

WEST BENGAL RENEWABLE ENERGY DEVELOPMENT AGENCY

Department of Non-conventional& Renewable Energy Sources, Govt. of West Bengal

NOTICE INVITING TENDER

E-Procurement

NIT No: WBREDA/NIT-05/20-21

dt: 25 .02.2021

National Competitive Bidding

Design and engineering, manufacture/procurement, testing, supply installation and commissioning, 5years comprehensive maintenance. Roof top grid connected rooftop Solar PV Power plants, each of array capacity 20 kWp to 30kWp with a Cumulative array capacity of 240kWp on turnkey basis. The detailed NIT may be seen and downloaded from WBREDA website (www.wbreda.org) from 26.02.2021. It is also available in the <http://wbtenders.gov.in> portal. The last date for submission of bid proposal 27.03.2021 at 4 PM.

Bidding Document

February, 2021

**WEST BENGAL RENEWABLE ENERGY DEVELOPMENT AGENCY (WBREDA)
Department of Non-conventional& Renewable Energy Sources, Govt. of West Bengal
Bikalpa Shakti Bhavan, J1/10, EP & GP Block,
Sector-V, Salt Lake Electronics Complex, Kolkata-700091**

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 specially issued.

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Section-I

WEST BENGAL RENEWABLE ENERGY DEVELOPMENT AGENCY (WBREDA)

Department of Non-conventional & Renewable Energy Sources, Govt. of West Bengal
Bikalpa Shakti Bhavan, J1/10, EP & GP Block,
Sector-V, Salt Lake Electronics Complex, Kolkata-700091

NIeT No: WBREDA/NIeT-05/20-21

dt: 25.02.2021

DETAILED NOTICE INVITING e-TENDER

Design and engineering, manufacture/procurement, testing, supply installation and commissioning, 5years comprehensive maintenance. Roof top grid connected rooftop Solar PV Power plants, each of array capacity 20 kWp to 30kWp with a Cumulative array capacity of 240kWp on turnkey basis. The detailed NIET may be seen and downloaded from WBREDA website (www.wbreda.org) from 26.02.2021. It is also available in the <http://wbtenders.gov.in> portal. The last date for submission of bid proposal 27.03.2021 at 4 PM.

- 1.0 West Bengal Renewable Energy Development Agency** herein referred to as **WBREDA** invites e-tender (Submission of Bid through **online**) through Domestic Competitive Bidding (DCB) from eligible bidders for following work:-

Name of the Work:

Design and engineering, manufacture/procurement, testing, supply installation and commissioning, 5years comprehensive maintenance. Roof top grid connected rooftop Solar PV Power plants, each of array capacity 20 kWp to 30kWp with a Cumulative array capacity of 240kWp on turnkey basis.

- 2.0 Estimated Cost of the Project: Total Rs. 91,20,000.00** (Rupees ninety one lakh twenty thousand only).

3.0 Cost of Tender Document (Tender Fee):

Cost of Tender document is **Rs. 5000/- (Rupees five thousand only)**. The cost of tender document is non-refundable. The tender fee may be remitted online through <http://wbtenders.gov.in> portal.

4.0 Bid Security(Earnest Money Deposit (EMD)) :

The Bid Security / EMD is **Rs. 1,82,400.00 (Rupees one Lakh eighty two thousand and four hundred Only)**. Necessary Earnest Money (EMD) may be remitted online through <http://wbtenders.gov.in> portal.

5.0 Variation, Additions and Omissions:

WBREDA reserves the right to alter, amend, omit or otherwise vary the allotment quantities of power plant as may be necessary but such variation will be limited to +/- 25% (Plus or minus twenty five percent) of the original order. Payment shall however be made as per actual execution of work

6.0 Schedule of Dates for e-Tendering:

SL. NO.	PARTICULARS	DATE & TIME
1.	Date of uploading of N.I.T. Documents (Online)	26/02/2021
2.	Documents download start date (Online)	26/02/2021 from 2.00 P.M
3.	Last date of uploading Pre-bid Query	12/03/2021 up to 4.00 P.M.
4.	Pre- bid Meeting	15/03/2021 at 3.00
5.	Last date for uploading of reply of pre-bid Query	19/03/2021
6.	Bid proposal submission start date (Online)	22/03/2021 at 3.00 P.M
7.	Bid proposal Submission end date (Online)	27/03/2021 at 4.00 P.M
8.	Bid opening date for Technical proposal (Online)	29/03/2021 at 12.00 noon
9.	Date of Opening of financial bid	Will be intimated later

7.0 In the event of e-filling, intending bidder may download the tender documents from the website <http://wbtenders.gov.in> directly with the help of Digital Signature Certificate. Necessary cost of tender documents (tender fees) amounting to **Rs. . 5000/- (Rupees five thousand only)** may be remitted online mode through <http://wbtenders.gov.in> portal.

8.0 : The Bid Security / EMD is **Rs. 1,82,400.00 (Rupees one Lakh eighty two thousand and four hundred Only)**. Necessary Earnest Money (EMD) may be remitted online through <http://wbtenders.gov.in> portal.

9.0 The successful bidder have to be submit Additional Security Performance @ 10% of the tendered value, if the bid value stands 80% or less of the estimated cost put to the tender.

10.0 Qualifying Requirement For Bidders:

The Bidder must have to meet the following conditions for participation of bidding for grid connected rooftop Solar PV power plants, each of array capacity 20kWp to 30kWp cumulative capacity 240kWp on turnkey basis

10.1 General:

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

- The Bidder shall be a Registered Company/Firm/Proprietorship incorporated in India under the Companies Act, 1956 or 2013/Indian Partnership Act, 1932/LLP Act, 2008 including any amendment thereto.
- Bidders shall have to submit the Audited Annual Accounts for the financial years(2017-2018, 2018-19 and 2019-20)
- The bidder shall have valid GSTIN, Professional Tax, Trade License (if applicable)

proof of registration document(s).

10.2 Minimum Financial Capability:

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

- i) The bidder should have a Minimum Average Annual Turnover @ 30% of the Estimated Project Cost during last 03 (three) consecutive financial years (2017-2018, 2018-19 and 2019-20)
- ii). Net worth shall be positive for the last three financial years.
- iii) Bidder shall have the liquid asset (L.A) and /or evidence of access or availability of credit facility of equivalent amount not less than Rs 20.0lakh.
- iv) For the purpose of this particular bid, bidder shall meet the following minimum commercial criteria in past 7 (seven) years ending last day of month previous to the one in which NleT are invited.
 - a) Experience in single completed work of project execution in Solar PV Power Projects sector or any other job costing not less than the amount equal to 80% of the estimated project cost.
OR
 - b) Experience in two completed work of project execution in each Solar PV Power Projects sector or any other job costing not less than the amount equal to individually 50% of the estimated project cost.
OR
 - c) Experience in three completed work of project execution in each Solar PV Power Projects sector or any other job costing not less than the amount equal to individually 40% of the estimated project cost.

10.3 Technical Capability

The Bidder shall have experience in Supply, Installation & Commissioning of ground mounted and/or rooftop Solar PV Power plants anywhere in India under order of any Government Department / Government Own Company/ Government organization/ Government Institution/ Parastatal during preceding 05 (five) years ending last day of month previous to the one in which NleT are invited. The minimum capacity of each power plant shall be 20 kWp.

- I. For single order : 80% of 240kWp (Ref. 10.2(iv)(a))
- II. For two orders : 50% of 240kWp(Ref. 10.2(iv)(b))
- III. For three orders : 40% of 240kWp(Ref. 10.2(iv)(c))

Bidder must have functional establishment or service center anywhere in West Bengal for minimum two years ending last day of month previous to the one in which NleT are invited. The establishment of the service set up must have Trade license and Professional Tax registration.

11.0 Completion time:

Completion period for the project are as follows:

Work Volume	Completion Time (site survey to completion of installation in all respect.) from the date of placement of LoA along with list of sites
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240kWp	180 days
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For other quantities, completion time will be in proportion of above. In case of providing new list of sites after LoA (along with first list of sites), Zero Date for new set of sites will be calculated from that date of providing new set of sites.

12.0 Validity of offer:

Validity of the offer shall be 360 days from the date of opening of the financial bid. However, it may be extended with consent from the successful bidder(s).

- 13.0** WBREDA is not bound to accept the lowest tender. WBREDA reserves the right to accept or reject any bid partly or fully or cancel the bidding without assigning any reason thereof and in such case no bidder/ intending bidder shall have any claim arising out of such action.

**** Liquid Asset(LA) :** ‘ Liquid Asset ‘ shall mean cash and bank balances and fixed deposits in the name of the bidder as certified by a Chartered Accountant on a date not more than one month before the bid submission date.

- 14.0 If the offer is submitted without or inadequate Earnest Money (Bid Security), the bid will not be opened. Incomplete offer will be liable for rejection.
- 15.0 A prospective bidder requiring any clarification on bidding documents may notify the WBREDA by uploading the same in the e-tendering portal, which shall be available to all the participant bidders, as per Standard Format . The soft copy of the same must be sent in Excel format at the mail address: cewbredagedcl@wb.gov.in
- 16.0 Any evidence of unfair Trade Practices including overcharging, price fixing, cartel etc. as defined in various statutes, will automatically disqualify the bidders.
- 17.0 The Tender Inviting Authority reserves the right to modify, amend or supplement the Tender Document. Any corrigendum, notification concerned to this tender will be published in the e-tender portal <https://wbtenders.gov.in> and it will be part & parcel of the tender. The bidders are therefore advised to follow the website for such corrigendum, notification etc.
- 18.0 **Technical Specification:** All the Technical Specifications are as per the Technical Specification of this NleT(**Section VI**).
- 19.0 No mobilization advance and secured advance will be allowed.

20. Location of Project:

Sl.no.	Location/Office	District	Tentative Capacity kWp
01	D M Office	Kalimpong	30 kWp
02	DM Bunglow	Kalimpong	20 kWp
03	Circuit House	Kalimpong	20 kWp
04	Block Office- Kalimpong -II	Kalimpong	20 kWp
05	SP Office	Kalimpong	30 kWp
06.	SDO Office , Ranaghat	Nadia	20 kWp
07.	BDO Office, Domkal	Murshidabad	20 kWp
08	BDO Office, Raninagar-I	Murshidabad	20 kWp
09	BDO Office, Jalangi	Murshidabad	20 kWp

10	BDO Office, Raninagar-II	Murshidabad	20 kWp
11.	SDO Office ,Domkal	Murshidabad	20kWp

21.0 Other information as well as terms and conditions, which are not covered in the NIE T, have been incorporated in **Instructions to Bidders (Section II)**, General Condition of Contract **(Section III)** and **Special Conditions of Contract (Section IV)**, **Technical specification (Section-VI)** of this tender

22.0 Address For Communication:

The Chief Engineer

West Bengal Renewable Energy Development Agency

Bikalpa Shakti Bhavan, J1/10, EP&GP Block,

Sector– V, Salt Lake, Kolkata– 700091

Website : www.WBREDA.in

Contact No. +9133-2357-6361,

Fax No. : +9133-2357-6569,

E-mail: cewbredagedcl@wb.gov.in

Sd/-

Chief Engineer

Section - II

Instruction to the Bidder

	A.
ITB. 1.0	Name of the Work: Design and engineering, manufacture/procurement, testing, supply installation and commissioning, 5years comprehensive maintenance. of grid connected rooftop Solar PV Power plants, each of array capacity 20 kWp to 30kWp Cumulative array capacity 240kWp on turnkey basis.
ITB.1.1	Quantity to be quoted by the bidder : Bidders shall have to quote for fixed quantity of 240kWp Power Plants.
ITB. 2.0	Brief Scope of work: The scope of work shall be on the basis of single source responsibility, completely covering all the Equipment/Material specified under the Technical Specifications. It will include, but not limited to the following: <ol style="list-style-type: none"> a. Physical site survey, shadow analysis through appropriate software , PV Array Layout using Auto Cad or appropriate software. b. Detailed design of the Equipment/ Materials. c. Complete manufacture including shop testing. d. Providing engineering drawing, data, operational manual, etc for the Purchaser's approval. e. Packing, forwarding, transportation and insurance of Equipment/ Material from the manufacturer's works to the Site. f. Receipt, storage, preservation, insurance and conservation of Equipment/ Material at the Site. g. Reliability tests, performance and guarantee tests, wherever applicable, on completion of commissioning. h. Erection, testing, commissioning and insurance of all the Equipments/ Materials.
ITB. 3.0	Responsibility of bidders:
ITB.3.1	The WBREDA will not assume any responsibility regarding information gathered,interpretations or conclusions made by the bidder or regarding information, interpretations or deductions the bidder may derive from the data furnished by the WBREDA . Verbal agreement or conversation with any employee of the WBREDA either before or after the submission of bid shall not affect or modify any of the terms or obligations contained herein.
ITB.3.2	It shall be the sole responsibility of bidders to determine and to satisfy themselves by such means as they consider necessary or desirable as to all matters pertaining to this bidding process including in particular all factors that may affect the bid price and period of supply of Equipment / Materials.
ITB.3.3	It must be understood and agreed by the bidders that factors which may affect the cost, duration and execution of the Works have properly been investigated and considered while submitting the bid. Claims whatsoever including those for financial adjustment in the price of the Contract awarded in accordance with these bidding documents will not be entertained by the Purchaser.

	Neither any change in time schedule of Contract nor any financial adjustments arising thereof shall be permitted by the Purchaser, which are based on the lack of investigation or its effect on the cost of the Contract to the bidder.																																																																
ITB. 4.0	Cost of bidding: The bidder shall bear all costs associated with the preparation and submission of his bid and WBREDA in no case shall be responsible or liable for these costs, regardless of the conduct or outcome of the bidding process.																																																																
B. The Bidding Documents																																																																	
ITB. 5.0	Contents of bidding documents																																																																
ITB. 5.1	The scope of work, bidding procedures, Contract terms and conditions and technical specifications are prescribed in the bidding documents. The set of bidding documents uploaded for the purpose of bidding includes the sections stated below together with any addendum/amendment to be issued in accordance with ITB. 9																																																																
ITB. 5.2	<table><tr><td rowspan="14">Volume-I</td><td>Section I</td><td>:</td><td colspan="2">Notice Inviting Tender</td></tr><tr><td>Section II</td><td>:</td><td colspan="2">Instructions To Bidders</td></tr><tr><td>Section III</td><td>:</td><td colspan="2">General Conditions of Contract</td></tr><tr><td>Section IV</td><td>:</td><td colspan="2">Special Conditions of Contract</td></tr><tr><td rowspan="10">Section V-A</td><td>:</td><td colspan="2">Forms <i>(Bid Form & Attachments)</i></td></tr><tr><td>1</td><td></td><td colspan="2">Check List</td></tr><tr><td>2</td><td></td><td colspan="2">Bid Form</td></tr><tr><td>3</td><td></td><td colspan="2">Proforma For Undertaking To Be Submitted By The Bidder</td></tr><tr><td>4</td><td></td><td colspan="2">Bid Security (Bank Guarantee format)</td></tr><tr><td>5A</td><td></td><td colspan="2">Summary Statement of Yearly Turnover And Net Worth</td></tr><tr><td>5B</td><td></td><td colspan="2">Capability Status</td></tr><tr><td>6</td><td></td><td colspan="2">Statement Of Similar Type of Order Orders Executed as on date of issuance of NIeT</td></tr><tr><td>7</td><td></td><td colspan="2">Curriculum Vitae of Key Personnel</td></tr><tr><td>8</td><td></td><td colspan="2">Format For Submission of Pre-Bid Queries</td></tr><tr><td>9</td><td></td><td colspan="2">Format for Proposed modifications</td></tr></table>				Volume-I	Section I	:	Notice Inviting Tender		Section II	:	Instructions To Bidders		Section III	:	General Conditions of Contract		Section IV	:	Special Conditions of Contract		Section V-A	:	Forms <i>(Bid Form & Attachments)</i>		1		Check List		2		Bid Form		3		Proforma For Undertaking To Be Submitted By The Bidder		4		Bid Security (Bank Guarantee format)		5A		Summary Statement of Yearly Turnover And Net Worth		5B		Capability Status		6		Statement Of Similar Type of Order Orders Executed as on date of issuance of NIeT		7		Curriculum Vitae of Key Personnel		8		Format For Submission of Pre-Bid Queries		9		Format for Proposed modifications	
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		Section V-B	Annexures	
			1 & 2	'Letter of Award of Contract
			3	Proforma Of Contract Agreement
			4	Proforma Of Bank Guarantee For Contract Performance
			5	Proforma For Extension Of Bank Guarantee
			6	Proforma Of Indemnity Bond
			7	Proforma Of Additional Bank Guarantee For Contract Performance
			Section VI	Technical Specification
ITB.7.0	Clarifications on bidding documents:			
ITB.7.1.	<p>A prospective bidder requiring any clarification on bidding documents may notify WBREDA by uploading the same in the e-tendering portal, which shall be available to all the participant bidders, as per Standard Format enclosed with this document Form 8 and Form 9 not later than the date and time specified in NleT. The soft copy of the same must be sent in Excel format at the mail address :cewbredagedcl@wb.gov.in</p> <p>The WBREDA will issue clarification(s) as he may think fit after pre-bid meeting prior to the deadline/ extended deadline for submission of bids prescribed by the WBREDA. Written copies of the WBREDA’s response (including an explanation of the query but without identifying its source) will be uploaded in the e-tendering portal in the corrigendum folder which shall be available to all the participant bidders All such clarifications shall form part of the bidding documents and shall accompany the bidder’s Proposal.</p> <p>The WBREDA will issue clarification(s) as WBREDA may think fit not later than ten (10) days prior to the deadline/ extended deadline for submission of bids prescribed by the WBREDA. All such clarifications shall form part of the bidding documents and shall accompany the bidder’s Proposal. Written copies of the WBREDA’s response (including an explanation of the query but without identifying its source) will be uploaded in the e-tendering portal in the corrigendum folder which shall be available to all the participant bidders</p>			
ITB.7.2.	Any queries sent by the bidders after the date and time notified in NleT or any extended date, if any, shall not be entertained.			
ITB. 8.0	Pre-bid meeting:			

ITB.8.1.	The bidder or its authorized representative is invited to attend pre-bid meeting to be held on the date, time and location specified in NlET. The purpose of the meeting will be to clarify the exact scope of work, and any issues regarding the bidding documents and the technical specifications for its clarification, if raised at that stage by the bidders. The Purchaser shall not be under any obligation to entertain /respond to suggestions made or to incorporate modifications sought for by the prospective bidders.
ITB.8.2.	Any modification/amendment of the bidding documents shall be made by the Purchaser exclusively through the issue of an amendment pursuant to ITB. 9
ITB.8.3.	Non-attendance at the pre-bid meeting will not be a cause for disqualification of bidders but at the same time shall not entitle them to raise any query at a later date.
ITB.8.4.	Any essential requirement not included in the Price Schedules but required for successful commissioning and operation of Works as per scope of Contract shall be indicated by the bidders as per Form: 9 shall be submitted before the pre-bid meeting by the date specified in the NlET in line with ITB.7.1 . The Purchaser shall make related modifications/ amendments as may be considered necessary based on this form in the bidding documents as per provisions mentioned in this clause.
ITB.8.5.	Place of pre-bid meeting: West Bengal Renewable Energy Development Agency Bikalpa Shakti Bhavan,J-1/10, EP&GP Block, Sector– V, Salt Lake, Kolkata– 700091
ITB. 9.0	Amendment of bidding documents:
ITB.9.1	At any time, but not later than ten (10) days prior to the deadline for submission of bids, the WBREDA may, for any reason, modify the bidding documents by issue of an addendum/amendment.
ITB.9.2	The addendum/amendment will be intimated (through e-tendering portal, corrigendum folder) to all bidders. WBREDA shall assume that the information contained therein have been taken into account by the bidder in its bid. The WBREDA will bear no responsibility or liability arising out of non- cognizance of the same in time or otherwise by the bidder. WBREDA may, at its discretion, extend the deadline for the submission of bids.
ITB.9.3	In order to afford prospective bidders reasonable time in which to take the addendum/amendment into account in preparing their bids, WBREDA may, at its discretion, extend the deadline for the submission of bids.
ITB.9.4	For the information of bidders, the addendum/ amendments, if any, shall be uploaded on the e-tendering portal. The bidders may visit the website https://wbtenders.gov.in from time to time in their own interest.
C. Preparation and Submission of Bids	
ITB. 10.0	General guidance for e- Tender: Instructions/Guidelines for electronic submission of the tenders have been mentioned below for assisting the bidders to participate in e-Tendering.
ITB. 10.1	Registration of Bidder: Any bidder willing to take part in the process of e-Tendering will have to be enrolled & registered with the Government e-Procurement System, by logging on to https://wbtenders.gov.in The contractor is to click on the link for e-Tendering site as given on the web portal.

