TECHNICAL SPECIFICATION FOR ELECTRICAL	134134134135135135135140147151152152154

5.13.3	PV ARRAY	.175
5.13.4	STRING MONITORING BOX (SMB)	.175
5.13.5	THREE WINDING TRANSFORMER (INVERTER DUTY TRANSFORMER	2)177
5.13.6	33kV INDOOR SWITCHGEAR & POWER EVACUATION	.188
5.13.7	33kV OUTDOOR SWITCHYARD	.209
5.13.8	STATION AUXILIARY TRANSFORMER	.340
5.13.9	LT SWITCHGEAR	.343
5.13.10	DC BATTERY, BATTERY CHARGING EQUIPMENT & DCDB	.349
5.13.11	RELAYS (For HT and LT Switchgear)	.356
5.13.12	PROTECTION SYSTEM (HT and LT Switchgear)	.360
5.13.13	EARTHING AND LIGHTNING PROTECTION SYSTEM	.364
5.13.14	CONTROL, MONITORING AND DATA ACUSITION	.367
5.13.15	CABLES & CONDUCTOR:	.406
5.13.16	NOT APPLICABLE	.417
5.13.17	WEATHER MONITORING STATION	.417
5.13.18	WEB BASED ON LINE REMOTE MONITORING SYSTEM:	.422
5.13.19	EXPORT IMPORT ENERGY METER:	.424
5.13.20	ILLUMINATION SYSTEM	.424
viii)	MISCELLANEOUS WORKS:	.426
5.13.21	FIRE PROTECTION SYSTEM	.426
5.13.22	VENTILATION SYSTEM	.427
5.13.23	AIR CONDITIONING SYSTEM	.429
5.13.24	DRINKING WATER	.430
5.13.25	SIGNAGE:	.430
5.13.26	FIRE BUCKETS AND HOLDING STANDS	.431
5.13.27	KIOSK	.431
5.13.28	TOOLS, TACKLES AND SPARES	.432
5.13.29	OTHER CONDITIONS	.432
ix)	APPROVED VENDOR LIST FOR BOIs:	.433
x)	LIST OF MANDATORY SPARES	.434
SECTIO	N – VI	.441
FORM-3	: BID FORM/UNDERTAKING	.446
FORM-5	: SUMMARY STATEMENT OF YEARLY TURNOVER AND NET WORTH.	.450
FORM-6	: CAPABILITY STATUS	.451
FORM-7	: SIMILAR TYPE OF ORDERS	.452
FORM-8	:CURRICULUM VITAE OF KEY PERSONNEL	.453
FORM-1	0: PROPOSED MODIFICATIONS	.455
FORM-1	1: PROFORMA FOR JOINT VENTURE/CONSORTIUM AGREEMENT	.456
FORM-1	2: POWER OF ATTORNEY	.460
FORM-1	3: DECLARATION FOR NET MINIMUM GUARANTEED GENERATION	.462
SECTIO	N – VII	.463

ANNEXURES	463
Declaration	464
ANNEXURE-1: CONTRACT AGREEMENT	465
ANNEXURE-2: BG (CONTRACT PERFORMANCE)	467
ANNEXURE-5: INDEMNITY BOND	473
ANNEXURE-7: APPLICATION FOR PAYMENT	477
ANNEXURE-8: TAKING OVER CERTIFICATE	478
ANNEXURE-9: NO-CLAIM CERTIFICATE	479
ANNEXURE-10A: INDEMNITY FOR EQUIPMENT	480
ANNEXURE-10B: APPLICATION FOR MATERIAL GATE PASS	483
ANNEXURE-12: MATERIAL RECEIPT CERTIFICATE	485
ANNEXURE-13: RECORD BOOK FOR GRID OUTAGE	486
ANNEXURE-15 · BIDDER INFORMATION SHEET	488

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 5MW Grid Connected Floating Solar Photovoltaic Power Plant on Raw Water Pond No. 1 in Santhaldih Thermal Power Station (STPS), Purulia, West Bengal including warrantee obligation with 05 (Five) years comprehensive Operation and Maintenance on turnkey basis.
2.	NIT NO. & Date	:	WBPDCL/CORP/NIT/E1515/21-22 Dtd:-06/01/2022
3.	Publishing Date		14.01.2022 at 10:00 a.m.
4.	Document Download start date		14.01.2022 at 10:30 a.m.
5.	Pre-bid queries submission end date		Within 28.01.2022 up to 03:00 p.m.
6.	Pre-Bid Meeting		03.02.2022 at 2:30 p.m.
7.	Bid submission start date		12.02.2022 from 11:00 a.m
8.	Bid submission end date		21.02.2022 till 03:00 p.m
9.	Earnest Money (B.G) physical submission at Corporate office		From 21.02.2022 to 23.02.2022 (between 11:00 a.m. to 3:00 p.m.) (except Saturday/ Sunday/ Holidays of GoWB)
10.	Technical Bid opening date		23.02.2022 at 03:00 p.m
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