ITB. 10.2	Digital Signature certificate (DSC): Each bidder is required to obtain a Class-II or Class-III Digital Signature Certificate (DSC) for submission of tenders from the approved service provider of the National Informatics Centre (NIC) on payment of requisite amount. Details are available at the Web Site stated above. DSC is given as a USB e-Token.
ITB. 10.3	The bidder can search & download NleT. & Bid Document(s) electronically From computer once he logs on to the website mentioned above using the Digital Signature Certificate. This is the only mode of collection of Bid Documents.
ITB.10.4	Price Schedule (BOQ): The BOQ is in form of Excel file.
ITB. 10.5	The bidder is expected to examine all instructions, forms, terms, conditions, Specifications and other information in the bidding documents. Failure to furnish all information required as per the bidding documents or uploading of a bid not substantially responsive to the bidding documents in every respect will be at the bidder's risk and may result in rejection of his bid.
ITB. 10.6	Participation in more than one work: A prospective bidder shall be allowed to participate in the job either in the capacity of individual or as a partner of a firm. If found to have applied severally in a single job all his applications will be rejected for that job.
ITB.11.0	Submission of Bid: Tenders are to be submitted through online to the website stated above in two folders at a time for each work, one in Techno-commercial Proposal & the other is Price Proposal before the prescribed date & time using the Digital Signature Certificate (DSC). The documents are to be uploaded virus scanned copy duly Digitally Signed. The documents will get encrypted (transformed into non readable formats).
ITB.11.1	Language of the bid: The bid prepared by the bidder and all correspondences and documents relating to the bid, exchanged between the bidder and the WBREDA shall be written in the English language, provided that any printed literature furnished by the bidder may be written in another language so long as the bid is accompanied by an English translation of its pertinent passages. Failure to comply with this may disqualify a bid. For purposes of interpretation of the bid, the English translation shall govern.
ITB.11.2	General process of submission: Tenders are to be submitted online through the website https://wbtenders.gov.in . All the documents uploaded by the Tender Inviting Authority for integral part of the

	<p>contract. Bidders are required to upload all the Bid Documents the other documents, as asked for in the tender, through the above website within the stipulated date and time as given in the Tender. Tenders are to be submitted in two folders-one is Technical Proposal and the other is Financial Proposal. The bidder shall carefully go through the documents and prepare the required documents and upload the scanned documents Format(PDF) to the portal in the designated locations of Technical Bid.</p> <p>The bidder needs to download the Forms / Annexures, fill up the particulars in the designated Cell and upload the same in the designated location of Technical Bid. The bidder needs to download the BOQ, fill up the rates of items in the BOQ in the designated Cell and upload the same in the designated location of Financial Bid.</p> <p>The documents uploaded shall be virus scanned and digitally signed using the Digital Signature Certificate (DSC). The bidders shall take note of all the addendum/corrigendum related to the tender and upload the latest documents as part of the tender.</p>
ITB.11.3	<p>Technical Proposal:</p> <p>The Technical Proposal shall contain scanned copies and/or declarations in the following standardized formats in two covers(folders).</p> <p>a) Statutory Cover</p> <p>b) Non- Statutory Cover</p>
ITB.11.3.1	Statutory Cover:
	<p>a) To be submitted in“Forms”folder:</p> <ol style="list-style-type: none"> Check List(<i>VideForm–1</i>), Forwarding Letter for submission of Bid Security and Tender Fee(Bid Form)- (Vide Form–2) Undertaking to be submitted by the Bidders (<i>VideForm–3</i>) Bid Security (vide Form-4) Summary statement of average annual turnover and Working Capital (VideForm–5A) Capability Status(VideForm–5B) Statement of Similar Type of Order Executed as on date of issuance of NleT [Applicability up to the extent of meeting Technical QR]. (Vide Form- 6). Curriculum Vita of Key Personnel (Vide Form – 7). Pre-bid Quarry (vide form-8) Proposed modification(Form-9) <p>Only downloaded copies of the above documents duly filled up and are to be uploaded, virus scanned and digitally signed by the bidder)</p>

ITB.11.3.2	Non statutory Cover (My Document)			
	Sl. No .	Category Name	Sub-Category Description	Detail(s)
	A	Certificate(s)	Certificate(s)	1. Copy of GSTIN Certificate 2. Copy of the PAN Card

				3. Proof of PF Registration and ESI Registration
				4. Valid Trade License
	B	Company Detail(s)	Company Details	5. Copy of the Registration Certificate under Company Act (Company Incorporation Certificate) or copy of the Registered Deed for Partnership Firm or LLP.
	C	Credential	Credential 1	6. Copy of the Order(s)/ Contract Agreement(s) with the Purchaser / any other Proof of Purchase, as primary agency [Applicability up to the extent of meeting Technical QR]. AND Corresponding Copy of the Completion Certificate(s) /Commissioning report signed by the Purchaser / Ordering Authority to substantiate the proof of completion of the Solar PV Power Plant(s). [Applicability up to the extent of meeting Technical QR].
	D		Credential 2 (Financial)	7. Audit Report along with audited annual accounts for the last three (3) financial years (i.e. for the FY 2017-18, 2018-19 and 2019-20). 8. Bank Solvency Certificate.
ITB.11.4	Financial Proposal: The financial proposal contain the following Folder: BOQ			
ITB.11.4.1	BOQ Folder: The bidder is to quote the rate through online in the space marked for quoting rate in the BOQ in respective schedule. (Please Consult ITB. 10.4 and ITB 18.0)			
ITB.11.4.2	Mode Of Transaction Folder : Not Applicable:			
ITB.11.5	Signing of bids: All documents should be digitally signed by the bidders and uploaded.			

ITB.12.0	Submission of Tender Fee and EMD (Bid Security) online: Cost of Tender document and EMD may be remitted online through http://wbtenders.gov.in portal.
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ITB.13.0	<p>Clarification of Bidding Documents:</p> <p>To assist in the examination evaluation and comparison of Bids, WBREDA may ask the bidder individually for a clarification of his Bid including breakup of unit rates. The request for clarification and the responses shall be in writing. But no change in the submitted Bid document shall be sought, offered or permitted except as required to confirm the correction of arithmetical errors discovered by WBREDA during the evaluation of the Bids.</p>
ITB.14.0	<p>Deviation:</p> <p>This tender is a 'No Deviation' (in terms of quoting the un-conditional or without any deviation of any tender terms only) tender.</p> <p>Request for any deviation may be considered only if pointed out by any bidder in the Pre Bid meeting. The quarries and proposed modification regarding tender must be submitted by writing as per format (<i>Vide Form -8 and Form-9</i>) before pre bid meeting as per Pre Bid Clause ITB. 8.0 After placement of LOA, no deviation of tender terms will be considered excepting any exigency. The decision of the controlling officer will be final in this regard.</p> <p>In case of failure of the contractor for complete delivery of materials at site , within the stipulated time of the tender and LoA and in the meantime the benchmark price is reduced by MNRE, GoI WBREDA may review the contract of price in this regard towards its reduction , if any. The decision of the controlling officer will be the final in this regard.</p>
ITB.15.0	<p>Conditional and Incomplete Tender:</p> <p>Conditional and/or incomplete tenders are not acceptable.</p>
ITB.16.0	Bid Security / Earnest Money Deposit (EMD):
ITB.16.1	EMD must be submitted online in favour of 'West Bengal Renewable Energy Development Agency' through http://wbtenders.gov.in portal.
ITB.16.2	Earnest money will be refunded online through NIC e-tender portal to the unsuccessful Bidder after finalization of the tender and incase of successful bidder; EMD will be refunded only after submission of Performance Bank Guarantee as per GCC
ITB.16.3	<p>Earnest Money submitted will be liable to forfeiture,</p> <ul style="list-style-type: none"> (i) If the successful tender fails to accept Letter of Award/LOI issued within their offered validity period. (ii) For failure to submit specified Performance Bank Guarantee within time limit indicated in the Letter of Award/LOI. (iii) Withdrawal of offer after opening of bid. (iv) If any cartel is formed by the Bidder in their quotation.
ITB.16.4	No interest shall be paid by the Purchaser on the bid security

D. Opening and evaluation of tender	
ITB.17.1	Opening of Technical Proposal:
	<ul style="list-style-type: none"> i. Technical proposals for those Bidders, whose EMD(s) have been received, shall only be opened. ii. Technical proposals will be opened by the Tender Inviting Authority or his authorized representative electronically from the website stated above, using their Digital Signature Certificate. iii. Cover (Folder) for Statutory Documents (vide ITB 11.3.1) will be opened first and if found in order, Cover (Folder) for Non-statutory Documents (vide ITB 11.3.2) will be opened. If there is any deficiency in the Statutory Documents, the tender will summarily be rejected. iv. Decrypted (transformed into readable formats) documents of the Statutory and Non-statutory Covers will be downloaded for the purpose of evaluation.
ITB.17.2	Technical Evaluation of Tender: <ul style="list-style-type: none"> a. While evaluation, the Tender Inviting Authority or his authorized representative may summon the bidders and seek clarification /information or additional documents or original hard copy of any of the documents already submitted and if the same cannot be produced within the stipulated time frame, their proposals will be liable for rejection. b. The summary list of bidders, whose bids will be found techno-commercially eligible, will be uploaded in the e-Tender Portal and Date of opening of financial bid will be intimated to the techno-commercially qualified bidders.
ITB.17.3	Opening and evaluation of Financial Proposal : <ul style="list-style-type: none"> i. Financial proposals of the bidders declared techno-commercially eligible, will be opened electronically by the Tender Inviting Authority from the e-tender portal stated above on the prescribed date. ii. The encrypted copies will be decrypted and the rates will be readout to the bidders remaining present at that time. iii. After opening of the financial proposal the preliminary summary result containing inter-alia, name of bidders and the rates quoted by them will be uploaded. iv. The Tender Accepting Authority may ask any of the bidder to submit an analysis to justify the rate quoted by that bidder. v. Bids determined to be subsequently responsive will be checked by
	WBREDA for any arithmetic errors in computation and summation. Errors will be corrected by WBREDA as follows: <ul style="list-style-type: none"> a) Where there is discrepancy between amount in figures and in words, the amount in words shall be considered. b) Where there is discrepancy between the unit rate and the total amount derived from the multiplication of the unit rate and the quantity, the unit rate as quoted shall be considered.
ITB. 17.4	Revision/withdrawal of Financial Proposal by the bidder after opening of Technical Proposal of the tender will not be allowed if it is not sought by the Tender Inviting Authority

ITB. 17.5	<p>Process to be Confidential :</p> <p>After the public opening of bids information relating to the examination, clarification, evaluation of comparison of Bids and recommendations concerning the award of contract shall not be disclosed to bidders or other person not officially concerned with such process until the Award of the Contract to the successful bidder has been announced.</p> <p>Any effort by a bidder to influence WBREDA in the process of examination, clarification evaluation and comparison of Bids, and in decisions concerning the Award of contract may result in the rejection of his Bid.</p>
ITB. 18.0	<p>Correction of arithmetical errors in price bid:</p> <p>Arithmetical errors will be corrected at the time of evaluation of Price bid and the corrected figure will be considered as evaluated bid price. The corrections in the bid price shall be done as per the provisions of this clause and shall be binding on the bidder. If the bidder does not accept the correction of errors as per the provisions of this clause, his bid will be rejected and the bid security will be forfeited.</p> <p>If there is a discrepancy between the product of Unit Value of Supply and quantity and the total value of supply, the product of unit price and quantity will prevail and the total value of supply will be corrected. If there is discrepancy between summation of subtotals and total Amount of supply, the summation of subtotal price shall prevail, and the total –Amount of supply shall be corrected. If there is a discrepancy between words and figure, the amount in words will prevail. In case unit Value of Supply or quantity or both are not filled in against any item, it will be treated as zero and will be assumed that the Bidder has absorbed the cost elsewhere in the Price Bid.</p> <p>The total Amount of Supply so corrected shall be considered for the purpose of evaluation of bid. However for the purpose of award, the corrected price by the Purchaser or the bid price quoted by the bidder, whichever is lower, will be taken</p> <p>Bidders shall quote the rate of GST/Taxes in force as on seven days prior to the last date of bid submission only in respect of direct transaction between the Vendor and</p>
	<p>Purchaser. Bids will not be corrected for the rates of taxes - in case of wrong rates considered by the bidder in their bids. Bidders should absorb the monetary loss in wholesome as declared in Bid form.</p> <p>However, Order shall be placed on the lowest quoted Total Amount or Arithmetically Corrected Total Amount, whichever is lower.</p> <p>The rate of GST quoted by the Bidder against any HSN/SAC code shall be deemed final and shall be binding upon the Bidder. The Purchaser shall pay the total landed cost including the GST as quoted in the price bid by the bidder. Any liability on account of GST rate quoted wrongly shall rest on the bidder and purchaser will not be liable. No variation in the rate shall be allowed at the time of billing except for statutory variations.</p> <p>In case of any claim of Statutory Variations, the Vendor must submit documentary evidence for rate quoted in the Bid and also for statutory variations of the rate quoted.</p>
ITB.19.0	Period of validity of bids:

ITB.19.1	The bids submitted by the bidder shall remain valid for a period as specified in NleT. A bid valid for a shorter period than that prescribed in the NleT shall be rejected by the WBREDA.
ITB.19.2	In exceptional circumstances, WBREDA may solicit the bidder's consent to an extension of bid validity for a further period without any change in the terms and conditions of the offer. The request and response thereto shall be made in writing by post or fax followed by post confirmation. The bidder may refuse the request without having his bid security forfeited. Bidders agreeing to the request will neither be required nor permitted to modify their respective bids, but will be required to extend the validity of their bid securities correspondingly. The provisions of ITB.13.2 regarding discharge and forfeiture of bid security shall continue to apply during the extended period of bid validity.
E. Award of Contract	
ITB. 20.0	Award Criteria:
ITB.20.1.	The Purchaser will award the Contract to the successful bidder(s) whose bid has been determined to be substantially responsive and has been determined as the lowest evaluated bid provided further that the bidder is determined to be qualified to perform the Contract satisfactorily. The Purchaser shall be the sole judge in this regard.
ITB.20.2.	For the purpose of determining the capability and capacity of the bidder to perform the Contract, the Purchaser reserves the right to verify the authenticity of the documents submitted by the bidder for meeting the qualification requirements and may undertake verification of the facilities available with the bidder.
ITB.20.3	The WBREDA reserves the right to split the total quantity among more than one bidder.
ITB. 21.0	Letter of Award:
ITB.21.1	After approval of bid evaluation by WBREDA, the successful bidder may be invited for pre-award discussions. After pre-award discussions and prior to the expiry of the period of bid validity, WBREDA will notify the successful bidder in writing by registered letter or by fax, that his bid has been accepted. This letter (hereinafter and in the Conditions of Contract called 'Letter of Award' or LoA) shall name the sum which WBREDA will pay to the Contractor in consideration of the execution & completion of the Works by the Contractor as prescribed under the Contract.
ITB.21.2.	Within seven (7) working days from the date of the LoA, the successful bidder shall sign and return one (1) photocopy of the same to WBREDA as acknowledgment of acceptance of the same.
ITB.21.3.	The LoA will constitute the formation of the Contract as per provisions of tender
ITB. 22.0	Signing of Contract Agreement:
ITB.22.1.	WBREDA will send the successful bidder the Contract Agreement (on judicial stamp paper of appropriate value) as per Annexure: 3 of Section V-B in two (2) copies incorporating all agreements between the parties duly signed by the authorized signatory of the Purchaser along with the LoA.
ITB.22.2.	Within ten (10) days from the date of acceptance of LoA, the successful bidder shall sign the Contract Agreement and return two (2) copies to the Purchaser and retain one (1) copy of the same.

ITB.23.0	<p>Misrepresentation by the bidder:</p> <p>If the bidder conceals any material information or makes a wrong statement or misrepresents facts or makes a misleading statement in the bid, in any manner whatsoever, in order to create circumstances for the acceptance of the bid, the purchaser reserves the right to reject such bid and/or cancel the LoA, if issued.</p>
ITB.24.0.	<p>Return of Earnest Money of the Unsuccessful Bidder(s):</p> <p>For return of the Earnest Money of the unsuccessful Bidder(s), the Earnest Money of all Bidders other than the successful Bidder(s) will be refunded automatically through NIC e-tender Portal.</p>

Section – III

General Condition of Contract

GCC.1.0	<p>Definition of Terms :</p> <p>Unless the context otherwise requires, the following terms whenever used in this document have the respective meaning:</p> <ol style="list-style-type: none"> i. The ‘Owner’ /‘Purchaser’/‘WBREDA’ shall mean the “WBREDA”, having its Office at Bikalpa Shakti Bhavan, J1/10, EP& GP Block, Sector V, Salt Lake, Kolkata-700091 and shall include its successors and assigns. ii. The ‘Engineer-in-Charge’/ ‘Controlling Officer’ shall mean the Chief Engineer / Superintending Engineer, WBREDA or for the purpose of carrying out this contract. iii. ‘WBREDA’s representative’ shall mean any person or persons or consulting firm appointed/authorized by the Chief Engineer / Superintending Engineer, WBREDA to supervise, inspect, test and examine workmanship and materials of the work under this scope. iv. The ‘Contractor’ shall mean the Bidder who will be awarded with the contract by the Company and shall include the contractor’s executor’s administrators, successors and permitted assignees. v. The ‘Sub-Contractor’ shall mean any person/agency to whom any part of the contract has been sublet by the contractor with the consent in writing of the Company and will include the legal representatives, successors and permitted assigns of such persons/agency. vi. ‘Equipment/materials’ shall mean and include all type of construction equipment & materials etc. required for true and satisfactory completion of the work under this contract. vii. ‘Workmanship’ shall mean the method/manner in which the jobs of the different items, whether included in the schedule or not but are required for true & satisfactory completion of the work under this contract, are executed. viii. ‘General conditions’ shall mean all the clauses of General conditions of the proposed contract stated hereinafter. The specification shall mean the specification annexed to or issued with the General Conditions and shall include the schedule and drawings attached thereto. ix. The term ‘Services’ shall mean all works to be undertaken by the contractor as laid down under the head “scope of work” or elsewhere in the specification enclosed. When the words “approved”, “subject to
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	<p>Approval”. “As directed”, “Accepted”, “Permitted” etc. are used, the approval, judgment, direction etc. are understood to be a function of Company.</p> <p>x. ‘Day’ means a calendar day beginning and ending midnight.</p> <p>xi. ‘Month’/‘Calendar month’ means not only the period from the first of a particular month, but also any period between a date in a particular month, and the date previous to the corresponding date in subsequent month unless specifically stated otherwise.</p> <p>xii. ‘Week’ means seven consecutive calendar days.</p> <p>xiii. ‘Writing’ shall include any manuscript, type written, printed or other statement reproduced in any visible form.</p> <p>xiv. The work ‘Site’ shall mean the site of proposed work as detailed in the specification or any other place where the work is to be executed under the contract.</p> <p>xv. ‘Date of Contract’/‘Commencement Date’ shall mean the date on which Letter of Award will be issued.</p> <p>xvi. ‘Zero Date’ will be started from the date of issuance of Letter of Award.</p> <p>xvii. ‘Specifications’ shall mean collectively all the terms and stipulations contained in this document including the conditions of contract, technical provisions and attachments thereto and list of corrections and amendments.</p> <p>xviii. ‘Drawings’ means collectively all the accompanying general drawings as well as all detailed drawings, which may be used from time to time or desired by WBREDA.</p> <p>xix. ‘Approval’ shall mean the written approval of WBREDA and/the statutory authorities, wherever such authorities are specified by any codes or otherwise.</p> <p>xx. ‘Manufacturer’ shall refer to the party proposing to design/engineering and construct in complete or in part a particular job/work at their works/premises.</p> <p>xxi. ‘Labour’ shall mean all categories of labour engaged by the Contractor, his sub- contractors and his piece workers for work in connection with the execution of the worked covered by the specifications. All these labourers will be deemed to be employed primarily by the Contractor.</p> <p>xxii. ‘Plant’/‘Equipment’/‘Stores’ means and include plant and machineries to be provided under the contract.</p> <p>xxiii. ‘Delivery of Plant’/‘Delivery of Equipment’ shall be deemed to take</p>
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	<p>place on delivery of the plant/equipment in accordance with the terms of the contract complete in all respect after approval by WBREDA.</p> <p>xxiv. ‘Tests on Completion’ shall mean all such tests as are prescribed by the specification to be made by the Contractor to the satisfaction of WBREDA before the plant and equipment are taken over by WBREDA and this also includes those tests not specifically mentioned in the specification but required under various BIS codes and relevant Electricity Acts and Rules.</p> <p>xxv. ‘Commissioning’ shall mean the satisfactory, continuous and uninterrupted operation of the equipment/work as specified after all necessary initial tests, checks and adjustments required at site for a period of at least 15 (fifteen) days to the satisfaction of WBREDA.</p> <p>xxvi. ‘Urgent Works’ shall mean any urgent measures, which in opinion of the Engineer-in- Charge, become necessary at the time of execution and/or during the progress of work to obviate any risk of damage to the structure, or required to accelerate the progress of work or which become necessary for security or for any other/reason WBREDA may deem expedient.</p>
GCC.2.0	<p>Mode of Execution:</p> <p>The work will be procured as a complete package. The entire work will have to be executed on turnkey basis. Any minor item(s) not included in the schedule or specification but required for completion of the work will have to be carried out/supplied without any extra cost.</p>
GCC.3.0	<p>Equipment and Material :</p> <p>All materials and equipment will be supplied by the contractor. The supply of materials will also include transportation, loading and unloading at work site Contractor will arrange pilfer proof proper storage at his own cost and risk at site for their equipment and materials. The complete system will be under the custody of the contractor till successful commissioning and handing over, at his own risk and cost. WBREDA in no case will be held responsible for any loss/damage or theft of materials/equipments; so long those will continue to remain under the custody of the contractor.</p> <p>Equipment and material will comply with description, rating, type and size as detailed in this specification. Equipment and materials furnished will be complete and operative in all respect. All accessories, which are necessary for safe and satisfactory installation and operation of the equipment, will be provided by the contractor. All parts will be made accurately to standard gauges so as to facilitate replacement and repair in due course. All corresponding parts of similar equipment must be interchangeable. Contractor will carefully check the available space and the environmental conditions for installation of all equipments at site and will design the system accordingly.</p> <p>Materials brought to the site shall not be removed from the site without the written consent of the WBREDA. The contractor shall submit well in advance</p>

	<p>for approval of samples, specimens as WBREDA may demand from time to time. Any material brought to the site and rejected by WBREDA shall be removed by the contractor from the site of work immediately.</p> <p>All materials including reinforcing steel, cement for concrete work, sanitary, plumbing & carpentry fittings etc. shall be procured after approval of brand and make by WBREDA.</p>
GCC.4.0	<p>Tools & Tackles :</p> <p>The contractor will provide all reliable tools & tackles for proper execution of work. Purchaser will in no way, be responsible for supply of any tools & tackles for execution of the work.</p>
GCC.5.0	<p>Codes and Standards:</p> <p>All equipment and materials to be furnished under this specification will be designed, manufactured and tested in accordance with the latest revisions of the relevant Indian Standard (IS)/IEC/MNRE as applicable.</p> <p>The electrical installation will meet the requirement of Indian Electricity Act, and Indian Electricity Rules as amended up-to-date and also the applicable section of the latest revision of the relevant IS Code of Practice.</p> <p>All civil, electromechanical & technical works including module mounting structure shall conform to the latest Indian Standards Codes as whereas applicable. If any items / components / structures which are not covered / available within any Indian Standards Codes, then the same only may be designed by International Standards Codes (accepted by BIS) as per prior approval of the Engineer-in-Charge, WBREDA.</p>
GCC.6.0	<p>Rules and Regulations:</p> <p>The Contractor shall obey following conditions strictly:</p> <ol style="list-style-type: none"> Employees' Provident Fund and Miscellaneous Provisions Act, 1952 Employees State Insurance Act, 1948 or appropriate medical facilities should be strictly adhered to wherever such Acts become applicable. Minimum wages to the workers will be paid according to the rates notified and/or revised by the State Government from time to time under the Minimum Wages Act, 1948 in respect of scheduled employments, within the specified time as per law. Payment of bonus, wherever applicable, has to be made
GCC.7.0	<p>Safety:</p>

GCC.7.1	<p>All units with respect to their location, layout, general arrangement and design and equipment, structural design, etc. shall be safe to the personnel and conform to the relevant safety rules and regulations/statutory requirement issued by the State Government and the Central Government as well as to:</p> <ol style="list-style-type: none"> 1) Indian Electricity Rules 2) Indian Electricity Act 3) Indian Explosives Manual and 4) Fire Protection Manual issued by Tariff Advisory Committee (India). <p>The bidder shall also provide necessary fencing and lights to protect the public from accident. Fire extinguishers shall be kept by the bidder at the site of works</p>
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	<p>where there is risk of fire hazard. Adequate washing facilities shall be provided earth place of Work.</p> <p>When the work is done near any place where there is risk of drowning, all necessary equipments shall be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provisions shall be made for prompt first aid treatment of all injuries likely to be sustained during the course of work.</p> <p>These safety provisions shall be brought to the notice of all concerned by displaying on a notice board at a prominent place at the work spot. The persons responsible for compliance of code shall be named by the bidder. To ensure effective enforcement of the rules & regulations relating to safety precautions, the arrangement made by the bidder shall be open to inspection by WBREDA.</p> <p>Notwithstanding the above clauses there is nothing in those to exempt the bidder from the operations of any other Act or Rule in force in the Republic of India.</p> <p>All storage, handling & use of flammable liquids shall be under the supervision of qualified persons.</p> <p>First aid arrangements with the degree of hazard and with no. of workers employed shall be maintained in area daily accessible place throughout the whole of working hours.</p>
GCC.7.2	<p>Reporting of Accident:</p> <p>All accidents, major or minor, must be reported immediately to WBREDA and the contractor will provide first aid to the injured person immediately. The injured person shall report to the First Aid Station along with the 'Injured on work' form as per appropriate Proforma, duly filled in triplicate and submit to the Medical Officer of the First Aid Station.</p>

GCC.7.3	Serious Injuries: In case of serious injuries, the following procedure shall be adopted by the contractor. a) To provide first aid at his own First Aid Station. b) To take the injured person to the hospital along with the 'Injured on work' form duly filled in. c) To report the accident to WBREDA.
GCC.7.4	Fatal Accident: Fatal accidents must be reported immediately to WBREDA as well as to the Police.
GCC.7.5	Penalty:

	Failure to observe the Safety Rules will make the contractor liable to penalty by way of suspension of work/termination of contract. Adequate arrangement for proper lighting & guarding shall be made at the work site.
GCC.8.0	Statutory Acts: The work will be done in compliance with the IS Specification, I.E. Rules, Indian Electricity Acts, other relevant Rules, Act and Regulation now in force with latest amendments, if any.
GCC.9.0	Commissioning: After installation and testing of the equipment/works as per above, commissioning of the power plant and works will be carried out and here the term "Commissioning" will mean the activities of functional testing of the power plant after installation and testing, including tuning or adjustment of the equipment for optimum performance and demonstrating to the Purchaser that the equipment performance meets the requirements of the specifications.
GCC.10.0	Road Permits: The contractor will arrange the waybill if required.
GCC.11.0	Controlling Officer's Decision: Controlling Officer's decision is final in respect of all matters which are left to the decision of the Controlling Officer including the granting or with-holding of certificates. If, in the opinion of the contractor, a decision made by the Controlling Officer is not in accordance with the meaning and intent of the contract, the contractor may file with the Controlling Officer, within 07(seven) days after receipt of the decision, a written objection to the decision. Failure to file an objection within the allotted time will be considered as an acceptance of the Controlling Officer's decision and the decision shall become final and binding.

GCC.12.0	Confidentiality: The Contractor, or any entity affiliated with the Contractor, shall not disclose to any unauthorized person any information and/or data that may be supplied to him/her by WBREDA or by any other organization, under the directions of WBREDA. All such documents shall be the property of WBREDA or any information that may have come to his/her knowledge directly or indirectly by virtue of the assignment.
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GCC.13.0	Departmental Material: Departmental material shall not be issued to the contractor for the work except under special circumstances.
GCC.14.0	Supplementary/Extra Works:
GCC.14.1	Whenever supplementary/extra items of work become unavoidable for completion of the work in all respect, the Contractor shall bring the matter to the notice of the Controlling Officer and submit their proposal. However, the controlling officers shall have the right to advise the contractor to proceed with such item(s) of work. Rates for supplementary items shall be arrived at as given hereunder.
GCC.14.2	The rates of all supplementary items shall be decided on pro-rata basis from the existing items in the contract.
GCC.14.3	When Clause no: GCC14.1 shall not be applicable, the rates shall be taken from PWD (Govt. of WB) Schedules of rates rate including addendum and corrigendum published upto date of bid opening subject to plus/minus the contractual rate of quotation.
GCC.14.4	When clause no GCC.14.2 &GCC.14.3 above shall not be applicable, the rates should be analyzed, to the mutual acceptance from present market rates of different elements involved in the item, against documentary evidence, with 5% overhead, contractor's profit as 10% and 1% cess towards BOCWWCAct,1996. In that case contractual rate of quotation will not be applicable.
GCC.14.5	Controlling Officer's decision regarding finalization of rate of non-scheduled item(s) shall be final and binding up on the contractors
GCC.15.0	Water and Electricity: The arrangement of construction power and water, if required, during execution of the work, will be arranged by the contractor within the contract value.

GCC.16.0	<p>Transportation:</p> <p>The Contractor shall at its own risk and expense transport all the Materials, Plant and Equipment and the Contractor's Equipment to the Site by the mode of transport that the Contractor judges most suitable under all the circumstances.</p> <p>Unless otherwise provided in the Contract, the Contractor shall be entitled to select any safe mode of transport operated by any person to carry the Materials, Plant and Equipment and the Contractor's Equipment.</p> <p>The Contractor shall be responsible for obtaining, if necessary, approvals from the authorities for transportation of the Plant and Equipment and the Contractor's Equipment to the Site. The owner shall use its best endeavors in a timely and expeditious manner to assist the Contractor in obtaining such approvals, if requested by the Contractor. The Contractor shall indemnify and hold harmless the Owner from and against any claim for damage to roads,</p>
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	bridges or any other traffic facilities that may be caused by the transport of the Plant and Equipment and the Contractor's Equipment to the Site.
GCC.17.0	<p>Insurance:</p> <p>The contractor must be responsible for transportation of material, loading and unloading, safe storage at site including its security and will hand over the complete system after commissioning.</p> <p>It is therefore, desired that the contractor shall arrange for insurance coverage for the equipment, accessories, materials etc. to be delivered at site upto one(1) month from the date of successful commissioning of the plant. As such the bidder shall consider the price of such insurance in their price bid as part of the price of work.</p> <p>Contractor will be However solely responsible for recovery of any losses or damages or death or injury of their personal or others, if occur, during execution of work irrespective of insurance is done or not by the contractor.</p>
GCC.18.0	<p>Accident Risk:</p> <p>Purchaser will not be responsible in connection with any sort of accident which may occur during transportation of materials/equipment, execution/ maintenance of works of the PV Power Plant. The Contractor will have to provide safety precautionary arrangement for his workmen in order to avoid any such incident / accident.</p>
GCC.19.0	<p>Stoppage of Work :</p> <p>Purchaser will neither be responsible nor be liable to bear any compensation for any interruption of work in the site due to war, strike, earthquake, lightning, flood, cyclone etc. Purchaser will also not responsible for any compensation due to stoppage of work as a reaction from the local public due to any undue action on the part of the contractor causing annoyance</p>

GCC.20.0	<p>Force Majeure:</p> <p>Force Majeure means any circumstances beyond the control of the parties, including but not limited to:</p> <ul style="list-style-type: none"> a) War and other hostilities, (whether war be declared or not), invasion, act of foreign enemies, requisition or embargo. b) Rebellion, revolution, insurrection, military power and civil war. c) Riot, commotion or disorder, except where solely restricted to employees of the Contractor or of his sub-contractors. d) Earthquake, flood, cyclone, pandemic, lock down, vacation, election, examination and such other disaster affecting Contractor's work. <p>WBREDA shall neither be responsible nor be liable to bear any compensation for any interruption of work in the site due to force majeure.</p> <p>Upon the occurrence of any situation of Force Majeure, the Contractor shall endeavor to continue to perform his obligations under the Contract so far as</p>
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	<p>reasonably practicable. The Contractor shall notify within a week in written to the controlling officer of the steps he proposes to take including any reasonable alternative means for performance which is not prevented by Force Majeure. The Contractor shall not take any such steps unless directed to do so by the controlling officer.</p> <p>If the Contractor shall fail to complete the works within the time prescribed herein or extended time for completion, then the Contractor shall pay to the Company a sum amounting to half percent (0.50%) of the value of works as liquidated damages for such delay for every week or part thereof which shall elapse between the time prescribed or extended time as the case may be and the date of completion of the work in each phase, subject to a maximum of five percent (5%) of the contract price which will be covered by the Performance Security.</p> <p>WBREDA may, without prejudice to any, all other method of recovery deduct the amount of such damages from any money in their hand due or which may become due to the contractor. The payment or deduction of such damages shall not relieve the contractor from this obligation to complete the works or from any other of his obligations and liabilities under the contract.</p> <p>If there is a valid acceptable reason for delay of execution, the Controlling Officer may at his discretion consider lower down of the liquidated damage or even waive the liquidated damage on having written prayer from the contractor along with valid reason.</p>
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GCC.21.0	<p>Liquidated Damage:</p> <p>If the Contractor shall fail to complete the works within the time prescribed herein or extended time for completion, then the Contractor shall pay to the Company a sum amounting to half percent (0.50%) of the value of works as liquidated damages for such delay or every week or part thereof which shall elapse between the time prescribed or extended time as the case may be and the date of completion of the work in each phase, subject to a maximum of five percent (5%) of the contract price which will be covered by the Performance Security.</p> <p>The Company may, without prejudice to any, all other method of recovery deduct the amount of such damages from any money in their hand due or which may become due to the Contractor the payment or deduction of such damages shall not relieve the contract or from this obligation to complete the works or from any other of his obligations and liabilities under the contract.</p> <p>If there is a valid acceptable reason for delay of execution, the Controlling Officer may at his discretion consider lower down of the liquidated damage or even waive the liquidated damage on having written prayer from the contractor along with valid reason.</p>
GCC.22.0	Performance Security/Contract Performance Guarantee:

GCC.22.1	The total Performance Security / Contract Performance Guarantee is 10% of the total value of the Contract.
GCC.22.4	The Performance BG will be released after satisfactory completion of the Comprehensive Maintenance support guided by the tender
GCC.22.5	<p>Forfeiture of Performance Security/Contract Performance Guarantee</p> <p>Performance Security/ Contract Performance Guarantee shall be forfeited if,</p> <ol style="list-style-type: none"> The successful bidder do not execute the work after placement of Letter of Award (LOA) and/or, The successful bidder will discontinue the work without prior permission of WBREDA and/or, The successful bidder fails to install/procure the total capacity of the plant as mentioned in the Bid Document and/or, The contractor fails to submit a fresh BG prior to 15 (fifteen) days of expiration of the previous one against performance security of appropriate amount as per the terms and conditions and/or, The successful bidder fails to rectify/replace of the defective/damaged equipment(s)/work(s) within the Defect Liability Period.
GCC.23.0	Taxes, Duties and other Levies:

GCC.23.1	Except as otherwise specifically provided in the Contract, the Contractor shall bear and pay all taxes, duties, levies and charges assessed on the Contractor, its Sub-contractors or their employees by all municipal, state or national government authorities in connection with the Works. All taxes, duties - and levies, including Central Goods and Services Tax, West Bengal Goods and Services Tax, Integrated Goods and Services Tax etc, where applicable and payable on Equipment/Materials, components, sub-assemblies, raw materials and any other item required for manufacture of finished Equipment/Material or completion of Works shall be deemed to have been included in total value of supply of goods or services or both .
GCC.23.2	The Contractor shall be solely responsible for the taxes that may be levied on the Contractor's persons or on earnings of any of his employees and shall hold the Purchaser indemnified and harmless against any claims that may be made against the Purchaser. The Purchaser does not take any responsibility whatsoever regarding taxes under Indian Income Tax Act, for the Contractor or his personnel. If it is obligatory under the provisions under the Indian Income Tax Act shall be made by the Purchaser.
GCC.23.3	For the purpose of the Contract, it is agreed that the Contract Price specified in the Contract Agreement is based on the taxes, duties, levies and charges prevailing at the date seven (7) days prior to the last date of bid submission (hereinafter called "Tax" in this paragraph). If any rates of Tax are increased or decreased, a new Tax is introduced, an existing Tax is abolished, or any change in interpretation or application of any Tax occurs in the course of the performance of Contract, which was or will be assessed on the Contractor in connection with performance of the

	Contract, an equitable adjustment of the Contract Price shall be made to fully take into account any such change by addition to the Contract Price or deduction there from, as the case may be. However, these adjustments would be restricted to direct transactions between the Purchaser and the Contractor (if applicable). These adjustments shall not be applicable on the bought out items.
GCC.23.4	Goods & Service Tax:
GCC.23.4.1	Contractor shall mention HSN Code / SAC Code and rate of Taxes against all supplies of Goods or Services or both in its Tax Invoice.
GCC.23.4.2	The Purchaser shall also bear and pay to the Contractor Good and Services Tax , Local Tax (if applicable) in respect of direct transactions between the Purchaser and the Contractor, if imposed on the Equipment/Materials including spares and specified in Price Schedule to be incorporated in the Works. These amounts will be payable, by the Purchaser on the supplies made by the Contractor.

GCC.23.4.3	<p>Tax deduction at source under GST</p> <p>WBREDA shall deduct tax from the payment made or credited to the supplier on the value of taxable supply, where the total value of such supply, under a contract, exceed Two Lakh and Fifty Thousand Rupees at a rate of one percent or at such rate prevailing from time to time.</p>
GCC.23.4.4	<p>In case however, the Equipment / Materials are offered for inspection after the schedule delivery period, CGST plus WBGST, or IGST, as the case may be, will be paid at the rate prevailing at the time of scheduled delivery period or actual delivery period, whichever is lower, in case of direct transactions.</p>
GCC.24.0	<p>Extension of Time:</p> <p>An extension of time without imposition of Liquidated Damage (LD), may be granted for delay in execution of work provided there is no fault whatsoever on the part of the contractor. Such extension may only be granted on the basis of application to be submitted within the schedule date of completion by the contractor who has to establish that the extension of time required by him is not due to his fault.</p> <p>The Contractor may claim an extension of the Time for Completion if he is or will be delayed in completing the Works by any of the following causes:</p> <ul style="list-style-type: none"> a) Extra or additional work ordered in writing by WBREDA. b) Suspension of work ordered in writing. c) Delay by any other Contractor engaged by WBREDA, affecting this Contract. d) Delay in handover of site by WBREDA e) Non accessibility of site f) Force Majeure. <p>The Contractor shall give notice to WBREDA of his intention to make a claim</p>

	<p>for an extension of time within 15 days of the occurrence of any of the above cause(s). The notice shall be followed as soon as possible by the claim with full supporting details. WBREDA shall after verification allow the Contractor for updating of the programmed chart as facts may justify. The decision of the controlling officer will be the final in this regard. Contractor will fully liable to complete the project within completion time after handing over the sites.</p>
GCC.25.0	<p>Risk Purchase :</p> <p>If the contractor fail, on receipt of the order, to take up the work within reasonable period or leave the work site after partial execution of the work WBREDA shall have the liberty to get the work done through other agency at his own risk and additional amount if any. If the situation so warranted to compel WBREDA to cancel the order placed on the Contractor, he shall be liable to compensate the loss or damage, which WBREDA may sustain due to reasons of failure on his part to execute the work in time.</p>

GCC.26.0	<p>Materials and Workmanship: Qualified, experienced people should be deployed to install the grid connected solar power plants. Such installer vendor must have valid electrical license , as issued by the appropriate government authority. All materials will be of the best quality and workmanship capable of satisfactory operation under the operating and prevailing climatic conditions of respective. Unless otherwise specified, they will conform in all respect to the latest edition of the relevant code and standards. The project must be supervised by a qualified Engineers so that the work will be as per drawing and related IS/IEC Code. The work will be performed confirming safety precaution of all level of worker execute the project.</p>
GCC.27.0	<p>Approval: Design and Drawing: The contractor will obtain approval for all the designs associated with civil, mechanical and electrical work which includes design of foundation, structure, cable sizing, fabrication work , layout design , wiring diagram etc. prior to the execution of work and for this purpose the contractor will submit all design and drawing for obtaining approval from Purchaser in time. The decision of the controlling officer will be the final in this regard.</p> <p>Materials: Contractor will obtain approval for the materials deliverable under the project. The decision of the controlling officer will be the final in this regard.</p>

GCC.27.1	<p>The following Schedule and Procedure of Documents Approval has to be followed:</p> <table><tr><th>Sl.No</th><th>Step</th><th>Action / Approved Status</th><th>Duration</th></tr><tr><td>1)</td><td>First submission by Contractor (Within 30 days from issuance of LoA)</td><td>Commented /Approved</td><td>21 days</td></tr><tr><td>2)</td><td>Second submission by Contractor within 15 days.</td><td>Commented /Approved</td><td>15days</td></tr><tr><td>3)</td><td>Third submission by the Contractor within 9 (nine) days</td><td>For approval</td><td>9 days</td></tr><tr><td>)</td><td>Submission of approved documents by Contractor.</td><td colspan="2">Approved documents with number of copies specified for distribution stamped with "Release for Construction".</td></tr></table> <p>Notes:</p> <ul style="list-style-type: none">a. Any delay whatsoever in the process of submission of documents under different stages shall be on the Contractor's account.b. Days means working days only	Sl.No	Step	Action / Approved Status	Duration	1)	First submission by Contractor (Within 30 days from issuance of LoA)	Commented /Approved	21 days	2)	Second submission by Contractor within 15 days.	Commented /Approved	15days	3)	Third submission by the Contractor within 9 (nine) days	For approval	9 days)	Submission of approved documents by Contractor.	Approved documents with number of copies specified for distribution stamped with "Release for Construction".	
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GCC.28.0	<p>Testing and Inspection:</p> <p>Inspecting Agency: The Purchaser may delegate inspection and testing to an outside agency [Project Monitoring Consultant etc] in place of personnel of PURCHASER.</p> <p>Inspection and Testing During Manufacture: The Purchaser or its designated representative shall be entitled during manufacture to inspect, examine and test the materials and workmanship and check the progress</p>																				

	<p>of manufacture of all Equipment to be supplied under the Contract. This shall take place on the Contractor's premises during working hours.</p> <p>No such inspection, examination or testing shall relieve the Contractor of his obligation under the Contract regarding quality of material and soundness of manufacture.</p> <p>No inspection call will be valid before drawings are approved under 'A' category without adverse comments.</p> <p>Dates for Inspection and Testing:</p> <p>After getting the related drawings approved, the Contractor shall give the Purchaser notice of inspection along with factory test results in writing of the date and the place at which any Equipment/Materials will be ready for testing as provided in the Contract. The Purchaser shall attend at the place so named within ten (10) days of the date which the Contractor has stated in his notice. The Purchaser shall give the Contractor notice, in writing, of his intention to attend the tests. The above notices shall be given at first by the quickest possible means and confirmed later in writing. The Contractor shall render all possible assistance in carrying out inspection in time.</p> <p>Facilities For Testing:</p> <p>Where the Contract provides for tests on the premises of the Contractor or Sub-contractor, the Contractor shall provide such assistance, labour, materials, electricity, fuel, stores, apparatus and instruments as may be necessary to carry out the tests efficiently without any extra charges. If the facilities are inadequate to carry out tests as per standard, the Contractor shall have to arrange suitable testing place having all such required facilities and the cost towards this will be on Contractor's account.</p> <p>The Contractor shall also bear all charges towards travelling expenses of the Inspecting Team of the Purchaser or the authorized representatives of the Outside Inspecting Agency consisting of maximum two (2) persons for to and fro journey by Air from Purchaser's Headquarters, including boarding and lodging local transport with comfort at the place of inspection and transit, if any, for the purpose of Inspection and testing anywhere in India or outside India.</p> <p>The Contractor shall be responsible for proper execution of the quality plans. The Works beyond Purchaser's hold points will progress only with Purchaser's prior written consent. The Purchaser may also undertake quality surveillance and quality audit of the systems and procedures and quality control activities. Any change in the Quality Plans shall be made only with Purchaser's prior written approval.</p> <p>The Contractor shall provide the Purchaser with the necessary facilities for carrying out quality audit and quality surveillance of the Contractor's and its Sub- Contractors' Quality Assurance System and manufacturing activities. Any expenses incurred for random sample testing at Govt. recognized test laboratories for SPV Modules, Inverters, MMS (not more than 1% of the supplied quantity) will be borne by the contractor.</p> <p>Routine and Acceptance Tests</p> <p>All routine tests and acceptance tests shall be carried out at manufacturer's works</p>
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or test site of the Contractor/Sub-contractor/test laboratory as per stipulation of relevant Indian Standard and relevant IEC as mentioned in other part of this tender. All tests shall be carried out on every lot offered for inspection as per relevant I.S. and IEC.