S. No	Aspect	:	Description of Aspect
15.	Cost of the Tender	:	Not applicable
16.	Bid Security/ EMD	:	Rs.6900000/-
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		Mr. Arindam Das . Manager(Civil) M&C Telephone: 0091 – 033 2339 3627, 9073900862 Email: a_das@wbpdcl.co.in
19.	Date of Commencement	••	From the date of issuance of Letter Of Award (LOA).
20.	Time for Completion	:	12 (Twelve) Months from date of LOA
21.	Possession of Site	:	Immediately on receipt of LOA from Purchaser (WBPDCL).
22.	Performance guarantee for execution of 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 WBPDCL approved format. ii. Should be submitted within 15 days from the date of LOA.(BG Format Annexure-2)
23.	Defects Liability Period	•	Sixty (60) calendar months from the date of issue of final completion certificate /Acceptance of work by WBPDCL (Annexure-6).
24.	Minimum value of work for each RA Bill	•	Rs.10.00 Lakhs. (Rupees Ten lakhs only)
25.	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.
26.	Integrated project performance of Net Minimum	:	Integrated project performance of minimum solar energy generation at the rate specified in Cl. No. 3.33

S. No	Aspect	:	Description of Aspect
	Guaranteed Generation (NMGG)		of NIT annually per MW with degradation of 0.7% for any reason, from second year onwards.
27.	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 .
		:	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 .
			c. Total LD value (LD for Time Delay + LD for Milestone Delay) shall not exceed 10% of total Project Cost plus GST.
28.	Performance Penalty	:	 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. ii) NMGG shall be considered during O&M period. This Integrated project performance of minimum solar energy at a rate of 1.52MU annually per MW with degradation of 1% 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. iii) Maximum penalty for failure of PG test and NMGG in total in the last test and the project cost plus GST.
29.	Statutory Taxes	:	NMGG in totality shall be not more than 10% of project cost plus GST. Bidder shall submit the base price: i) GST will be reimbursed at actual by the WBPDCL to the bidder on submission of appropriate supporting documents. ii) In case of any change in custom duty, entry tax. etc. during the currency of the contract,

S. No	Aspect	:	Description of Aspect
			the same shall be borne by the bidder. No reimbursement shall be allowed.
30.	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):
			10% of the Project cost (excluding Taxes and Duties) for 5(five) years. Clause No.GCC 3.8.4
31.	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 including successful completion of O&M period. Contractor will be responsible for maintaining the Insurance Policy for the complete Plant and Facilities during the O&M period also.
32.	Mode of tendering	:	E-tendering cum reverse auction.

Note: i) 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.

THE BIDDING DOCUMENTS

Section I	:	Instr	Instructions To Bidders (ITB)						
Section II	:	Bid 1	Bid Data Sheet (BDS)						
Section III	:	Gene	General Conditions of Contract (GCC)						
Section IV	:	Spec	Special Conditions of Contract (SCC)						
Section V		Tech	nnical Specification						
	:	Forn	Form						
		1	Check List						
		2	Forwarding Letter for submission of Bid Security and Tender Fee						
		3	Bid Form/Undertaking						
		4	Bid Security (Bank Guarantee format)						
		5	Summary Statement of Yearly Turnover and Net Worth						
			Capability Status						
Section VI			Statement of Similar type of order, Orders executed as on date of issuance of NIT						
		8	Curriculum Vitae of Key Personnel						
		9	Format for Submission of Pre-Bid Queries						
		10	Format for Proposed modifications						
		11	JV/Consortium Agreement						
		12	Power of Attorney						
		13	Declaration for Net Minimum Guaranteed Generation						
		Ann	exure						
		1	Proforma of Contract Agreement						
		2	Proforma of Bank Guarantee for Mobilisation Advance						
		3	Proforma of Bank Guarantee for Contract Performance						
		4	Proforma for extension of Bank Guarantee						
		5	Proforma of Indemnity Bond						
		6	Completion Certificate						
Section VII		7	Application for Payments						
		8	Taking-Over Certificate						
		9	No-Claim Certificate						
		10A	Indemnity for Equipment						
		10B	Application for Material Gate Pass						
		11	Application for material gate pass						
		12	Authorization letter						

SECTION-I

INSTRUCTION TO THE BIDDER (ITB)

A. SCOPE & QUALIFICATION

1.1 NAME OF THE WORK

Design & Engineering, Manufacture / Procurement, Supply, Erection, Testing and Commissioning of 5MW Grid Connected Floating Solar Photovoltaic Power Plant on Raw Water Pond No.1 in Santhaldih Thermal Power Station(STPS), Purulia, West Bengal including warrantee obligation with 05 (Five) years comprehensive Operation and Maintenance.

1.2 SOURCE OF FUND

The West Bengal Power Development Corporation Ltd (hereinafter referred to as **WBPDCL** 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 area of WBPDCL 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.

For 5MW Floating Solar PV Power Plant at STPS of WBPDCL

- 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.
- 1. Providing power supply for construction purposes.
- m. Construction of RCC type Inverter room with Power conditioning unit and associated LT and HT switchgear.
- 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 33kV voltage level as specified in technical specifications.
- 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.

plant and putting the system into successful functional operation.

For 5MW Floating Solar PV Power Plant at STPS of WBPDCL

w. Reliability tests, performance and guarantee tests, wherever applicable, on completion of commissioning.

v. Final check-up of equipment, installation, and commissioning of power

- 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 WBPDCL or Consultant of WBPDCL.

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, Grid Connected Inverters, Transformer, String Monitoring Boxes, Inverter LT Panel, Grid Interfacing LT Panel, Web based monitoring systems, Weather Monitoring Systems, Cables, System protection and other accessories conforming to the Technical Specification as required for successful Installations commissioning of 5MW Floating Solar PV Power Plant at Raw Water Pond 1 at Santhaldhi Thermal Power Plant.

- **b)** 12.5 MVA, 132/33 KV oil filled transformer and its accessories.
- c) Mandatory Spares as per list of Section V.