	<p>Type Test: The successful bidder shall submit complete and valid test reports of all tests (including type tests) as stipulated in the relevant I.S. and IEC and carried out in a Govt. recognized Test House or laboratory/NABL accredited laboratory on Equipment/IEC accredited laboratory on Equipment / Materials of identical design conforming to our Technical Specification, along with submission of drawing during detailed engineering stage. PURCHASER may also undertake Proto checking and quality approval of structural items (wherever applicable) before erection. Each type test report shall provide the following information with test results: a) Complete identification, date and Serial No. b) Method of application where applied, duration and interpretation of each test.</p> <p>Repetition of Tests: If any of the type tests, routine or acceptance tests fails to pass, the Contractor shall arrange for repetition of the tests, after rectification or replacement, at his own cost and expenses. If, however, the tests fail for the 2nd time, the related supplier shall be rejected immediately and the Contractor will be required to furnish the name of another supplier immediately either from the already approved list of Sub-contractor for that particular Equipment/Materials, or any new Sub-contractor along with submission of all relevant documents in support, towards approval of the new Sub-contractor as stated in this tender document.</p> <p>Reports of Inspection and Tests: After the factory tests have been completed at the Contractor's or Sub-contractor's works, the Contractor shall submit two (2) copies of Test Reports for approval of Purchaser. The Purchaser in turn will approve the same. The Contractor shall provide the Purchaser with two (02) copies of Approved Reports of all inspection and tests. If the Purchaser or his designated representatives fails to attend the test and/or inspection or if it is agreed between the parties that such persons shall not do so, then the Purchaser may advice the Contractor in writing to proceed with the test and/or inspection in the absence of such persons. The Contractor should provide the Purchaser with a certified report of the results thereof. WBREDA , if desired, may test the delivered product(especially solar module) at site from any accredited laboratory of Govt. of India. The result of that test and subsequent decisions taken by the controlling officer will be bound to the contractor.</p>
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GCC.29.0	<p>Rejection:</p> <p>If, as a result of an examination/testing, any plant, materials, design or workmanship is found defective and/or not in accordance with the Contract, WBREDA may reject the plant, materials, design or workmanship by giving notice with reasons. The Contractor shall then promptly make good the defect and/or ensure that the rejected/replaced item complies with the Contract.</p>
GCC.30.0	<p>Defective Material:</p> <p>If in the opinion of the Engineer, any of the machineries/equipment/materials etc. brought to the site for use are not of the quality or kind specified in the contract and/or are unfit for the work, he shall be at liberty to order the removal of the said items and the contractor shall remove the same within</p>

	<p>twenty four (24) hours after notice has been given to him and if he fails to remove them within the time the engineer may cause them to be removed anywhere at the risk of the Contractor and any cost incurred in so doing shall be deducted from the dues to the contractor under the contract. In such case, items as prescribed by the Controlling Officer or his representative are to be substituted immediately</p>
GCC.31.0	<p>Defect Liability Period:</p> <p>The term 'Defect Liability Period' shall be reckoned from the Date of commissioning of Plant/ Project. If any defect is found within the defect liability period the contractor shall be liable to rectify/replace the materials at their own cost and responsibility.</p> <p>Defects/rectification work so notified shall have to be attended and completed satisfactorily within the specified date or as deemed justified by the Controlling officer. For faithful & due fulfillment of all obligations, this defect liability period shall be covered by the performance security/contract performance, already submitted by the contractor.</p> <p>After completion of defect liability period, and on completion of satisfactory rectification of defects, if any, reported within the defect liability period and on receipt of the application from the contractor and considering other factors.</p>
GCC.32.0	<p>Subletting of Contract:</p> <p>The contractor shall not, without the written consent of the WBREDA, assign or sublet any part thereof, other than for raw materials, or for any part of the work provided that any such consent shall not relieve the contractor from any obligation, duty or responsibility under the contract. In the event of sub-letting of contract or any part thereof is permitted, the fact that such permission has been accorded shall not establish any contractual relationship between the approved Sub-vendor and WBREDA of any of his liabilities and obligations under the contract.</p>

GCC.33.0	<p>Notices:</p> <p>Unless otherwise stated in the Contract, all notices to be given under the Contract shall be in writing, and shall be sent by personal delivery, Registered post, special courier, e-mail to the address of the relevant party.</p> <p>Any notice sent by email shall be confirmed within two (2) days after dispatch by notice sent by speed post or special courier, except as otherwise specified in the Contract.</p> <p>Any notice sent by speed post or special courier shall be deemed (in the absence of evidence of earlier receipt) to have been delivered ten (10) days after dispatch. In proving the fact of dispatch, it shall be sufficient to show that the envelope containing such notice was properly addressed, stamped and conveyed to the postal authorities or courier service for transmission by speed</p>
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	<p>post or special courier. Either party may change its postal, email address for receipt of such notices by ten (10) days' notice to the other party in writing.</p> <p>Notices shall be deemed to include any approvals, consents, instructions, orders and certificates to be given under the Contract.</p>
GCC.34.0	<p>Right to Terminate Contract:</p> <p>If the contractor fails to start the work within fifteen days from the date of issuance of LOA, WBREDA shall have the right to cancel the LoA with forfeiture of earnest money without giving any notice to the contractor.</p> <p>If the contractor neglects or fails to proceed with the work proportionate to the scheduled time of completion of the work or fails to complete the work within scheduled time or within approved extended time, WBREDA shall have the right to terminate the LoA after giving notice in writing to the contractor.</p> <p>If the contractor fails after 14 (fourteen) days of such notice, to proceed with the work in the manner notified, WBREDA shall terminate the contract and call the contractor to take joint measurement along with the Engineer for the finished portion of work. If the contractor does not appear for joint measurement, ex-party measurement by WBREDA will be taken as final.</p> <p>In that case, WBREDA shall take possession of the work, site and engage other agency to complete the work. Extra cost, if incurred, to get the unfinished work done through other agency, will be realized from him from his pending bills and security money. In the contract terminated as above, the contractor shall have no claim for compensation against WBREDA for any loss or deterioration of any materials that he may have collected or he may have entered into account of the work.</p>
GCC.35.0	<p>Accommodation:</p> <p>The accommodation of the contractor's Engineers and workers at the site is to be arranged by the contractor.</p>

GCC.36.0	Clearing Site on Completion: On completion of the works the contractor shall clear away any and remove from the site all constructional plant, surplus materials, rubbish, debris and temporary works of every kind and leave the whole of the site and works clean and in a good and tidy condition to the satisfaction of the Controlling Officer of WBREDA. The contractor shall dismantle and remove the staging and other temporary structures like stores, offices, labour camps etc. on completion of work, clear and clean the site where such temporary facilities were built and restore the same to original condition
GCC.37.0	Corrupt or Fraudulent Practices:
GCC.37.1	The Purchaser requires that the bidders/Contractors observe the highest standard of

	ethics during the procurement and execution of the Contracts.
GCC.37.2	In pursuance of this policy, the Purchaser defines, for the purposes of this provision the terms set forth below as follows: a.“Corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in Contract execution. b.“Fraudulent practice” means a misinterpretation of facts in order to influence the procurement process or the execution of a Contract to the detriment of the Purchaser, and includes collusive practice among bidders (prior to or after bid submission) designed to establish bid prices at artificial non-competitive levels and to deprive the Purchaser of the benefits of free and open competition.
GCC.37.3	The Purchaser will reject a proposal for award if it determines that the bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the Contract in question
GCC.37.4	The Purchaser may declare a firm ineligible, either indefinitely or for a stated period of time, to be awarded a Contract if it any time determines that the firm has engaged in corrupt or fraudulent practices in competing for or in executing a Contract of the Purchaser
GCC.38.0	Advertising: Any advertising stating the subject of this Contract by the Contractor in India or in foreign countries shall be subject to approval of the Purchaser prior to the publication. Publication of approved articles, photographs and other similar materials shall carry acknowledgment to the Purchaser.

GCC.39.0	<p>Disputes:</p> <p>The parties shall take necessary steps to settle any dispute through mutual discussion with issuing prior notice in writing to other side at least 07 (seven) days in advance. If the issue is remained unresolved to the satisfaction of the parties, then the matter may be referred to Arbitration.</p> <p>The parties may refer the matter for Arbitration on expiry of 45 (forty five) days from the date of intimation of disapproval/dissatisfaction from either party to other party.</p> <p>The provisions of Arbitration and Conciliation Act 1996 will apply with respect to Arbitration proceedings between the parties.</p> <p>Dispute(s), if any, shall be settled by mutual agreement through Amicable Settlement and in case of failure the dispute(s) shall be settled through Arbitration.</p>
GCC.40.0	<p>Arbitration:</p> <p>The provisions of Arbitration and Conciliation Act 1996 will apply with respect to Arbitration proceedings between the parties.</p>

	<p>Dispute (s), if any, will be settled by mutual agreement through Amicable Settlement and in case of failure, the dispute(s) will be settled through Arbitration.</p> <p>Amicable Settlement: If any dispute(s) is not resolved through mutual settlement, WBREDA and Contractor will attempt to settle the dispute amicably before the commencement of arbitration. However, unless both Parties agree otherwise, arbitration may be commenced on or after the thirty day after the day on which notice of dissatisfaction was given, even if no attempt at amicable settlement has been made.</p> <p>Arbitration: Unless settled amicably, any dispute or differences shall be referred to the Sole Arbitrator appointed by WBREDA. The Arbitrator will preferably be a member of Indian Arbitration Council and arbitration proceedings will take place as per provision of The Arbitration And Conciliation Act, 1996 or any statutory modifications or re-enactment thereof, and the rules made there under and for the time being in force shall apply.</p>
GCC.41.0	<p>Jurisdictional Matter:</p> <p>Either party may approach Court of Law if any of them is aggrieved by the award of the Arbitration proceedings.</p> <p>All litigation matters between the parties if any shall be held in any Court in Kolkata under the superintendence of Calcutta High Court.</p>

GCC.42.0	<p>Law & Procedure:</p> <p>The law which is to apply to the contract and under which the contract is to be constructed shall be Indian Law.</p> <p>The law governing the procedure and administration of any arbitration instituted by the Clause for Arbitration shall be Indian Law.</p>
GCC.43.0	<p>Construction of Contract:</p> <p>The contract shall in all respect be construed and operated, as a contract as defined in the Indian Contracts Act, 1972 and so on in latest version, and all the payments there under shall be made in India Rupees unless otherwise specified</p>

Section – IV

SPECIAL CONDITION OF CONTRACT

SCC. 1.0	<p>Title of the Work: Design and engineering, manufacture/procurement, testing, supply installation and commissioning, 5years comprehensive maintenance of grid connected rooftop Solar PV power plants, each of array capacity 20kWp to 30kWp cumulative array capacity 240kWp on turnkey basis.</p>
SCC.2.0	<p>Name of Purchaser: WBREDA</p>
SCC.3.0	<p>Beneficiaries: Various Govt. institutes and organization at different places of West Bengal having grid connectivity. As per requirement, number of grid connected solar rooftop power plant shall be one or more at a single site.</p>
SCC.4.0	<p>Scope of Work: The work is to be executed on turkey basis. The Purchaser will not supply any material departmentally. The scope of work will include but not limited to the followings:</p> <ul style="list-style-type: none"> (a) Physical site survey, shadow analysis through appropriate software, PV Array Layout using Auto Cad or appropriate software. List of sites will be provided by WBREDA along with the LoA. (b) Detailed design of the Equipment/ Materials. (c) Complete manufacture including shop testing. (d) Providing engineering drawing, data, operational manual etc for the Purchaser's approval. (e) Packing, forwarding, transportation and insurance of Equipment/ Material from the manufacturer's works to the Site. (f) Receipt, storage, preservation, insurance and conservation of Equipment/ Material at the Site. (g) Reliability tests, performance and guarantee tests, wherever applicable, on completion of commissioning. (h) Erection, testing, commissioning and insurance of all the Equipments/ Materials. (i) Obtaining technical approval from the Purchaser (j) Timely procurement and transportation to site in properly packed condition of all equipment, materials and miscellaneous item required to complete the project (k) Receiving, unloading and transportation at site (l) Safe storage (m) Final check-up of equipment and commissioning and putting the system into successful functional operation. (n) Installation, testing and commissioning of power plant (o) Providing of training material to the end users during onsite training for

	<p>end users.</p> <ul style="list-style-type: none"> (p) Preparing commissioning certificate and documentation. (q) Training and Handing over of power plant (r) Providing of routine and break down maintenance of grid connected solar rooftop power plants (s) Fulfilment of warranty obligation as may arise <p>In addition to facilitate the installation work, following work may have to take up by the contractor as per site condition. The activities, however, deemed to be included in the scope of work.</p> <ul style="list-style-type: none"> (t) Tit bit repairing work mainly plastering, white washing, painting, mending good damages and other related miscellaneous work etc. (u) Removing of rubbishes and staking the serviceable materials at suitable within a lead of around 75m and lift around of 15 m from the installation site place as directed. (v) Cleaning of site identified for installation of different components of the power plants as may be required <p>The equipment and materials other than services deliverable against each of the grid connected solar rooftop power plant of array capacity 20 kWp to 30 kWp will include but not limited to the following:</p> <ul style="list-style-type: none"> (a) PV Modules (b) PV Module Mounting Structure (c) PV Array Junction Box (d) Grid –Tied String Inverter (e) Web based on line data logger and Remote Monitoring Unit (f) Inverter LT Panel (g) Grid interfacing LT Panel (h) Kiosks for Inverter and accessories according to site condition (i) Export Import Energy Meter (j) Cable and Wires (k) Earthing system arrangement. (l) Fire Extinguisher (m) Recommended spares, tools and tackles (n) Signage (o) Project Document (p) Periodic Operation Maintenance Log Book and Maintenance Manual, equipment Manual
SSC.4.1	<p>Site Survey:</p> <ul style="list-style-type: none"> (a) Site visit and field survey at the premises of the Prospective Beneficiaries (List of the prospective beneficiary will be provided by WBREDA). (b) The contractor shall submit site wise Technical Feasibility Survey report with shadow analysis through appropriate software, PV Array Layout using Auto Cad or appropriate software, indicating technical suitability of site for installation of the GCRTSPV system with roof plan indicating the suitable area for installation of solar plant, dimension, north-south direction and any other relevant information for each site, PV Array Layout, Plant Component Layout, the structural condition of the roof / type of roof / type of roof treatment (if any) along with all technical

	<p>particulars along with site wise Single Line Diagram (SLD) etc. These exercises are to be done in line with the guideline laid down by WBREDA. No hand written sketch will be accepted. Site feasibility will fully liability/responsibility of the Contractor</p> <p>(c) At any stage during implementation of the project, if it is found that any of the sites is not suitable for installation of GCRTSPV systems and the site survey has been conducted without maintaining the guideline as laid down by WBREDA, the site shall not be accepted by WBREDA and all related payment to that particular site will be forfeited.</p>
SCC.5.0	<p>Metering arrangement: DISCOM [Distribution Company like WBSEDCL, CESC etc] will provide Energy Meter at each location. The contractor shall have to guide, facilitate and assist the beneficiary institutions to complete the process of metering arrangement with the respective DISCOM.</p>
SCC.6.0	<p>Controlling Officer: The Chief Engineer / Superintending Engineer, WBREDA will be Controlling Officer of the work.</p>
SCC.7.0	<p>Supervising officer: Authorized Officer/representative of WBREDA. Site In Charge / Cluster In Charge: Authorized Officer/representative of WBREDA.</p>
SCC.8.0	<p>Paying Officer: Chief of Finance & Accounts, WBREDA is the Paying Authority of the work</p>
SCC.9.0	<p>Variation, Additions and Omissions: WBREDA reserves the right to alter, amend, omit or otherwise vary the allotment quantities of power plant as may be necessary but such variation will be limited to +/-25% (Plus or minus twenty five percent) of the original order Payment shall however be made as per actual execution of work.</p>
SCC.10.0	<p>Executed work value: The value of work may vary +/-25% (Plus or minus twenty percent) of the contact value.</p>

SCC.11.0	<p>Completion time: 180days from the date of LOA. Providing new list of sites after LoA and first list of sites, Zero Date for new set of sites will be calculated from that date of providing new set of sites.</p>
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<p>SCC.120</p>	<p>Warranty:</p> <p>The contractor must ensure that the goods supplied under the contract are new, unused and of most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the contract.</p> <p>The warrantee period of the complete PV Systems will be 60 calendar months from the date of commissioning. However, the modules will have warranty for 25 years with degradation of power generated not exceeding 20% of the minimum rated power over the 25 years period and not more than 10% up to initial 10 years period as per guideline of MNRE, Government of India.</p> <p>The equipments or components, or any part thereof of the Power Plant, if so found defective during warrantee period, the contractor will remain liable to repair or replace immediately under warrantee obligation to the satisfaction of the Purchaser in order to ensure trouble free operation of the Power Plant.</p> <p>In case of PV Module, the contractor has to transfer Performance Guarantee Certificate from the original manufacturer to the Purchaser for subsequent arrangement.</p> <p>In order to ensure satisfactory performance of the Power Plant, the contractor should take up periodic maintenance as may be required and also attend breakdown maintenance as and whenever required within the warrantee period and scope under warranty obligation.</p> <p>Within the scope of warranty, the Contractor will repair or replace of any defective part of the Plant & Equipment supplied, Works done and services rendered under the Contract and render periodic maintenance as a preventive measure to up keep performance of the power plant and also to attend breakdown maintenance as and whenever needed.</p>
<p>SCC.13.0</p>	<p>Defect Liability Period: 60 (sixty) Calendar Months from the date of commissioning at each site.</p>
<p>SCC.14.0</p>	<p>Comprehensive Maintenance during defect liability period:</p> <p>All the equipments to be installed for commissioning of each of the grid connected solar PV power plant and the power plant in whole shall be under Comprehensive Maintenance Contract within the scope of the tender for 5(five) years from the date of commissioning. The equipments or components, or any part thereof, so found defective during Comprehensive Maintenance Contract period will be forthwith repaired or replaced within the scope of guarantee obligation to the satisfaction of the Purchaser.</p> <p>The maintenance of grid connected solar PV power plant include routine & periodic maintenance, overhauling, breakdown maintenance, and repairing or replacement of defective PV modules, invertors, and other components, providing of consumables.</p> <p>The complete back to back agreement with the manufacturer of SPV Module, Inverter, MMS, Net Meter, etc of the agency have to be submitted to WBREDA. The scope of support service provides preventive maintenance as & when</p>

	<p>necessary within the contract period and break down maintenance in the event of malfunctions, which prevent the operation of the power system or part of it within the stipulated time period & free replacement of spares required for maintenance.</p> <p>The contractor will provide Spare parts & Measuring Instruments during maintenance.</p> <p>The Down-Time of PV system should not be more than three (03) working days</p>																
SCC.14.1	<p>Routine maintenance:</p> <p>In order to carry out routine maintenance of the power plant, the contractor will provide all labour, material, consumables etc. within the scope of maintenance service. Recommended tasks under the scope of routine maintenance will include but not limited to the followings:</p> <table border="1"> <thead> <tr> <th>Sl No.</th><th>Type of Routine Maintenance</th></tr> </thead> <tbody> <tr> <td>01</td><td>Cleaning of PV modules once in a month</td></tr> <tr> <td>02</td><td>Checking and tightening of all electrical connections</td></tr> <tr> <td>03</td><td>Checking and tightening of mechanical fittings</td></tr> <tr> <td>04</td><td>Checking and restoring of earthing system</td></tr> <tr> <td>05</td><td>Dusting and cleaning of Inverter and other electrical equipments</td></tr> <tr> <td>06</td><td>Routine maintenance as recommended by the Original Equipment Manufacturer (OEM)</td></tr> <tr> <td>07</td><td>Renewal of Fire Extinguishers</td></tr> </tbody> </table> <p>The engagement terms along with warranty & maintenance terms of the agency regarding maintenance with the OEM have to be submitted to WBREDA.</p>	Sl No.	Type of Routine Maintenance	01	Cleaning of PV modules once in a month	02	Checking and tightening of all electrical connections	03	Checking and tightening of mechanical fittings	04	Checking and restoring of earthing system	05	Dusting and cleaning of Inverter and other electrical equipments	06	Routine maintenance as recommended by the Original Equipment Manufacturer (OEM)	07	Renewal of Fire Extinguishers
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07	Renewal of Fire Extinguishers																
SCC.14.2	<p>Breakdown maintenance:</p> <p>Breakdown maintenance will include but not limited to the followings:</p> <ol style="list-style-type: none"> Breakdown maintenance will mean the maintenance activity including repairs and replacement of any component or equipment of the power plant, which is required to be carried out as a result of any sudden failure/breakdown of that particular component or equipment while the plant is running. The contractor will be responsible to carry out breakdown maintenance of the power plant and will provide the required manpower, materials, consumables, components or equipment etc. for breakdown maintenance. The contractor will undertake necessary maintenance/ troubleshooting work of the grid connected solar rooftop power plants. Down time will not be more than 05 (five) working days from time of occurrence or reporting. However, if the breakdown is not repairable within 5(five) working days due to some specific reason, the contractor must seek extension of time by giving sufficient acceptable reasons within three working days of the occurrence of the fault. In such case, the contractor will also specify the specific date within which the fault will be restored and the system will be put in operation again. However, the final decision taken by the Purchaser considering all such reason will be binding for the contract. In such cases the restoration shall be done by the contractor within maximum 15 days. If the restoration of the power plant shall not be done within 15 days the CMC of that Power plant shall be deducted pro rate basis. 																

SCC.14.3	<p>Capital Maintenance:</p> <p>Capital Maintenance shall mean the major overhaul of any component or equipment of the power plant which is not covered by routine, preventive and breakdown maintenance which may become necessary on account of excessive wear & tear, aging, which needs repair/replacement. The capital maintenance of power plant and all civil structures shall normally be planned to be carried out on an annual basis.</p> <p>The capital maintenance also includes annually painting of mechanical & civil structures etc as and where required. Adequate measures should be taken for prevention of wear and tear of the machines. Solar PV Power System is to be designed to operate with a minimum of maintenance.</p> <p>The scope of support service provides preventive maintenance as & when necessary within the contract period and breakdown maintenance in the event of malfunctions, which prevent the operation of the power system or part to fit within the stipulated time period & free replacement of spares required for maintenance.</p>
SCC.14.4	<p>Maintenance Report :</p> <p>In every six months, Maintenance Report comprising of Generation Data for that particular quarter, period of grid outage and any other required details for each location as per approved format must be submitted to WBREDA with certification of Beneficiary in original. If the contractor shall not submit the maintenance report within due date the CMC charge shall be deducted to the tune of maximum 10% for that period. For all maintenance reports energy meter reading with photographs, duly endorsed by the respective authority are mandatory for submission.</p> <p>The payment shall be made on yearly basis on submission of bills in triplicate to WBREDA along with a copy of the maintenance report of the claimed year period which will already to be submitted.</p>
SCC.14.6	<p>Rental and other periodic charges:</p> <p>The contractor shall pay the rental charge of the SIM / Telephone Bill for web connectivity in order to transfer of data related to Web Based Remote Monitoring System. The contractor shall also pay the rental charges for server of the web based remote monitoring system for storing and access the data till the defect liability period is over. The Contractor shall also pay necessary charges periodically for refilling of the Fire Extinguisher till defect liability period is over within the contract price.</p>
SSC.14.7	<p>The payment towards maintenance shall be made on yearly basis on submission of bills in triplicate to WBREDA along with a copy of the maintenance report during the claimed period which will already to be submitted on quarterly basis subjected to submission of the extension of Performance BG.</p>

Extension of BG

SSC.15.0	Payment:		
	All payments to be made to the Contractor under the contract will be in Indian		
G	pees only	Payment schedule proposed to be as follows:	
	Sl No	Work Head	Pattern of release of payment
	(i)	After delivery of PV modules, Grid Interfacing Inverter and	60% payment on delivered items
	(ii)	MMS at each site After installation of the Power Plant.	25% payment against delivered items and
	(iii)	After Performance testing , users' training and observing the performance of the system for 30 days from the date of	85% on service items. 5% Payment on delivered items and service items.
	(iv)	commissioning and handing over of Power Plant for each site Performance of providing of Comprehensive Maintenance support for five years (i.e during defect liability Period) for each site.	10% of the supply item and 10% of th service item will be released on yearly basis in five equal installment (2% per year) subject to satisfactory performance as per Clause no: SCC.14.0 and its sub clause on submission o maintenance report on regular basis and submission of
			The BG against Performance Guarantee will be released after rganization completion of the Defect liability period guided by this tender
	Performance Bank Guarantee- 10%		
	The materials shall be delivered at site according to the Bill of Materials mentioned in the BOQ.		
	The contractor shall submit Invoice in triplicate for releasing the payments based on the Joint Measurement Certificate. The first 60% payment will be released against signed delivery chalan of the respective Govt.authority with photographs.		
SSC.16.0	For other payments, WBREDA officials or authorized agency will inspect sites to the extent, to be decided by the Controlling Officer.		
	End Users Training:		
	The Contractor will arrange for training at site for the end users.(representatives of beneficiary)		
SSC.17.0	Handing Over:		
	The work will be taken over by WBREDA upon successful completion of all tasks to be performed at site(s) on equipment supplied, installed, erected, commissioned and run successfully for consecutive 30 days by the contractor in accordance with provision of this order. During handing over of the complete project work, the contractor will submit the followings for considering final payment in triplicate along with soft copy of each site:		

- a) All As-Built Drawings & Design of the power plant
- b) Layout of PV array field, schematic drawing

	<ul style="list-style-type: none"> c) Installation and testing compliance document as per format provided by WBREDA d) Detailed Engineering Document with detailed specification, schematic drawing, Design and test results, manuals for all deliverable major items, Operation, Maintenance & Safety Instruction Manual and other information about the project e) Bill of materials f) Site wise documentation as per MNRE GoI Format g) Performance Guarantee Certificate of PV modules from the original manufacturer h) Completion certificate as per prescribed format provided by WBREDA a) Item wise picture- minimum four (04) numbers (PV Array Field-2Nos, Kiosk having Inverter, IIP, AJB-01 No., Energy Meter—1, No, Training – 01 No) j) 30 days Generation Data. k) Copy of the Electricity Bill of the Beneficiary /organization l) Insurance Document m) Handing Over document.
SCC.18.0	<p>Other documents to be delivered to WBREDA</p> <p>The documents to be delivered to WBREDA will include but not limited as follows:</p> <p>Warranty Certificates of Original Equipment Manufacturer (OEM) for stipulated period as mentioned in the Tender for Solar PV Modules, Inverters, etc.</p>
SCC.19.0	<p>Approval of Inverter , Data logger & Web Based monitoring systems</p> <ul style="list-style-type: none"> a) The proposed inverter (proposal for maximum two makes and approval for maximum three makes) shall have the features and also comply the terms as laid down in the tender. b) The proposed inverter (minimum 10kVA, 15 kVA, 20 kVA for minimum one number each should be used in the Solar PV projects in any Government organization / Government undertaking / Government agencies / SNA of MNRE, Govt. of India / any government programme and in operation with satisfaction for a minimum period of last 01 year before the date of issuance of the NieT. (Site visit of such inverter(s), if it will decided by the Controlling Officer, is to be arranged by the Agency concerned.) Supporting documents to be submitted. If the documents are not up to the acceptability of WBREDA, the bidder have to submit documents as required for satisfaction of WBREDA.

Verification from online remote monitoring system will also be accepted as proof of performance. Demonstration of functioning of inverter in conjunction with RMS to be done for accordance for approval.

- c) The proposed inverter manufacturer must have service centre or authorized service provider anywhere in India preferably in West Bengal. The contractor shall have to submit the detail of the service centre setup with documentary proof like Trade license (if applicable), Agreement etc at time of the request for approval of Inverter. Provided at any time for restoration, repair or replacement of parts and whole of the inverter supplied should be made available in the State of West Bengal.
- d) The contractor has to propose to supply Inverter, data logger [in-built or add on]and Web based Monitoring Systems from maximum three manufacturers.
- e) Contractor shall be sole responsible for the delay in obtaining approval of the inverter, data logger and Web Based Monitoring System due to non-compliance.
- f) Demonstration of Inverter have to be provided by the contractor at his place/warehouse/lab having appropriate testing facility along with all requisite documents at the time of approval. The contractor have to submit QAP for approval to WBREDA before testing/demonstration. Testing includes but not limited to the following: THD, Efficiency, AC & DC Protection, Anti Islanding, Data dumping, Display Parameters, etc as per acceptability of WBREDA in accordance to the specification laid elsewhere in the tender document. Appropriate and satisfactory protection at DC side is to be ensured at the satisfaction of WBREDA.
- g) Before going for mass production, approval shall be provided by WBREDA for the particular model(s) of the inverter(s).
- h) No further approval shall be accorded after completion of approval or in the mid time of the execution of the project if otherwise any force majeure/unusual/abnormal condition is arisen. In such case, the controlling officer's decision regarding further approval will be final.

Approval of PV Module:

- a) The contractor has to offer PV Module of maximum two manufacturers. Out of offered PV Modules, approval shall be provided for the PV Module(s) of maximum three manufacturers, subject to compliance of the document submitted by the Contractor as per tender.
- b) No further approval shall be accorded after completion of approval or in the mid time of the execution of the project if otherwise any force majeure/unusual/abnormal condition is arisen. In such case, the controlling officer's decision regarding further approval will be final.

Approval of Balance of Systems (BOS)

- a) The contractor has to offer BOS of maximum three manufacturers. Out of offered BOS, approval shall be provided of one or two subject to compliance of the document submitted by the Contractor as per tender.

- b) No further approval shall be accorded after completion of approval or in the mid time of the execution of the project if otherwise any force

	majeure/unusual/abnormal condition is arisen. In such case, the controlling officer's decision regarding further approval will be final.
SCC.20.0	<p>Joint Inspection: Joint Inspection may be carried out at various stages of execution of the work as follows but not limited to the following stages, as per decision of the Controlling officer :</p> <ol style="list-style-type: none"> Site Survey during site feasibility. Inspection at factory for Witness of testing before Dispatch of materials. After delivery of materials of GCRTSPV systems at individual site After Installation of GCRTSPV systems at individual site. After Testing of GCRTSPV systems at individual site.
SCC.20.1	<p>The Contractor shall bear all charges towards travelling expenses of the Inspecting Team of the WBREDA or the authorized representatives of the Outside Inspecting Agency consisting of maximum two (2) persons at each event for to and fro journey by Air where available from Purchaser's Headquarters, including boarding and lodging for Inspection at factory. For Joint Inspection at site at different stage of the project the Contractor shall also bear all charges towards travelling expenses from WBREDA's Headquarter including boarding and lodging at good comfort level for maximum two such visits at each site.</p>
SCC.22.0	<p>Additional 05 Years Annual Comprehensive Maintenance: WBREDA may extend the Annual Comprehensive Maintenance for a further period of 05 years (additional 05 years after completion of Defect Liability Period) as will be confined on the basis of satisfactory performance of the Agency concerned.</p> <ol style="list-style-type: none"> The payment will be done @2.5% of the LOA value per year. The prevailing terms & Conditions for Maintenance will prevail. Fresh Performance guarantee in the form of BG @10% of the LOA value have to be submitted by the Agency Concern. For any other respect, the prevailing terms & Conditions of NIEt will prevail

FORMS
Section – V-A

FORMS

Sl No	Form Name	Form No
01.	Check List	Form-1
02.	Forwarding Letter for submission of Bid Security and Tender Fee(Bid Form)	Form -2
03.	Proforma for Undertaking to be submitted by the Bidder	Form-3
04.	Bid Security	Form- 4
05.	Summary statement of yearly turnover and net worth	Form 5A
06.	Capability status	Form-5B
07.	Statement of similar type of orders executed as on date of issuance of the NleT	Form-6
08.	Curriculum Vita of key Personnel	Form-7
09.	Format for submission of Pre-Bid Queries	Form- 8
10.	Proposed modifications	Form-9

Form-1**CHECKLIST**

Sl. No.	Scanned Copy of Documents to be uploaded	Name of folder	To be submitted in cover	Submitted (Y/N)
1.	Check List(Form-1)	Forms	Statutory cover (Technical proposal)	
2.	Bid Form (Form-2)	Forms	Statutory cover (Technical proposal)	
3.	Pro-forma for undertaking to be submitted by the Bidders(Form-3)	Forms	Statutory cover (Technical proposal)	
4.	Bid Security (Form-4)	Forms	Statutory cover (Technical proposal)	
5.	Summary Statement Of Yearly Turnover And Net Worth (Form 5A)	Forms	Statutory cover (Technical proposal)	
6.	Capability status (Form 5B)	Forms	Statutory cover (Technical proposal)	
7.	Statement of similar type of order/orders executed as on date of issuance of the NleT (Form 6)	Forms	Statutory cover (Technical proposal)	
8.	Curriculum Vita Of Key Personnel (Form 7)	Certificates	Non-Statutory cover (Technical proposal)	
9.	Format For Submission Of Pre-Bid Queries (Form 8)	Forms	Non-Statutory cover (Technical proposal)	
10.	Proposed modifications (Form 9)	Forms	Non-Statutory cover (Technical proposal)	
11.	BOQ (Financial proposal)	Bill of Quantities (BOQ)	Financial Proposal	

Date : (Printed Name).....

Place : (Designation).....

Signed and Upload

**Forwarding Letter for submission of Bid Security and
Tender Fee
Bid Form**

(Bidder s Letterhead)

Ref No:

To
The Chief Engineer,
WBREDA ,
Bikalpa Shakti Bhavan, J1/10, Block-EP&GP
Salt Lake Electronics Complex, Kolkata-700091

Subject : Design and engineering, manufacture/procurement, testing, supply installation and commissioning, 5years comprehensive maintenance of grid connected rooftop Solar PV power plants, each of array capacity 20 to 30 kWp having array capacity 240kWp on turnkey basis

Reference: NleT No:

Sir,

I, the undersigned, being the authorized signatory of(Name of the Bidder), having read and examined in detail the NleT including minimum eligibility criteria in particular, instruction to Bidders, general terms & conditions, special terms & conditions and specification, do hereby submitting our offer to execute the contract as per terms & conditions as said forth in your Tender document.

1. We confirm having submitted the eligible criteria as required by you in your Tender Document along with this proposal. In case you require any further information or clarification in this regard, we agree to furnish the same in time.
2. We have submitted the requisite amount of “Tender Fee” in online mode.
3. We hereby furnish the following:

1	GSTIN	
2	PAN No	

4. Our contact details related to this tender are as follows:

Information	Local office (In West Bengal)	Head office
Name of the Contact Person		
Designation		
Telephone No		
Fax No		
Mobile No		
Email Address		

5. We confirm that our bid in response to the NIeT is consistent with all the requirements of submission as stated in the Tender Document and subsequent communications from WBREDA.
6. We have neither made any statement nor provided any information in this Bid, which to the best of our knowledge is materially inaccurate or misleading. Further, all the confirmations, declarations and representations made in our Bid are true and accurate.
7. We declare that the submitted our offer is without any deviations and are strictly in conformity with the documents issued by WBREDA.
8. We declare that content of the Tender Document including NIeT, ITB, GCC, SCC, Technical Specification and subsequent corrigendum, addendum, if any, are acceptable to us and we have not taken any deviation in this regard. This is to expressly certify that our offer contains **no deviation** either in direct or indirect form.
9. We also declare that in case any deviations are noticed which might have crept inadvertently, that such deviations without reservation of any kind are automatically deemed to have been withdrawn by us.
10. If you accept our offer, we agree to complete the entire work in accordance with work completion time given in the Tender document. We fully understand that the work completion time stipulated in is the essence of the contract, if awarded.
11. We offer to execute the work in accordance with the conditions of the NIeT document as available in the website.
12. This Bid and your subsequent Letter of Acceptance / Work Order /agreement shall constitute a binding contract between us.
13. We hereby confirm our acceptance o fall terms and conditions of the NIeT document unconditionally.
14. We also declare that, we have never been blacklisted and / or there were no debarring actions against us as on date due to any reason what-so-ever, by any Government or Government Agencies. In the event of any such information pertaining to the aforesaid matter found at any point of time either during the course of the contract or at the bidding stage, our bid/contract will be liable for truncation / cancellation / termination without any notice at the sole discretion of WBREDA.

Date : (Printed Name).....

Place : (Designation).....

Signed and Upload

PROFORMA FOR UNDERTAKING TO BE SUBMITTED BY THE BIDDER

(Bidders Letterhead)

(For genuineness of the information furnished on-line and authenticity of the documents produced before Tender Committee for verification in support of his eligibility)

I-----, Partner/Legal Attorney/Accredited Representative of

M/s-----, solemnly declare that:

1. We are submitting Tender for the Work -----
against Tender Notice No.-----dated-----
--
2. All the information's furnished by us in respect of fulfillment of eligibility criteria and qualification information of this Tender is complete, correct and true.
3. All documents/credentials submitted along with this Tender are genuine, authentic, true and valid.
4. If any information and document submitted is found to be false/ incorrect any time, department may cancel my Tender and action as deemed fit may be taken against us, including termination of the contract, forfeiture of all dues including Earnest Money and banning/delisting of our firm and all partners of the firm etc.

Date : (Printed Name).....

Place : (Designation).....

Signed and Upload

Bid Security
Bank Guarantee

(To be stamped in accordance with Stamp Act)

Bank Guarantee No.

Date.....

To
The Chief Engineer
WBREDA
Bikalpa Shakti Bhavan,
Plot No.J1/10, EP & GP - Block, Sector – V,
Salt Lake Electronics Complex, Kolkata – 700 091.

Dear Sirs,

In accordance with NIET No., M/s having its
Registered/Head Office at (here-in-after called the 'Bidder') wish to
participate in the said tender for [Name of tender].....

As an unconditional and irrevocable bank guarantee against Bid Security for an amount
of.....(*insert in words and figures)..... valid for.....(insert number of
days).....days from(**).....is required to be submitted by the Bidder as a
condition precedent for participation in the said tender which amount is liable to be forfeited on the
happening of any contingencies mentioned in the Bidding Documents.

We, the[Name & address of the Bank] having
our Head Office at (#) guarantee and undertake to pay immediately
on demand by WBREDA (WBREDA) the amount of(*insert in words and
figures)..... without any reservation, protest, demand and recourse. Any such demand
made by the Purchaser shall be conclusive and binding on us irrespective of any dispute or
difference raised by the Bidder.

This Guarantee shall be irrevocable and shall remain valid up to(@)..... If any
further extension of this guarantee is required, the same shall be extended to such required period on
receiving instructions from M/s..... [Bidder's Name]..... on whose behalf this
guarantee is issued.

All rights of WBREDA under this Guarantee shall be forfeited and the Bank shall be relieved and
discharged from all liabilities there under unless a demand or claim is lodged by WBREDA under
this Guarantee against the Bank within [thirty (30)] days from the above mentioned expiry date of
validity or, from that of the extended date.

In witness where of the Bank, through its authorised officer, has set its hand and stamp on this.....day of.....20.....at.....

WITNESS

.....
(Signature)

.....
(Name)

.....
(Official Address)

**SIGNATURE OF AUTHORIZED
SIGNATORY OF THE BANK**

.....
(Signature)

.....
(Name)

.....
(Official Address)

Authorized vide

Power of Attorney No:.....

Date.....

- Note:**
1. (*) The amount shall be as specified in the NlET.
(**) This shall be the date of opening of bids.
(#) Complete mailing address of the Head Office and issuing branch of the Bank to be given with fax no./telephone no. of the contact person
(@)The bid security shall be valid for a period as specified in NlET
 2. The Stamp Paper of appropriate value shall be purchased in the name of Bidder/Bank issuing the guarantee.

SUMMARY STATEMENT OF YEARLY TURNOVER AND NET WORTH

Bidder's Name & Address:

NleT No:

To
The Chief Engineer
WBREDA
Bikalpa Shakti Bhavan, J1/10, Block-EP&GP ,
Salt Lake Electronics Complex, Kolkata-700091

This is to certify that the following statement is the summary of the Audited /Tax audited Accounts of our Company/firm (The Bidder) arrived for the three consecutive years or for such period since inception of the Firm, if it was set in less than such three year's period as follows:

Sl.No.	Financial		Remarks
	Financial Year	Turnover rounded upto in lakh (two digit after decimal)	
1.	2019-20		
2.	2018-19		
3.	2017-18		
4.	Average yearly Turn Over		
5.	Net Worth as at FY 18-19 & 19-20		

Note:

1. Average turnover is to be expressed in rupees in lakh, rounded upto two digits after decimal.
2. The statement must be the individual bidder's turnover and not the consolidation as the result of accounts of group and associates.
3. Average turnover for 3 years is to be obtained by dividing the total turnover by 3.0. If the bidder was set up in less than 3 year's period, consider the turnover for the period from inception to the Year-1. It may be either 1.0 or 2.0.
4. Average turnover is to be obtained by dividing the total turnover by 1.0 or 2.0, as the case may be.
5. In case, the bidder was set up in less than 3 year's period, mention the year of inception in the 'Remarks' column.

Signed and Upload

Capability status
(Bidders Letterhead)

NIE T No:

Bidder's Name & Address:

To
The Chief Engineer
WBREDA
Bikalpa Shakti Bhavan, J1/10, Block-EP&GP,
Salt Lake Electronics Complex, Kolkata-700091

We provide the following details to conform that we have sufficient capacity to execute the supply of Goods covered in the NIE T:

A	Manufacturing Capacity (applicable in case of original manufacturers only)	
B	Orders in Hand	
i	Total value of Orders	
ii	Value of work completed out of above value upto 31.12.2020.	
iii	Value of anticipated work to be done in the following Financial Years: 2017-18, 2018-19 and 2019-20.	

Details of orders in hand are as follows:

Sl. No	Owner/ Client	Scope of works	Order Value	Schedule Time of Completion	Value of Outstanding work	Estimated Completion date

Note:

- Continuation sheets of like size and format may be used and annexed to this format if required.

Date : (Printed Name).....

Place : (Designation).....

Signed and Upload

Form 6

(Bidders Letterhead)

Statement of similar type of order/orders executed as on date of issuance of the NleT

[Applicability up to the extent of fulfillment of Technical QR].

NleT No:

Bidder's Name &

Address: To

The Chief Engineer

WBREDA

Bikalpa Shakti Bhavan, J1/10, Block-EP&GP , Salt

Lake Kolkata-700091

Sl No	Name of the Installed Plants/ Project	Financial year	Order No. and date	Name of Owner / order issuing authority	Cumulative capacity of the order (Considering similar type of work) (scanned copy of certificate to be Submitted in non-statutory cover) (kWp)	Ordered Value/Time (extended time, if any) of Completion	Cumulative capacity installed (Considering similar type of work) (kWp)	Completion report of installed systems (scanned copy of certificate to be Submitted in non-statutory cover)	Remarks

- Continuation sheets of like size and format may be used and annexed to this format if required.

Similar type of work means Solar PV power plant each of minimum capacity 10 kWp (Solar Pump will not be Considered)

Date :

(Printed Name)..... Place :

(Designation).....

Signed and Upload

(Bidders Letterhead)
CURRICULUM VITAE OF KEY PERSONNEL

NIeT No:

Bidder's Name & Address:

To
 The Chief Engineer
 WBREDA
 Bikalpa Shakti Bhavan, J1/10, Block-EP&GP ,
 Salt Lake Electronics Complex, Kolkata-700091

S.No	Proposed Position	Name	Position Held since	Professional Qualification	Experience in relevant Field	Any other Information

Date : (Printed Name).....

Place : (Designation).....

Signed and Upload

Note:

- Continuation sheets of like size and format may be used and annexed to this Form if required.

FORMAT FOR SUBMISSION OF PRE-BID QUERIES			
NI e-T No.		DTD.	
Design and engineering, manufacture/procurement, testing, supply installation and commissioning, 5years comprehensive maintenance. Roof top grid connected rooftop Solar PV Power plants, each of array capacity 20 kWp to 30kWp with a Cumulative array capacity of 240kWp on turnkey basis..			
NAME OF THE BIDDER:	<To be filled in by the bidder>	Work name : <To be filled in by the bidder>	
PART A - TECHNICAL QUERIES			
Sl no	GCC Clause reference (if any)	BIDDER'S QUERY	WBREDA's REPLY
1			
2			
3			
4			
5			
PART B: COMMERCIAL/GCC RELATED/CONTRACTUAL QUERIES			
Sl no	GCC Clause reference (if any)	BIDDER'S QUERY	WBREDA's REPLY
1			
2			
3			
4			
5			
• Continuation sheets of like size and format may be used as per Bidders requirements and shall be annexed to this Form.			

Note: 1. To be submitted before Pre- bid meeting

2. This sheet must not the part of the offer submitted by the bidder and not to be upload

3. Pre bid query to be mailed in Excel Format at email address :

cewbredagedcl@wb.gov.in

Date :	(Signature).....
Place :	(Authorized Representative of bidder)..
	(Designation).....
	Name of the bidder:

**(Bidders
Letterhead)**

**Proposed
modifications**

(To be submitted before Pre-bid meeting)

NIeT No:

**Bidder's Name &
Address:**

To
The Chief Engineer
WBREDA
Bikalpa Shakti Bhavan, J1/10, Block-EP&GP ,
Salt Lake Electronics Complex, Kolkata-700091

We have carefully gone through the Technical Specifications and the General Conditions of Contract and we have satisfied ourselves and hereby propose certain modifications as mentioned below:

Sl.No.	Sec./Clause & Page No.	Existing Clause	Modified clause (proposed by Bidder)	Reasons for modification

Note: 1. To be submitted before Pre- bid meeting

2. This sheet must not the part of the offer submitted by the bidder and not to be upload

3.This sheet to be mailed in Excel Format at email address : cewbredagedcl@wb.gov.in

Date : (Signature).....

Place : (Authorized Representative of bidder)

(Designation).....

Name of the bidder:

Section – V-B

ANNEXURES

Sl No	Annexure Name	Annexure No
01.	'Letter of Award' of Contract for Supply of Equipment/ Materials	Annexure-1
02	'Letter of Award' of Contract for Erection of Equipment/ Materials	Annexure-2
03	Proforma of Contract Agreement	Annexure-3
04	Proforma of Bank Guarantee for Contract Performance	Annexure-4
05	Proforma for Extension of Bank Guarantee	Annexure-5
06	Proforma of Indemnity Bond	Annexure-6
07	Proforma of Additional Performance Security	Annexure-7

'Letter of Award of Contract' for Supply of Equipment/ Materials

(This form shall apply for First Contract)

Ref No:

Date:

.....

...Contractor's Name & Address.....

.....

Attn: Mr

Sub: Letter of Award of Contract for..... (Work Name)
..... as per Bid Document No.....

Dear Sir,

1. This has reference to the following :

- a. Our NIE.T.dated.....
- b. E-Tender ID.
- c. Bidding Documents for the subject comprising the following :
 - i.(List out all the Sections of the Bidding Documents along with Tender Drawings etc.)
 - ii. Errata/Amendment No..... to..... (Name of Section of the Bidding Documents to which Errata/Amendment pertains)..... issued vide no.....dated..... and uploaded (*Applicable only if any Errata/Amendment to the Bidding Documents has been issued subsequently*)
- d. Clarifications furnished on the Bidding Documents vide no..... dated and uploaded (*Applicable only if any clarification to the Bidding Documents has been issued subsequently*)
To be included as further sub-paragraphs any other correspondence made after uploading of bidding documents up to the date of bid opening
- e. Your Proposal for the subject work submitted vide Bid Id No:
- f. Our Fax message/letter No. dated..... regarding extension of validity of bid and that of the Bank Guarantee towards Bid Security. (*Applicable only if any extension has been sought subsequently*)
(To be Included as further sub-paragraphs any other correspondence made to or by the bidder after bid opening)
- g. Our Fax message/letter No. dated.....inviting you for post bid discussions.
- h. Post bid discussions and meetings we had with you from to resulting into the following
- i. Minutes of Meeting enclosed herein with this Letter of Award:
 - i. Minutes of Meeting regarding Commercial issues (APPENDIX -)
 - ii. Minutes of Meeting on Technical issues (APPENDIX -)
 - iii. Minutes of Meeting regarding Work Schedule (APPENDIX -)
 - iv. Minutes of Meeting regarding Quality Assurance Aspects (APPENDIX -)

2. We confirm having accepted your proposal submitted vide your bid id no:..... dated and its modification vide letter no..... dated (Delete if not applicable) read in conjunction with all the specifications, terms & conditions of the Bidding Documents, Your subsequent letters (Use if relevant) and agreed Minutes of Meeting referred to in para 1.0 above and award on you the Contract for the scope of work covering

.....(Indicate Scope of Work)
(hereinafter referred to as the 'First Contract').

3. We have also notified you vide our Letter of Award No..... dated..... and Letter of Award No..... dated..... for award of 'Second Contract' on you for the work of (Indicate brief scope of work of the Second Contract)for(Name of Work)as per Bid Document No..... (hereinafter referred to as the 'Second Contract'). You shall also be fully responsible for the works to be executed under the 'Second Contract' and it is expressly understood and agreed by you that any breach under the 'Second Contract' shall automatically be deemed as a breach of this 'First Contract' and vice-versa and any such breach or occurrence or default giving us a right to terminate the 'Second Contract' and/or recover damages there under, shall give us an absolute right to terminate this Contract and/or recover damages under this 'First Contract' as well and vice-versa. However, such breach or default or occurrence in the 'Second Contract' shall not automatically relieve you of any of your responsibility/obligations under this 'First Contract'. It is also expressly understood and agreed by you that the equipment/materials to be supplied by you under this 'First Contract' when installed and commissioned under the 'Second Contract' shall give satisfactory performance in accordance with the provisions of the Contract.
4. The total Contract Price for the entire scope of work under the Contract shall be(Specify the amount in INR)..... as per the following break up

i.	Ex- works price for Main Equipment/material
ii.	Transportation including Insurance charges	
iii.	Type Test Charges	
iv.	Taxes (e.g. GST etc.)	
TOTAL (i + ii + iii+ iv)		
(.....(Specify the total amount in words).....)		

5. Date of Commencement & Completion Period:
The Contract shall be executed within the specified time given commencing from the date of LoA.

Sl.No	Particulars	Completion time (months)

The time and date of completion is the essence of this contract. You are required to organize your resources and perform your work

6. You shall prepare and finalise the Contract Documents for signing of the formal Contract Agreement and shall enter into the Contract Agreement with us, as per the proforma enclosed with the Bidding Documents, on non-judicial stamp paper of appropriate value within..... (Specify)..... days from the date of this Letter of Award.
7. This Letter of Award is being issued to you in original. We request you to return its photocopy duly signed and stamped on each page including all the enclosed Appendices, by the authorised signatory of your company as a proof of your acknowledgement and confirmation.

Please take the necessary action to commence the work and confirm action.

Yours faithfully,

(Authorised Signatory)

Encl:As above.

**'Letter of Award of Contract' for Erection of Equipment/
Materials**

(This form shall apply for Second Contract)

Ref No:Date:

.....
...Contractor's Name & Address.....
.....

Attn: Mr

Sub: Letter of Award of Contract for Inland Transportation, Erection/ Installation, Testing, Commissioning and conducting Guarantee tests of..... (Name of the Work)
..... as per Bid Document No.....

Dear Sir,

1. This has reference to the following :

- a. Our NleT.dated.....
- b. E-Tender ID.
- c. Bidding Documents for the subject comprising the following :
 - i.(List out all the Sections of the Bidding Documents along with Tender Drawings etc.)
 - ii. Errata/Amendment No..... to..... (Name of Section of the Bidding Documents to which Errata/Amendment pertains)..... issued vide no.....dated..... and uploaded *(Applicable only if any Errata/Amendment to the Bidding Documents has been issued subsequently)*
- d. Clarifications furnished on the Bidding Documents vide no..... dated and uploaded *(Applicable only if any clarification to the Bidding Documents has been issued subsequently)*
To be included as further sub-paragraphs any other correspondence made after uploading of bidding documents up to the date of bid opening
- e. Your Proposal for the subject work submitted vide Bid Id No:
- f. Our Fax message/letter No. dated..... regarding extension of validity of bid and that of the Bank Guarantee towards Bid Security.
(Applicable only if any extension has been sought subsequently)
(To be Included as further sub-paragraphs any other correspondence made to or by the bidder after bid opening)
- g. Our Fax message/letter No. dated.....inviting you for post bid discussions.
- h. Post bid discussions and meetings we had with you from to resulting into the following
- i. Minutes of Meeting enclosed herein with this Letter of Award:
 - i. Minutes of Meeting regarding Commercial issues (APPENDIX -)
 - ii. Minutes of Meeting on Technical issues (APPENDIX -)

- iii. Minutes of Meeting regarding Work Schedule (APPENDIX -)
- iv. Minutes of Meeting regarding Quality Assurance Aspects (APPENDIX -)

2. We confirm having accepted your proposal submitted vide your bid id no:..... dated and its modification vide letter no..... dated (Delete if not applicable) read in conjunction with all the specifications, terms & conditions of the Bidding Documents, Your subsequent letters (Use if relevant) and agreed Minutes of Meeting referred to in para 1.0 above and award on you the Contract for the scope of work covering

.....(Indicate Scope of Work)
(hereinafter referred to as the 'Second Contract').

3. We have also notified you vide our Letter of Award No. dated..... for award of 'First Contract' on you for the work of (Indicate brief scope of work of the First Contract)for(Name of Work)as per Bid Document No..... (hereinafter referred to as the 'First Contract'). You shall also be fully responsible for the works to be executed under the 'First Contract' and it is expressly understood and agreed by you that any breach under the 'First Contract' shall automatically be deemed as a breach of this 'Second Contract' and vice-versa and any such breach or occurrence or default giving us a right to terminate the 'First Contract' and/or recover damages there under, shall give us an absolute right to terminate this Contract and/or recover damages under this 'Second Contract' as well and vice-versa. However, such breach or default or occurrence in the 'First Contract' shall not automatically relieve you of any of your responsibility/obligations under this 'Second Contract'. It is also expressly understood and agreed by you that the Equipment/ Materials to be supplied by you under 'First Contract' when installed and commissioned under the 'Second Contract' shall give satisfactory performance in accordance with the provisions of the Contract.

4. The total Contract Price for the entire scope of electrical erection work under the Contract shall be(Specify the amount in INR)..... as per the following break up

i.	Erection charges inclusive of unloading & insurance, testing & commissioning
ii.	Taxes (e.g.GST etc.)
TOTAL (i + ii)	
(..... (Specify the total amount in words).....)		

5. Date of Commencement & Completion Period:

The Contract shall be executed within the specified time given commencing from the date of LoA.

Sl.No	Particulars	Completion time
-------	-------------	-----------------

		(months)

The time and date of completion is the essence of this contract. You are required to organize your resources and perform your work

6. You shall prepare and finalise the Contract Documents for signing of the formal Contract Agreement and shall enter into the Contract Agreement with us, as per the proforma enclosed with the Bidding Documents, on non-judicial stamp paper of appropriate value within..... (Specify)..... days from the date of this Letter of Award.
7. This Letter of Award is being issued to you in duplicate. We request you to return its duplicate copy duly signed and stamped on each page including all the enclosed Appendices, by the authorised signatory of your company as a proof of your acknowledgement and confirmation.

Please take the necessary action to commence the work and confirm action.

Yours faithfully,

(Authorized Signatory)

Encl: As above.

Proforma of Contract Agreement
(To be executed on Non-Judicial Stamp Paper of Rs.100/-)

THIS CONTRACT AGREEMENT is made theday of, 20.....
BETWEEN

Articles of agreement made on this.....day of.....in the year.....between
WBREDA having its head office at Bikalpa Shakti Bhavan, J1/10, Block – EP&GP ,Sector – V ,
Salt Lake Electronics Complex, Kolkata -700091herein after referred s 'WBREDA' (which
expression shall unless excluded by or repugnant to the context be deemed to include its
successors and assigns) of the OF THE FIRST PART ,

and

..... **[Name of Contractor]**....., a company incorporated under the laws of
.....[country of Contractor]..... and having its principal place of business at
.....[address of Contractor]..... (Hereinafter called “the Contractor”) which expression
shall include its successors and permitted assigns OF THE SECOND PART.

WHEREAS the Purchaser desires to engage the Contractor to design, manufacture, test, deliver,
install, complete and commission and conduct guarantee tests of certain Works, viz.
.....[list of Works] (“the Works”) and the Contractor have agreed to such
engagement upon and subject to the terms and conditions hereinafter appearing.

NOW IT IS HEREBY AGREED as follows:

Article1. Contract Documents

1.1. Contract Documents as per Tender Document:

The following documents shall constitute the Contract between the Purchaser and the
Contractor, and each shall be read and construed as an integral part of the Contract:

- a. This Contract Agreement and the Appendices hereto
- b. Letter of Award including all documents referred to therein
- c. Special Conditions of Contract
- d. General Conditions of Contract
- e. Technical Specifications and Drawings
- f. Bid form and Price Schedules and Annexure (Section VIIA and Section
VIIB)submitted by the Contractor

1.2. Order of Precedence as per tender document

In the event of any ambiguity or conflict between the Contract Documents listed
above, the order of precedence shall be the order in which the Contract Documents
are listed in Article 1.1 (Contract Documents) above

1.3. Definitions as per tender document

Capitalized words and phrases used herein shall have thesame meanings as are
ascribed to them in the GeneralConditions of Contract.

Article2. Contract Price and Terms of Payment

2.1. Contract Price as per tender document:

The Purchaser hereby agrees to pay to the Contractor the Contract Price in consideration of the performance by the Contractor of its obligations hereunder. The Contract Price shall be [Amount of Indian Rupees in words].....,[amount in figures]....., or such other sums as may be determined in accordance with the terms and conditions of the Contract.

2.2. Terms of Payment as per tender document

The terms and procedures of payment according to which the Purchaser will reimburse the Contractor are given in Appendix 1 (Terms and Procedures of Payment) hereto.

Article3. Effective Date for determining Time for Completion

3.1. Effective Date as per tender document:

The Time of Completion of the Works shall be determined from the date of Letter of Award provided all of the following conditions have been fulfilled within a period of two (2) months from the date of said Letter of Award

- a. This Contract Agreement has been duly executed for and on behalf of the Purchaser and the Contractor;
- b. The Contractor has submitted to the Purchaser the performance security, and the advance payment guarantee;
- c. The Purchaser has paid the Contractor the initial advance payment.

Each party shall use its best efforts to fulfil the above conditions for which it is responsible as soon as practicable

- 3.2. If the conditions listed under 3.1 are not fulfilled within two (2) months from the date of Letter of Award because of reasons attributable to the Purchaser, the Contract would become effective only from the date of fulfillment of all the above mentioned conditions and, the parties shall discuss and agree on an equitable adjustment to the Contract Price and the Time for Completion and/or other relevant conditions of the Contract.

- 3.3. However, if any of the conditions listed under 3.1 above are not fulfilled within two (2) months from the date of Letter of Award because of the reasons attributable to the Contractor, the Contract will become effective from the date of Letter of Award. In this case, contract Price and/or time of completion shall not be adjusted.

- 3.4. It is expressly understood and agreed by and between the Contractor and the Purchaser that the Purchaser is entering into this Agreement solely on its own behalf and not on behalf of any other person or entity. In particular it is expressly understood and agreed that the Government is not a party to this Agreement and has no liabilities, obligations or rights hereunder. It is expressly understood and agreed

that the Purchaser is an Independent legal entity with power and authority to enter into contracts solely on its own behalf under the applicable laws of India and the general principles of Contract Law. The Contractor expressly agrees, acknowledges and understands that the Purchaser is not an Agent, Representative or Delegate of the Government. It is further understood and agreed that the Government of West Bengal is not and shall not be liable for any acts, omissions, commissions, breaches or other wrongs arising out of the Contract. Accordingly, the Contractor expressly waives, releases and foregoes any and all actions or claims, including cross claims, impleader claims or counter claims against the Government arising out of this Contract and covenants not to sue the Government as to any manner, claim, cause of action or thing whatsoever arising of or under this Agreement.

3.5. Appendices:

The Appendices listed in the attached list of Appendices shall be deemed to form an integral part of this Contract Agreement. Reference in the Contract to any Appendix shall mean the Appendices attached hereto, and the Contract shall be read and construed accordingly.

IN WITNESS WHEREOF the Purchaser and the Contractor have caused this Agreement to be duly executed by their duly authorized representatives the day and year first above written.

Signed by for and on behalf of the Purchaser

.....
[Signature]

.....
[Title]

In the presence of

..... (Signature, Name and Title)

Signed by for and on behalf of the Contractor

.....
[Signature]

.....
[Title]

In the presence of

..... (Signature, Name and Title)

Appendices:

1. Terms and Procedures of Payment
2. Price Variation
3. Insurance Requirements
4. Time Schedule
5. Scope of Works by the Purchaser

PROFORMA OF BANK GUARANTEE FOR CONTRACT PERFORMANCE

(To be executed in non-judicial stamp paper of Rs. 100/-)

Ref.....
Bank Guarantee No......
 Date:.....
 To

.....
 West Bengal

Dear Sirs,

In consideration of WBREDA, (herein after referred to as the "Owner" which expression shall unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having awarded to M/s.....with registered/Head office at.....(hereinafter referred to as "Contractor" which expression shall unless repugnant to the context or meaning thereof include its successors, administrators, executors and assigns), a Contract issued by Owner's Letter of Award No.....dated.....for... (scope of work) and the same having been acknowledged by the Contractor, resulting in a Contract bearing No.....dated.....Contractor having agreed to provide a Contract Performance Guarantee for the faithful performance of the entire Contract equivalent to Rs..... (.....in words.....) being (10%) (ten percent) of the said value of the Contract to the Owner.

We.....
 (Name & Address) having its Head Office at.....(hereinafter referred to as the "Bank", which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the Owner, on demand any or all monies payable by the Contractor to the extent of Rs..... (.....in words.....) as aforesaid at any time up to.....* (day/month/year) without any demur, reservation, contest, recourse or protest and/or without any reference to this Contractor.

Any such demand made by the Owner on the bank shall be conclusive and binding notwithstanding any difference between the Owner and the Contractor or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. The Bank undertakes not to revoke this guarantee during its currency without previous consent of the Owner and further agrees that the guarantee herein contained shall continue to be enforceable till the Owner discharges this guarantee.

The Owner shall have the fullest liberty without affecting in any way the liability of the Bank

under the guarantee from time to time to extend the time for performance or the Contract by the Contractor. The Owner shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in the mor of any right which they might have against the Contractor and to exercise the same at any time in any manner and either to enforce or to forbear to enforce any covenants, contained or implied in the Contract between the Owner and the Contractor or any other course or remedy or security available to the Owner. The Bank shall not be relieved of its obligations under these presents by any exercise by the Owner of its liberty with reference to the matters aforesaid or any of the mor by reason of any other act of omission or commission on the par t of the Owner or any other indulgences shown by the Owner or by any other matter or thing whatsoever which under law would, but for this provision have the effect of relieving the Bank.

The bank also agrees that the Owner at its option shall be entitled to enforce this guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee the Owner may have in relation to the Contractor's liabilities.

Notwithstanding anything contained hereinabove our liability under this guarantee is restricted to Rs. (.....in words.....) and it shall remain in force upto and including**(day/month/year) and shall be extended from time to time for such period as may be desired M/s.....on whose behalf this guarantee has been given.

Unless a demand or claim is lodged on us within and including.....*(day/month/year) we shall be discharged from all liabilities thereafter.

Dated this..... day of20.....at.....

WITNESS

.....
(Signature)

.....
(Signature)

.....
(Name)

.....
(Name)

.....
(Official Address)

.....
(Official Address)

Attorney as per Power Of Attorney No.....
Date.....

* Till3(three)months after the validity of the Bank Guarantee.

**Upto3(three)months after the expiry of warranty/guarantee period.

Notes:

1. The stamp paper of appropriate value shall be purchased in the name of issuing bank.
2. The sum shall be as per terms of the contract
3. The performance Bank Guarantee/Contract Performance Bank Guarantee shall be valid as per terms of contract. A period of three(3) months should be added as claimed period from the last date of validity of the Bank Guarantee.

PROFORMA FOR EXTENSION OF BANK GUARANTEE

Ref.....

Date.....

To

.....

.....

.....

West Bengal

Sub: Extension of Bank Guarantee No.....for Rs.....
favoring yourselves, expiring on.....on account of
M/s.....in respect of Contract
No.....dated.....(hereinafter called original Bank
Guarantee).

Dear Sirs,

At the request of M/s.....,We.....Bank, branch office
at.....and having its Head Office at.....do hereby
extend our liability under the above mentioned Bank Guarantee
No.....dated..... for a further period
of.....(Years/Months)from..... to expire on.....Expect as
provided above, all other terms and conditions of the original bank guarantee
No.....dated.....shall remain unaltered and binding.

Please treat this as an integral part of the original bank guarantee to which it would be
attached. Yours faithfully,

For

Manager/Agent/Accountant.....Power of Attorney

No..... Dated.....

SEAL OF BANK

NOTE: The non-judicial stamp paper of appropriate value shall be purchased in the
name of the bank who has issued the Bank Guarantee.

PROFORMA OF INDEMNITY BOND

(To be executed on Non-Judicial Stamp Paper of Rs.100/-)

BY THE PRESENT INDEMNITY BOARD EXECUTED by me/us on this.....Day of.....20....., I/We having Registered Office / residing at.....(herein after called "OBLIGOR/ OBLIGORS" which expression shall mean and includes my/our successors legal representatives, assigns) do hereby binds myself/ourselves and also our company/firm..... after having the power to bind so with the promise and undertaking in favour of the WBREDA having head office at Bikalpa Shakti Bhavan, J1/10, Block – EP&GP ,Sector – V , Salt Lake Electronics Complex, Kolkata - 700091(hereinafter called as OBLIGEE, which expression shall mean and include it's legal representative, administrators assigns.

Whereas OBLIGOR/OBLIGORS has/have been awarded to execute the job/works under letter no.....dated.....issued by the OBLIGEE after having observing necessary formalities, the details of which is described in the schedule given hereunder as per letter mentioned herein-above and where as the said job/works will be/likely to be done in places covered under Employees' State Insurance Act(ESI)and/or the Employee Compensation Act, 1923(W.C. Act) and/or other laws relating to the Labour Management and Welfare.

And whereas according to the condition of the contract the OBLIGOR/OBLIGORS is/are under obligation to execute this Indemnity Bond before the commencement of actual execution and OBLIGOR/OBLIGORS is/are aware that unless this Indemnity Bond is executed in accordance with the condition of contract before the actual execution in accordance with law the OBLIGEE shall have the power to deem that actual work has been stated within the meaning of the contract before the execution of this Indemnity Bond.

Now this indenture witnesses that I/we the OBLIGOR/OBLIGORS do hereby undertake:

1. THAT the OBLIGEE shall not be held responsible for any type of accident which may take place during the course of work under taken by the OBLIGOR/OBLIGORS.
2. THAT the OBLIGOR/OBLIGORS will take/adopt all safety norms in respect of each and every workmen labour personnel according to the rules or to the satisfaction of the OBLIGEE INALLCASES.
3. That the OBLIGOR/OBLIGORS undertakes/undertake to engage only those labour worker or any other personnel whether skilled or unskilled or any other person whether in technical management or non-managerial or any other capacity in the area covered under Employee' State Insurance Act,1948 who has/have insurance coverage within the meaning of Employees' State Insurance Act and further undertakes NOT to engage any person in the area covered under Employees State Insurance Act., who does/do not has/have insurance coverage within the meaning of Employees' State Insurance Act,1948.
4. That the OBLIGOR/OBLIGORS further undertakes/undertake to engage only those labour, worker, or any other personnel, whether skilled or unskilled, whether in technical, managerial or non-managerial or any other capacity in the area NOT covered under

Employees' State Insurance Act 1948, who has life insurance for the sum assured equivalent to the amount of Compensation under the Employees Compensation Act in case of accidental death or inquiry and such insurance has been effected by the OBLIGOR/OBLIGORS.

5. THAT the OBLIGOR/OBLIGORS undertakes/undertake to indemnify and keep harmless the OBLIGEE from all claims, action, proceedings and of risk, damage, danger to any person whether belonging to/or not belonging to OBLIGOR/OBLIGORS.
6. THAT the OBLIGOR/OBLIGORS shall keep harmless the OBLIGEE from all claims, compensation, damages, any proceedings in respect of any of its employee/workmen under the Employee Compensation Act or any other laws for the time being in force.
7. THAT, if during the course of execution of work as stated in the letter mentioned herein above issued by the OBLIGEE, it is found that the OBLIGOR/OBLIGORS has/have not complied with guidelines/formalities within the meaning of Employees' State Insurance Act or Employee Compensation Act or any other laws relating to the Labour Welfare for the time being in force, and also has not observed the safety norms in accordance with the law to the satisfaction of the OBLIGEE, the OBLIGEE shall have the right to stop the execution of work/job and the period of such stoppage shall continue till adequate safety and other compliance mentioned hereinabove under the labour welfare legislation have been observed and such period of stoppage shall not be taken into account for the calculation of the total period of completion of work for which the OBLIGOR/OBLIGORS is responsible to complete the work/job and it will be deemed that discontinuance was due to default of OBLIGOR/OBLIGORS.
8. THAT, if at any time, due to exigency, the OBLIGEE i.e. the WBREDA (WBREDA) as the Principal Employer, becomes liable to pay any such compensation mentioned hereinabove, whether on failure of the OBLIGOR/OBLIGORS or for any other reason, the OBLIGEE shall have the right to recover the said amount from any amount receivable by OBLIGOR/OBLIGORS or any bank guarantee deposited or anything payable whether in connection with this contract or other contract by the OBLIGEE to the OBLIGOR/OBLIGORS.
9. THAT the OBLIGOR/OBLIGATOR is/are aware and accept that for the persistent or repeated violation of any condition mentioned in this Indemnity Bond, the OBLIGEE shall have right to terminate the contract of work issued by the OBLIGEE to OBLIGOR/OBLIGATOR.

SIGNED AND DELIVERED

BY THE OBLIGOR/OBLIGORS

Signature

WITNESS:

1) Name & Designation

Signature

1) Name & Designation

Signature

PROFORMA OF BANK GUARANTEE FOR ADDITIONAL PERFORMANCE SECURITY

(To be stamped in accordance with Stamp Act)

Bank Guarantee No......

Date:.....

To
The Chief Engineer
WBREDA
Bikalpa Shakti Bhavan,
J-1/10, EP & GP, Block,
Saltlake, Sector-V, Kolkata – 700 091

Dear Sirs,

In consideration of WBREDA, (herein after referred to as the “WBREDA” which expression shall unless repugnant to the context or meaning there of include its successors, administrators and assigns) is going to award an order for (name of the work) against NIT No..... dated.....towith registered/Head office at....., (hereinafter referred to as “Contractor” which expression shall unless repugnant to the context or meaning thereof include its successors, administrators, executors and assigns), and the Contractor having agreed to provide an Additional Performance Security @10% of the tendered value in terms of the provisions of the said NIT for faithful and due fulfillment of all obligations as laid down in Tender documents equivalent to Rs. (Rupees) (Value of BG) of the WBREDA.

We..... (Name & Address) having its Head Office at.....(hereinafter referred to as the “Bank”, which expression shall, unless repugnant to the context or meaning thereof, include its successors, administrators, executors and assigns) do hereby guarantee and undertake to pay the WBREDA, on demand any or all monies payable by the Contractor to the extent of Rs.....(.....in words.....)as a foresaid at any time up to.....* (day/month/year) without any demur, reservation, contest, recourse or protest and/or without any reference to this Contractor. Any such demand made by the WBREDA on the bank shall be conclusive and binding not withstanding any difference between the WBREDA and the Contractor or any dispute pending before any Court, Tribunal, Arbitrator or any other authority. The Bank undertakes not to revoke this guarantee during its currency without previous consent of the WBREDA and further agrees that the guarantee herein contained shall continue to be enforceable within claim period of[ninety(90)]..... after the validity of this guarantee.

The WBREDA shall have the fullest liberty without affecting in any way the liability of the Bank under the guarantee from time to time to extend the time for performance or the Contract by the Contractor. The WBREDA shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they might have against the Contractor and to exercise the same at any time in any manner and either to enforce or to forbear to enforce any covenants, contained or implied in the

Contract between the WBREDA and the Contractor or any other course or remedy or security available to the WBREDA. The Bank shall not be relieved of its obligations under these presents by any exercise by the WBREDA of its liberty with reference to the matters aforesaid or any of them or by reason of any other act of omission or

commission on the part of the WBREDA or any other indulgences shown by the WBREDA or by any other matter or thing whatsoever which under law would, but for this provision have the effect of relieving the Bank.

The Bank also agrees that the WBREDA at its option shall be entitled to enforce this guarantee against the Bank as a principal debtor, in the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee the WBREDA may have in relation to the Contractor's liabilities.

Notwithstanding anything contained hereinabove our liability under this guarantee is restricted to Rs..... (.....in words.....) and it shall remain in force up to and including*(day/month/year) and shall be extended from time to time for such period as may be desired on whose behalf this guarantee has been given.

All right of WBREDA under this guarantee shall be forfeited and the Bank shall be relived and discharged from all liabilities there under unless a demand or claim is lodged by WBREDA under this guarantee against the Bank within[ninety(90)]..... days from the above mentioned date or from the extended date.

Dated this..... day of20.....at.....

WITNESS

.....
(Signature)

.....
(Signature)

.....
(Name)

.....
(Name)

.....
(Official Address)

.....
(Official Address)

Attorney as per Power Of Attorney No..... Date.....

Note:

1. The stamp paper of appropriate value shall be purchased in the name of guarantee issuing bank or the party on whose behalf t5he Bank Guarantee is being issued. The bank Guarantee (BG) shall be issued on a stamp paper of value as applicable in the State of India from where BG has been issued or the State of India from where the BG shall be operated, whichever is higher.

Section – VI

Technical Specification

1.0 Outline of the scheme of the project :

- 1.1 The PV array will be installed at the available space earmarked at project site.
- 1.2 The power from PV array will be feed into grid through a grid tied string inverter shall be of 3Ø 415 V 50Hz AC.
- 1.3 Outputs of the grid-tied string inverter will be terminated to an **Inverter LT Panel** to be located close to the inverter.
- 1.4 The output of the **Inverter LT Panel** will be terminated and connected with supply mains through a **Grid interfacing LT Panel**.
- 1.5 An Energy Meter to be installed at any suitable location at the output of Inverter LT panel and before connected to the mains to measure the energy produce from the PV Power Plant
- 1.6 The Grid –tied string Inverter, Inverter LT Panel, AJB , Energy Meter will be installed in suitable kiosk with proper security and protection with arrangement of proper shed (if required).
- 1.7 The SPV power plant to be installed should be Robust, Economic, Efficient and Time tested and having a good aesthetic view matched with the Building.
- 1.8 Site wise as built diagram including shadow analysis report to be submitted.

2.0 Solar PV Modules:

The Cell of the Modules will be crystalline silicon. The capacity will be consider as per declared capacity in the published technical brochures of the proposed PV Module Manufacturer.

Minimum capacity of each **PV Module to be used is 72 cells - 330 Wp** (without any negative tolerance).

The PV modules must qualify the relevant **IEC 61215 or IS 14286 and IEC 61730**. The proposed PV Module must have the Test Certificate issued from accredited test laboratories of MNRE Government of India under NSM Program. The test certificates issued from IEC accredited laboratories will also be acceptable.

Each PV module used in this solar power project must use an RF identification tag. The information must be mentioned in the RFID used on each module as per guideline of MNRE Government of India (This can be inside or outside the laminate, but must be able to withstand harsh environmental condition)

In case of any damage for MMS and / or Module will take place by cyclone or storm, the contractor has to assess the damage within 07 days of such incidence. The contractor has to do necessary repair works within three weeks of such occurrence at its own cost.

Warranty:

- A. Material Warranty:** The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a period not less than ten (10) years from the date of dispatch instruction by WBREDA or dispatch from the manufacturers factory, which-ever is later :
- i. Defects and/or failures due to manufacturing

- ii. Defects and/or failures due to quality of materials
- iii. Non conformity to specifications due to faulty manufacturing and/or inspection processes.

If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the Owner's sole option. The contractor (till defect liability period) shall be responsible to contact with the contractor if any of the above mentioned cases occurred.

B. Performance Warranty: The manufacturer should warrant the output of Solar Module(s) for at least 90% of its rated power output at the end of initial 10 years and 80% of its rated power at the end of the next 15 years from the date of dispatch instruction by WBREDA or dispatch from the manufacturers factory, which-ever is later. The contractor shall collect the Warranty Certificate for performance of the modules from the manufacturer and submit the same to WBREDA prior to delivery of the products to the respective sites.

Manufacturer of proposed PV modules must have the ISO 9001:2008 or ISO 14001 or latest available. Certification for their manufacturing unit should be for their said manufacturing item.

Note: Only indigenously manufactured PV modules should be used in Grid Connected Rooftop Solar PV Power Plants under this scheme. However, other imported components can be used, subject to adequate disclosure and compliance to specified quality norms and standards.

The contractor should submit the warrantee certificate issued by the original PV Module manufacturer to WBREDA after delivery of every lot. The warrantee shall include but not limited to the following:

- i) Capacity and model of the PV module,
- ii) PV Module serial no.
- iii) Warrantee period & Nature of warranty in details
- iv) Order reference of WBREDA
- v) Order description of WBREDA

The warranty certificate as issued by the PV Module manufacturer, must comply the terms of the tender warranty period and other terms of the tender.

Desired specification of the PV Module will include but not limited to the following:

Sl No	Item	Description
1.0	Certification	i) IS 14286:2010/IS 16077:2013/IEC 61215 ii) IS/IEC 61730(1,2):2004
1.1	Type Test certificate issuing authority.	NABL/ IEC Accredited Testing Laboratories or MNRE accredited test centers.
2.0	PV Cell	
2.1	Type	Crystalline Silicon
3.0	PV Module	
3.1	Rating at STC	Minimum capacity of each PV Module to be used is 72 cells - 330 Wp (without any negative tolerance).
3.4	Withstanding voltage	1000V/1500 DC

3.5	Glass	
3.6	Bypass Diode	
3.6.2	Number	3 numbers (minimum)
3.7	Module Frame	
3.7.1	Type	Anodized aluminum frame 35 mm & above.
3.8	Module Junction Box	
3.8.1	Enclosure	IP 67 (min)
3.8.2	MC4 Connector	To be provided
3.8.3	Cable	Solar cable

3.0 PV Array:

Desired specification of the PV Array will include but not limited to the following:

Sl No	Item	Description
1.0	PV Module interconnection	MC-4 / Tyco connector.
2.0	PV Module interconnection cable and array cable	PV 1-F standard /EN 50618
3.0	PV array String Voltage	Compatible with the MPPT Channel of the inverter

4.0 PV Module Mounting Structure:

During Structural design following points must be include but not limited to the following:

- (i) Hot dip galvanized MS mounting structure with minimum 5 mm thickness should be used for mounting modules / panels / arrays etc. Each structure should have the angel of inclination as per the site condition to obtain optimal insolation. However to accommodate more capacity, the angel of inclination may be reduced / adjusted until the plant meets the specified optimal performance ratio (as decided by MNRE / SECI etc) requirements. The decision of the Controlling Officer will be final in this regard. Weight of MMS should be maintained according to BOQ and approved design.
- (ii) The MS member must be of I.S standard reputed manufacturer and the standard ISI engrave should be visible on the mild steel section member. No hollow pipe or box or cold rolled M.S Sectional structure shall be considered.
- (iii) The array structure shall be designed to allow easy replacement of any module. The array structure is to be so designed that it would occupy minimum space without sacrificing the output of the PV Plant. The design factor of safety should be 1.5 or optimum. The decision of the controlling officer will be final in this regard.
- (iv) While designing, sufficient care is to be taken about the load bearing capacity of the roof and for designing the suitable structure based on the quality of the roof.
- (v) The Module Mounting structure must be made of MS as per latest IS : 2062 and galvanization of the mounting structure shall be in compliance of latest IS : 4759.
- (vi) The structural condition of the roof / type of roof / type of roof treatment (if any) should be precisely assessed by the contractor before execution of work and incase of any decision regarding availability of suitable shadow free and structural sound roof space, the matter is to be taken up with WBREDA in writing. The decision of the Controlling Officer will be final in this regard.
- (vii) The contractor shall have to submit the drawing of PV Module mounting structure

supported by Stadd- pro design (soft copy & hard copy of the Staad profile to be submitted) , wind loading calculation sheet ; duly certified by a Structural Engineer to WBREDA after placement of LOA for necessary approval. The decision of the Controlling Officer will be final in this regard

- (viii) For special type of roof, where above cited prevailing process is not suitable or any type of constraints observed (with appropriate documentation of the authority/ user organization), the contractor have to design & supply special type of structure supported by Stadd- pro design ,wind loading calculation sheet ; duly certified by a Structural Engineer. The decision of the Controlling Officer will be final in this regard.
- (ix) The PV Array should be capable of withstanding a **minimum wind load of 180 km/hr after installation**. Standard design considerations i.r.o relevant wind zone may be applied, in line of given parameters/ information / instructions/standards, codes etc., as mentioned here in this tender document. Suitable fastening arrangement, such as grouting and clamping should be provided to ensure & secure the installation against the specific wind speed for the respective wind zone of the location where the PV Power plant to be proposed to be installed. The decision of the Controlling Officer will be final in this regard.
- (x) All structures including any ancillary metallic parts thereof must be protected against any corrosion. The structures must also be compatible with the materials used in the module frame, fasteners, fixtures, nuts, bolts etc. or any similar nature of metallic components whichever are required to complete the job, in all respect.
- (xi) All Nuts & Bolts, fasteners, jointing materials of PV Module mounting Structure, PV Module fixing nuts and bolts with the PV Module Mounting structure. fasteners, fixtures for supporting conduits etc shall be made with Stainless Steel (S S) .Tie must be of Stainless Steel for outdoor installations and for indoor/inside equipments/inside enclosure have to be of UV Protected PVC.
- (xii) Safety of the roof structure should be properly maintained all through the work. If any damages of the building roof structure occurred due to installation by the contractor, necessary rectification is to be made by the contractor immediately at his own risk & cost and mending good all damages & provided its original and good condition.
- (xiii) Suitable hole has to be designed and made on the leg member for fitting & fixing of Earthing Strip using nut & bolts.
- (xiv) Slope should be provided on the stool column base foundation of the structure for slanting of water. Plain Concrete Casting (250X250X250 mm) may be provided. The Stool column footing base of the structure should be painted by good quality (in relevant IS compliance) water proofing bituminous paint.
- xv) G.I. structural works for “Module mounting” in columns/posts, rafters, purlins, bracings (front &/or back), tie rods etc. with simple rolled structural members (e.g. joists, angle, channel, round bar sections conforming to latest IS: 2062, IS: 808 & SP (6)-1964 connected to one another with brackets, gussets, angle cleats etc. as per drawing, design & direction of Engineer-in-charge complete including cutting to requisite shape and length, fabrication with necessary bolting (without any type of welding), haulage, hoisting, fitting, fixing and erection at all level of works and complete in all respect and mending good all damages as per direction of E.I.C. The Module mounting structures should be robustly designed & fixed-up/mounted on the top surface of the existing roofs (any types of roofs) with anchor fastener (or any other suitable devices, after

taking prior approval from E.I.C). Except nuts, bolts & washers etc., all the members should be hot dip galvanized with a minimum thickness of 85 micron conforming to latest IS:2926, IS:4826. All nuts, bolts & washers should be made by stainless steel (S.S.-316). The rate includes the cost of rolled steel section, consumables such as fitting & fixing materials, anchor fasteners/any other suitable devices, proper hot dip galvanization, hire charge of all tools and plants and labours required for the work including all incidental charges such as electricity charges, labour insurance charges etc. [Payment to be made on the basis of calculated weight of structural members (bare) only in finished work as per IS specified weight. Payment for gussets, brackets, angle cleats, base plates, anchor fasteners/any other suitable devices, appropriate washers, bolts and nuts etc. may be made by adding the 7% of weight for finished bare structural members weighing not less than 22.5 Kg. / m. or 15 % of weight for finished bare structural members weighing less than 22.5 Kg. / m. may be increased allow for brackets, angle cleats, base plates, bolts and nuts washers, anchor fasteners/any other suitable devices etc. and no separate payment being made for these items, as per direction of Engineer In Charge. The rates are considered for any height of erection from the ground.]

- xvi) Lower edge of the module and surface roof clearance should be minimum 300 mm.
- (xvii) In case of any damage for MMS and / or PV Module will take place by cyclone or storm, the contractor has to assess the damage within 07 days of such incidence. The contractor has to do necessary repair works within three weeks of such occurrence at its own cost.
- (xviii) Making stool column base. Plain Concrete Casting (250X250X250 mm) may be provided. for aesthetic views only with cement, sand & stone chips surrounding the vertical columns/posts of Module Mounting Structures including necessary surface preparation of existing roofs, ordinary shuttering, plastering, top surface of the Concrete base should be slanting nature and finishing with colour wash for all level of works complete in all respect as per drawing, design & direction of E.I.C.

5.0 PV Array Junction Box (AJB):

PV Array Junction Box (AJB) will have to be used for termination of string prior connecting array with inverter. There will be two Arrays Junction Box in case, the inverter is located elsewhere away from PV Array. Minimum one (01) number of PV Array Junction Box will be provided with each Power Plant. The desired specification of the PV Array Junction Box and accessories will include but not limited to the following:

Sl No	Item Description	Desired Data
1.0	Enclosure	
1.1	Degree of Protection	IP65 with UV Protected
1.2	Material	Polycarbonate.
1.3	Withstanding voltage	1000V DC
1.5	Accessories mounting arrangement	DIN Rail or as suitable
1.6	Front cover	Transparent
1.7	Number of Strings entry	As may be required
2.0	Cable Entry and Exit	
2.1	Position	Bottom at cable entry and exit
2.2	Cable Entry and Exit connector type	MC 4 / Tyco Connector (as per suitability of PV Array String cable)
2.3	Cable gland	Earthing cable entry
3.0	Surge Protecting Device (SPD)	
3.1	Type	DC
3.2	Protection class	Type 2
3.3	Rating (8/20)	20 kA
3.4	Number of set	As may be required as per string Design (minimum 1 set against each MPPT Chanel)
4.0	Fuse with fuse holder	
4.1	Position	Positive and negative terminal for each series string
4.2	Type	Glass fuse, for PV Use only
4.3	Rating	Current: Minimum 1.25 times the rated short circuit current of the series string
5.0	Earthing Provision	Terminal blocks will have to be provided for Earthing,
6.0	Terminals, lugs and bus bar	Tinned copper

6.0 Grid –Tied Inverter: (for capacity 10KVA/15KVA/20KVA)

The power from PV array is to be feed into grid through grid-tied string inverter shall be of, 3Ø- 415 V 50Hz AC.

Performance Certificate Demonstration Will Be Guided As Per Clause S.C.C.19. Desired specification of string inverter will include but not limited to the following:

Sl. No.	Operating Parameter	Desired specification
1.0	Type	Grid - tied String Inverter

2.0	Usage	Specially used for PV system
3.0	Standards	
3.1	Efficiency Measurement	IEC 61683/ Equivalent BIS Std.
3.2	Environmental testing	IEC 60068-2 (1,2,14,30) / Equivalent BIS Std.
3.3	Interfacing with utility grid	IEC 61727 or Equivalent
3.4	Islanding Prevention Measurement	IEC 62116 or Equivalent
3.5	Type Test certificate issuing authority (for item no 3.1 , 3.2)	NABL/ IEC Accredited Testing Laboratories or MNRE approved test centers.
4.0	Input (DC)	
4.1	Aggregated PV array connectivity capacity	Equal or more than the rated AC output at unity p.f.
4.2	MPPT Voltage range	Compatible with the array voltage
4.3	Total number of MPPT Power Plant	Minimum : 2 (two)
5.0	Output (AC)	
5.1	AC capacity	The rated capacity of the inverter shall be the AC output of the inverter at unity power factor
5.2	AC Grid Connection	3 Ø 400 V + N 50Hz ,
5.3	Adjustable AC voltage range	As per prevailing grid code.
5.4	Frequency range	As per prevailing grid code
6.0	General Electrical data	
6.1	Efficiency	Minimum 96 %.
7.0	Protection	
7.1	DC Side	1. Reverse-polarity protection 2. over voltage protection
7.2	AC side	1. Over voltage and Under voltage protection 2. Over and under grid frequency protection, 3. Anti-Islanding protection
7.3	Isolation Switch	PV array Isolation switch (DC). If DC isolating Switch is not provided in the inverter it will be provided by the contractor separately nearer to the inverter.
7.4	Ground fault detection device (RCD) which can detect changes in ground current. Rating will be as suitable for inverter	To be provided for transformer-less inverter.
8.0	Interface (Communication protocol)	Suitable port must be provided in the inverter for i) Instant On site dumping facility for onsite data dumping, ii) Compatible to Web based remote monitoring system
9.0	Web monitoring	To be inbuilt or add on /external
10.0	Mechanical Data	
11.1	Protection Class	IP 65 (min)

11.3	Cooling	Natural / forced cooling
11.4	Type of Fixing	Wall / angel / channel

The contractor should submit the warrantee certificate issued by the original inverter manufacturer to WBREDA after delivery of every lot. The warrantee shall include but not limited to the following:

- i) Capacity and model of the inverter,
- ii) Inverter serial no.
- iii) Warrantee period
- iv) Order reference of WBREDA
- v) Order description of WBREDA
- vi) Name of WBREDA (principal purchaser)
- vii) Name of the contractor

- a).The warranty certificate as issued by the Inverter manufacturer, must comply the terms of the tender warranty period and other terms of the tender.
- b).Technical approval shall be given only for 10KVA/15KVA/20KVA

7.0 Web enable on line data logger and Remote Monitoring Unit :

- (i) Web enable data logging system may be an integrated part of the inverter or a separate unit.
- (ii) The data Logger should have the provision of recording electrical parameters on DC and AC side to study performance of system as well as to study status of the system at a particular instant. The data logger should have required transducer to monitor and record the required system data.
- (iii) Web based Remote Monitoring system must be compatible with data logger.
- (iv) The data logger shall have reliable data storage capacity (for a minimum period of six months) to record and store the minimum desired data mentioned herein under with maximum 20 minutes intervals and there must be provision of offline retrieval of the same at site as and when required.
- (v) The other required accessories, hardware and compatible software will have to be provided as an integrated part of the system to monitor the real time data (maximum 20 minutes delay) through web server. The Data logger will continuously send data to the server.
- (vi) The desired data which will be recorded in the Data logger are as follows:
Power generated, Cumulative Energy generated, AC & DC Parameters.
- (vii) The contractor shall provide the necessary accessories to extract data from the data logger with the system for each site.
- (viii) The system can be monitored from anywhere through internet without installing any specific application software. The server will not be provided by the Purchaser.
- (ix) **The rental charges and other charges of the IP address, data storage space in the host server and free access of the Data through Web for a period of five (5) years from the date of commissioning will be within the cost of contract value.**
- (x) The contractor will arrange Internet connection/ facility at the project site for data transfer by supplying and installing a dongle& a SIM card or by other means **for a period of five (5) years from the date of commissioning and the cost incurred will be within the cost of contract value.**

In case of modem based internet facility, the contractor will supply and install data cable connection with required switch or router having sufficient number of port from the Web-enabled Data Logger up to the internet facility at the project site for data transfer.

In case the data cable to be laid at outdoor for a significant distance, SPD (surge suppressing device) suitable for communication network, as much number at suitable location are required must be provided with the system.

- (xi) The Web based monitoring system should have the provision of graphical representation of the data will include but not limited to the following:

Sl. No.	Operating Parameter	Desired specification
1.0	Input data	Volt, Current, PV Power PV Energy
2.0	Output data	
2.1	Inverter	Volt, Current, Export energy

All data will be recorded chronologically date wise. The data file should be MS Excel/XML/or any readable form compatible and should have the facility of easy downloads.

In case of non-availability of data or non-functioning of the Web Based Monitoring System, the contractor has to restore the system within 07 days from the date of such occurrence at its own cost. The Data logger should be either in built or add on /external with enclosure, if applicable of IP 65, appropriately compatible of the given inverter. For any malfunctioning / not proper functioning of the Inverter and / or data logger, the bidder will be solely responsible. No maintenance payment will be released in case of absence of appropriate functioning of the web based monitoring system. The decision of the controlling officer will be final in this regard.

The inverter ,data logger along with RMS shall be of same manufacturer

8.0 Inverter LT Panel:

The output of the string Inverter will be terminated in a Panel styled as **Inverter LT Panel** through 415 V 4 pole MCB at the output of the string inverter. The set of AC surge suppressor (SPD) of type will be connected at the outgoing side.

Desired specification of **Inverter LT Panel** will include but not limited to the following:

SI No	Parameter	Desired Specification
1.0	MCB/MCCB	
1.1	Use of MCB/MCCB C-Characteristics	Up to 63A, MCB Rated Short Circuit Breaking Capacity 10 kA (Minimum) Above 63A, , MCCB Rated Short Circuit Breaking Capacity 16 kA (Minimum)
1.2	Standards	MCB : IEC -60898/ IS: 8828 MCCB : IEC – 60947 /IS : 13947
1.3	Number	01(one) number
1.4	Type	4 pole
1.5	Rating	1.2 times of the rated current capacity of the inverter.
2.0	Surge protection device (SPD)	
2.1	Usage as declare by Manufacturer	For AC use only
2.2	Protection class	Type II
2.3	Number of set	01 Set
2.4	Rating	600 V, 20 kA (minimum)
3.0	Indicator	R,Y,B
4.0	Earthing Provision	Terminal Blocks will have to be provided for Earthing
5.0	Enclosure	
5.1	Degree of Protection	IP 42/43
5.2	Material	Polycarbonate (If Inverter LT Panel is a separate Unit and not Inbuilt in Inverter) or Double doored Sheet Steel made with minimum 16 SWG.
5.3	Withstanding voltage	1000V DC
5.4	Number of Strings entry	As may be required
5.5	Number of entry and exit	As may be required

9.0. Inverter Combiner Panel:

If the numbers of inverters are more than one, Inverter Combiner LT Panel has to be provided instead of Inverter LT Panel. In such case, all the desired components of Inverter LT Panels shall be provided in the Inverter Combiner LT Panel. In addition Inverter Combiner LT Panel shall have a outgoing switch – MCB/MCCB. If the Inverter LT Panel be an integral part of Inverters or the desired components may partially inbuilt in the inverter in such case remaining components shall be put into the Inverter Combiner LT Panel. The Inverter Combiner LT Panel shall be installed close to the inverters. A suitable rated MCB/MCCB has to be connected at the output of the inverter combiner LT Panel.

Sl No	Parameter	Desired Specification
1.0	Incoming	
1.1	Use of MCB/MCCB	Up to 63A –MCB fault Current 10 kA Above 63 A- MCCB Fault Current 16 kA
1.2	Standards	MCB : IEC -60898/ IS: 8828 MCCB : IEC – 60947 /IS : 13947
1.3	Number	01(one) number for each Inverter
1.4	Type	4 pole
1.5	Rating	1.2 times of the rated current capacity of the Inverter.
2.0	Surge protection	
2.1	Usage as declare by	For AC use only
2.2	Protection class	Type II
2.3	Number of set	01 Set
2.4	Rating	600 V, 20 kA (minimum)
3.0	Indicator	R,Y,B with Fuse
4.0	Earthing	Terminal Blocks will have to be provided for Earthing
5.0	Outgoing	
5.1	Use of MCB/MCCB	Up to 63A –MCB fault Current 10 kA Above 63 A- MCCB Fault Current 16 kA
5.2	Standards	MCB : IEC -60898/ IS: 8828 MCCB : IEC – 60947 /IS : 13947
5.3	Number	01(one)
5.4	Type	4 pole
5.5	Rating	1.2 times of the rated current capacity of the Inverter.
6.0	Enclosure	
6.1	Type	Metallic, double door, indoor Type , 16SWG MS sheet
6.2	Housing	Wall Mounted
6.3	Enclosed	Double Door Metal Enclosure dust and vermin proof
6.4	Glands Position	At cable entry and exit

10.0. Grid interfacing LT Panel (GILP):

Output of the Inverter LT Panel / Inverter LT Combiner Panel shall be terminated at GILP. The Grid Interfacing LT Panel shall be indoor type having double door metal enclosure dust and vermin proof (nearer to the Point of Common Coupling).

Desired specification of each Grid interfacing LT Panel shall include but not limited to the following:

SI No	Parameter	Desired Specification
1.0	MCCB/MCB	
1.1	Use of MCB/MCCB	Up to 63A –MCB fault Current 10 kA Above 63 A- MCCB Fault Current 16 kA
1.2	Standards	MCB : IEC -60898/ IS: 8828 MCCB : IEC – 60947 /IS : 13947
	Quantity	1 + 1(spare)
1.4	Type	4 Pole TPN
1.5	Rating	1.2 times of the rated current capacity.
1.6	Actability of MCB/MCCB	Flap/handle from 2 nd Door
3.0	Indicator	R,Y,B with Fuse
6.0	Earthing Provision	Terminal Blocks will have to be provided for Earthing
7.0	Mechanical	
7.1	Type	IP 42/43. Metallic, double door, indoor Type , 16SWG MS sheet
7.2	Housing	Wall Mounted/ Floor Mounted
7.5	Cable Entry	Bottom /Top/Side
7.5	Glands Position	At cable entry and exit

11.0 Kiosk:

The Array Junction Box, Solar String Inverter, Inverter LT Panel shall be installed in suitable locations in Metallic Kiosks. The kiosks must be of a suitable design, painted for avoiding rust, covered with a door and locking arrangement with good air circulation. The Kiosks must have security arrangement against theft, manhandling etc. Minimum clearance of the lower edge of the equipments from floor should be 0.5m. Clearance from the front door of the Kiosk with any of the equipments/panel within the Kiosk shall be minimum 110 mm. indicative drawing is attached herewith for ready reference. The bidder will provide drawing to WBREDA for approval. The decision of the controlling officer will be final in this regard.

Enclosure	Metallic Box
Type	Single door, sheet steel (16 SWG) ,powder coated horizontal / vertical enclosure dust and vermin proof. Adequate louver to be provided for air circulation.
Type of Fixing	Ground/Wall mounted as applicable

The Contractor shall submit details of Material and Design of the Kiosk with their Detailed Design Report to WBREDA for according approval. Necessary civil work as required to construct/fixing the Kiosk(s) shall be done by the contractor. If any civil construction is required for installing the whole arrangement, as and where required, it will be within the cost of contract value.

12.0 Energy Meter :

Energy Meter shall be 3 Phase Class -1 whole current/CT meter. The meter shall not be a panel meter. The meter to be supplied must be tested. There will be one Energy meter for each of the Grid Interfacing Panel. This meter shall be installed to record the energy delivered through each of the GIP. The rating of the meter shall be matched with the current and voltage rating of the GIPs. The meter must be put in an enclosure made with Polycarbonate sheet. The location of the meter may either close of Inverter Interfacing LT Panel or GIP.

Sl. No.	Technical Parameters	Whole Current Meters
1	Number of phases and wires	Three Phase, 4 Wire
2	Rating	As per requirement
3	Standard Voltage and frequency	3X240 V (PN), 415 V (P-P), 50Hz
4	Accuracy class	Minimum 1.0
5	Indian Standard or IEC to which conforming	IS 13779

13.0 Cables & Wirings :

The Specification of wiring material of PV Power plant will include but not limited to the following:

Sl No	Item	Description
A	DC Cable	
1.1	Conductor	Tinned annealed stranded flexible copper according to IEC 60228 class 5
1.2	Standard	PV-1F / 2 PfG 1169/08.2007 / VDE Standard E PV 01:2008-2 / EN 50618/Equivalent
B	AC Cable	
2.1	Rated Voltage	1.1kV
2.2	Construction	
2.2.1	Conductor	Copper
2.2.2	Insulation	PVC
C	uPVC Conduit, tees, bends etc	
3.0	Standard	u PVC (ISI Marked)
3.1	Ambient Temperature	0 ⁰ C to 50 ⁰ C
3.2	Type	UV stabilized , temperatures, Shock proof chemical resistant
D	GI Pipe	
4.0	Make	Reputed make.
E	All Cables to be used in the project shall be copper connectors.	

Sizing and procedure and guideline of Cable laying:

- i) Buried AC underground cables must be armored.
- ii) Conductor size of cables and wires shall be selected based on efficient design criteria. The wiring size shall be designed such that maximum voltage drop at full power.

From the PV Array to Inverter(s) should be less than 2%.

From Inverter to AC Grid interfacing panel should be less than 3%.

- iii) Cable terminations shall be made with suitable cable lugs & sockets etc, crimped properly and cables shall be provided with dry type compression glands wherever they enter junction boxes/ panels/ enclosures at the entry & exit point of the cubicles. The panels bottoms should be properly sealed to prevent entry of snakes/lizard etc. inside the panel. All cables shall be adequately supported. Outside of the terminals / panels / enclosures, shall be protected by conduits. Cables and wire connections shall be soldered, crimp-on type or thimble or bottle type.
- iv) Only terminal cable joints shall be accepted. Cable joint to join two cable ends shall not be accepted.
- v) The cable must be laid through UPVC conduit on roof and indoor. On the roof the conduit shall run over the PCC block & suitable size cable tray. The PCC block shall be painted with suitable paint. as per advise of WBREDA
- vi) All the unarmored cable and control cable if need to be drawn through underground, adequate size UPVC conduit is to be used for drawl of such cable all along. However, the conduits also need to be laid inside class – B, GI pipes of requisite diameter under road crossings, drains, sewerage lines, entry or exit points of the buildings or where there are chances of mechanical damage.
- vii) All cable/wires/control cable shall be marked with good quality letter and number ferrules of proper sizes so that the cables can be identified easily.
- viii) All cable shall be suitable marked or coded for easy identification. Cables and wires shall confirm to the relevant standards suppliers to specify the specification.
- ix) The u-PVC conduit of suitable size must run through GI cable tray suitable painted with anti-corrosive paint. The cable shall also rest on the pre fabricated RCC pedestal which will be properly fixed on the roof.
- x) All fasteners will be made of Stainless steel
- xi) Minimum one number loop may be provided at the start and end each span of cable laying and before termination.
- xii) Suitable cable tray/ Hanger to be provided

Type of cable to be used:

Sl no	Location	Type of AC Cable
01.	PV Array to PV Array Junction Box	Un-armoured Solar Copper
02.	PV Array JB to String Inverter	Un-armoured solar copper cable
03.	String Inverter to Inverter LT panel/ Inverter Combiner LT Panel	Un-Armoured PVC insulated copper Cable
04.	Inverter LT panel to Grid Interfacing Panel	Armoured PVC insulated Aluminium cable 4 core as per design.
05.	Grid Interfacing Panel to Point of Common Coupling	Un-Armoured PVC Insulated AC Aluminium cable 4 core as per design

14. Equipment, Array structure Earthing:

- i). Equipment Earthing will connect all non-current carrying metal receptacles, electrical boxes, appliance frames, chassis and PV panel mounting structures in one long run. The earthing wire should not be switched, fused or interrupted. The earth strips shall be drawn from the ground floor to the roof of building

- ii). Earthing Pit with Pipe Electrode and Earth Strip:

The earthing shall be done as per IS 3043 and its latest amendments and modification

a) Earth Pit:**i) Earth Electrode:**

Earthing with 50 mm dia. GI pipe 3.64 mm thick x 3Mts long of ISI make manufacturer and duly galvanized earth electrode, and non GI part duly painted with bitumen shall be under the ground level and partly above ground level driven to an average depth of 3.65 Mts. Earthing pit should be filled with earthing compound as per IS below the ground level & restoring surface duly rammed.

ii) Masonry enclosure:

Masonry enclosure of the earth pit of size not less than 600 mm X 600 mm X 500 mm (depth) complete with cemented brick work (1:6) of minimum 150 mm width duly plastered with cement mortar (inside) shall be provided. Hinged inspection covers of size not less than 300 mm X 300 mm shall be provided. Suitable handle shall be provided on the cover by means of welding a rod on top of the cover for future maintenance

iii) Cable for earthing :(From Earth electrode to Earth –Bus):

XLPE insulated Armoured 4 core 10 sq mm Aluminium cable shall be drawn from each earth electrode. Cable drawn from the Earth Electrodes shall be connected to the 50 mm x 6 mm Alluminum Earth Bus-bar nearer to the Earth Pit at the ground floor of the building. From the Earth Bus-bar two (02) nos. XLPE insulated Armoured 4 Core 10 sq mm Aluminium cable shall be drawn up to the other Earth Bus-bars at the different location of the Power Plant. All the earth cable shall be terminated at the earth bus through bimetallic terminal. The earth cable shall run on the cable tray.

- iv) Necessary provision will be made for bolted isolating joints of each earthing pit for periodic checking of earth resistance.
- v) Test point will be provided for earth pits.
- vi) Number of earth pit : Four (04) Numbers.
- vii) For hilly area/rocky area/ urban area where the earth electrode (3.65m) could not inserted into the ground in such cases suitable earthing to be done complying the earth resistance as per IE rule & as per instruction of Engineering -In –charge.

b).Array Structure Earthing:

- (i) Earth Cables shall be connected with all PV array structures.
- (ii) The earth cable must be connected with the PV Array structure by Lugs, Nuts and Bolts check nut etc.
- (iii) Earth structures shall be interconnected to each other for continuous earthing
- (iv) The Earth Cable in the PV array field must be laid through uPVC conduit of minimum 1 inch diameter. The uPVC conduit must be rest and fixed with metallic clamp on the precast separate pedestals of minimum size 150 mm X 150 mm x 100 mm on the Roof with cable tray/ cable hanger. However the height of the pedestals may be increased for leveling purpose as per site condition. The distance between two pedestals shall be maximum 1.0 M

c) Main Earth cable: XLPE insulated Armoured 4 core 10 sq mm Aluminium cable.

d) Earth Bus-bar: All Earth Bus-bar shall be 50mm X 6mm Aluminium flat on wall having clearance of 6 mm from wall including providing drilled holes on the bus-bar complete with bolts, nuts, washers, spacing insulators etc. as required. Each Earth Bus-bar must have Two (02) Incoming Earth Cable.

e) Position of the minimum number of Earth Busbar shall include but not limited to the following:

- i. At the Ground floor near the earth pits : 2nos.
- ii. Near the Inverters, Inverter Interfacing LT Panel : 01no. (as per location of the equipment)
- iii. Array field each : 01no

f) Earth Wire:

- i) Earth wire shall be connected to Inverter, Inverter LT Panel from the Earth Bus near Inverter and Inverter LT Panel: Size of Earth wire: Copper Wire 6 sq.mm
- ii) Earth wire shall be connected to Grid interfacing Panel from the Earth Bus at Ground Floor. Size of Earth wire: 10 SWG (GI)

15.0. Project Signage:

The Signage will be made up of metallic base of minimum size 3'x 2'. The Signage provide with detail of the project as approved by WBREDA. The font size on the signage has to be big enough so that everyone can read it easily. The Signage will be fixed up two (02) prominent place of the project area.

16.0 Schematic Diagram Signage:

Schematic diagram of the installation must be provided on a display board of minimum size 3'x 2' made up of metallic base. The schematic diagram must be fixed up at any prominent place of installation. Schematic diagram shall be 01(one) against each installation.

17.0 Danger Notice:

Danger notice of size 200 mm X 150 mm shall have to be affixed permanently in conspicuous positions as mentioned herein under of a design as per the relevant BIS No. 2551 in accordance with Rule No. 35 of the IE Rules, 1956.

Location	Quantity
PV Array Field	Minimum 4 nos. for up to 25
Near Inverters	01 No for each block
On Inverter combiner LT panel	01 no
On Grid interfacing Panel	01 No

18.0 Fire Buckets and Holding Stands:

- a) Each set of Fire Buckets and Fire Bucket Holding Stand shall have four (04) Fire Buckets and one (01) Double Tier Fire Bucket Holding Stand with an arrangement of holding of minimum four (04) Fire Buckets. The Fire Bucket Stand shall be installed nearer the Array field.

The minimum technical specification is a follows:

Fire Bucket Capacity	10 liters
Fire Bucket Body Material	Mild Steel Sheet
Standard	As per BIS

- b) Number of Fire Buckets and Holding stands:
 - i. Power plant up to 30kWp : 01(one)

19.0 Fire Extinguishers:

- a) ABC type dry power portable fire extinguishers of minimum capacity 5/6 kg shall be provided. Fire Extinguisher must be of BIS Standard
- b) Number of Fire Extinguishers:
 - i. Power plant up to 30 kWp : 01(one) set

20.0 Lighting arrangement:

One number 10W LED bulb with necessary fittings and wiring and control switch are to be provided near the Inverter and Inverter LT Panel/Grid Interfacing Panel. The LED tube shall be connected with the existing power supply.

21.0 PV Array Cleaning Arrangement

- a) Necessary equipment is to be provided at site to facilitate easy cleaning and abrasion of the PV Array.
- b) Water pipe line must be passed through within the PV Array field. Adequate numbers of outlet tap with suitable platform and posts are to be laid down covering total array field for cleaning of the PV Module. Minimum three (03) numbers of post along with tap shall be provided against upto 20 kWp PV Array capacity & more than 20 kWp five (4) numbers. The plumbing equipment must be of UPVC of standard ASTM D 1785 or GI Pipe with necessary specials & fixtures as per suitability of site.
- c) The Water line must be run on the suitable size precast concrete pedestal which will be properly fixed on the roof.
- d) The water line is to be connected to the suitable nearest point of water source provided by the beneficiary.

22. Other Conditions:

The work includes necessary excavation, concreting, flooring, platform, necessary finishing, painting, back filling, shoring & shuttering, cable laying, location of installation of different component of PV Power Plant etc. if any, required for completion of the project in all respect shall be as per direction of Engineer-in-Charge.

BILLOF MATERIAL
for each
Grid connected Solar PV Power Plant of PV Power Plant

Sl. No	Items	Unit	Quantity
(I)	(II)	(III)	(IV)
1.	PV Array as per reference Sl no. 2.0 and 3.0 of Technical Specification	Set	01
2.	PV Module Mounting Structure with foundation as per reference Sl no. 4.0 of Technical Specification	Set	01
3.	PV Array Junction Boxes (AJB) as per reference Sl no. 5.0 of Technical specification	Set	01
4.	Grid –Tied String Inverter of minimum nominal AC capacity 10 kVA as per reference Sl no. 6.0 of Technical specification	No	01
5.	Web enable on line data logger and Remote Monitoring Unit as per reference Sl no. 7.0 of Technical Specification	Set	01
6.	Inverter LT Panel as per reference Sl no. 8.0 of Technical Specification	Set	01
	Invert Combiner Panel Sl.no-9 of Technical specification		
7.	Grid interfacing LT panel as per reference Sl no. 10.0 of Technical Specification	Set	01
8.	Kiosk for Inverter and other accessories as per reference Sl no. 11.0 of Technical Specification	No.	01
9.	Export Import Energy Meter per reference Sl no. 12.0 of Technical Specification	No.	01
10.	Cables and Wiring as per reference Sl no. 13.0 of Technical specification	Lot	01
11.	Supply, laying ,fixing of suitable 4 core 6 sq.mm armored XLPE insulated copper cable from Inverter LT panel to Grid interfacing LT Panel to Point of Common Coupling (Supply Mains) as per reference Sl no. 14.0 of Technical Specification – (100 mtr for each site –As required)	Mtr	100
12.	Equipment, Array structure Earthing as per reference Sl no. 14.0 of Technical Specification	Set	01
13.	Lighting arrangement as per reference Sl no. 20.0 of Technical Specification	Set	01
14.	PV Array Cleaning arrangement as per reference Sl no. 21.0 of Technical Specification	Lot	01
15.	Fire Extinguisher as per reference Sl no. 19.0 of Technical Specification	Set	01
16.	Fire Bucket and Holding stand as per technical specification Sl.no-18		
17.	Signage as per reference Sl no. 15.0 of Technical specification	Lot	01
18.	Preparation of Technical Documentation and Training to the beneficiary	Set	01
19.	Site Survey	Set	01