

REQUEST FOR PROPOSAL (RFP)

EMPANELMENT OF VENDORS

FOR

DESIGN, ENGINEERING, CIVIL WORK, SUPPLY, ERECTION, TESTING AND COMMISSIONING INCLUDING WARRANTY, COMPREHENSIVE OPERATION & MAINTENANCE OF GRID-CONNECTED ROOFTOP SOLAR PLANT OF VARIOUS CAPACITIES UNDER THE PHASE-II OF GRID CONNECTED ROOFTOP SOLAR SCHEME (GCRTS) OF MNRE IN NCT DELHI/OPERATIONAL AREAS OF BSES YAMUNA POWER LIMITED (BYPL), BSES RAJDHANI POWER LIMITED (BRPL) AND TATA POWER DELHI DISTRIBUTION LIMITED (TPDDL)



RFP NO CMC/BY/21-22/RB/SV/39

Due Date for Submission: 24.02.2022, 15:00 HRS

**BSES YAMUNA POWER LIMITED (BYPL)
SHAKTI KIRAN BUILDING, KARKARDOOMA,
DELHI-110032**

CIN: U40109DL2001PLC111525

TEL: 011 3999 7111

WEBSITE: [BSES YAMUNA POWER LIMITED \(BSESDELHI.COM\)](http://BSESDELHI.COM)

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Interpretations

1. Words comprising the singular shall include the plural & vice versa.
2. An applicable law shall be construed as reference to such applicable law including its amendments or re-enactments from time to time.
3. A time of day shall save as otherwise provided in any agreement or document be construed as a reference to Indian Standard Time.
4. Different parts of this contract are to be taken as mutually explanatory and supplementary to each other and if there is any differentiation between or among the parts of this contract, they shall be interpreted in a harmonious manner so as to give effect to each part.
5. The table of contents and any headings or sub-headings in the contract has been inserted for case of reference only & shall not affect the interpretation of this agreement.

Disclaimer

1. Though adequate care has been taken while preparing the RFP document, the Bidders shall satisfy themselves that the document is complete in all respects. Intimation of any discrepancy shall be given to this office immediately. If no intimation is received from any Bidder within fifteen (15) days from the date of notification of RFP/ Issue of the RFP document, it shall be considered that the RFP document is complete in all respects and has been received by the Bidder.
2. BYPL (also on behalf of BRPL and TPDDL) reserves the right to modify, amend or supplement this RFP document.
3. While this RFP has been prepared in good faith, neither Delhi *DISCOMs* (*i.e. BYPL, BRPL and TPDDL*) nor their employees make any representation or warranty, express or implied, or accept any responsibility or liability towards customer and vendor, whatsoever, in respect of any statements or omissions herein, or the accuracy, completeness or reliability of information, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this RFP, even if any loss or damage is caused by any act or omission on their part.

EMPANELMENT OF VENDORS FOR "DESIGN, ENGINEERING, CIVIL WORK, SUPPLY, ERECTION, TESTING AND COMMISSIONING INCLUDING WARRANTY, COMPREHENSIVE OPERATION & MAINTENANCE OF GRID-CONNECTED ROOFTOP SOLAR PLANT OF VARIOUS CAPACITIES UNDER THE PHASE-II OF GRID CONNECTED ROOFTOP SOLAR SCHEME (GCRTS) OF MNRE IN NCT DELHI/OPERATIONAL AREAS OF BSES YAMUNA POWER LIMITED (BYPL), BSES RAJDHANI POWER LIMITED (BRPL) AND TATA POWER DELHI DISTRIBUTION LIMITED (TPDDL) (TWO PART BIDDING TENDER)

The Ministry of New and Renewable Energy, Government of India (MNRE) is implementing Phase-II of Grid Connected Rooftop Solar (GCRTS) Programme wherein central financial assistance (CFA) is being provided for installation of rooftop solar (RTS) projects in residential buildings. To implement the RTS activities in respect of the aforesaid programme, respective Power Distribution companies (DISCOMs) have been designated as the State Implementing Agency. The Government of NCT of Delhi has decided that BYPL shall be the common tendering agency on the behalf of BRPL and TPDDL in NCT of Delhi and will identify L-1 rates and empanel vendors for implementation of the programme. The respective DISCOMs i.e. BYPL, BRPL and TPDDL will execute RTS projects in their operational areas through the empanelled vendors, in accordance with the rates discovered in this tender.

BYPL (also on behalf of BRPL and TPDDL) invites bids from eligible bidders to participate in Request for Selection (RFS) for empanelment of vendors for Site Survey, Design, Installation, Supply, Erection, Testing and Commissioning including Warranty and Comprehensive Operation and Maintenance of 5 years for CAPEX and 25 years for RESCO of Roof Top Solar PV Power System for Residential Consumers in the NCT of Delhi. This RFS shall be governed by terms of sanction received from MNRE vide Order No. 318/63/2019 – Grid Connected Rooftop Dated 10.11.2021 (for BRPL and BYPL) and Sanction Order No. 318/63/2019-Grid Connected Rooftop Dated 19.01.2022 (for TPDDL) for the Delhi DISCOMs (copy enclosed). For the implementation of above-mentioned work, Bidders should submit their bid proposal online, complete in all aspect, on or before Last date of Bid Submission as mentioned on the Bid Information Sheet.

For the implementation of above-mentioned work, Bidders should submit their bid proposal, complete in all aspect, on or before Last date of Bid Submission as mentioned on the Bid Information Sheet.

Bidder shall submit bid proposal along with non-refundable bid processing fee and refundable Bid Bond as per the Bid Information Sheet. Techno-Commercial bids will be opened online as per the Bid Information Sheet in presence of authorized representatives of bidders who wish to be present online. Bid proposals received without the prescribed bid processing fees and Bid Bond shall be rejected. In the event of any date mentioned in bid information is declared a Holiday, the next working day shall become operative for the respective purpose mentioned herein.

Bid documents which include Eligibility criteria, "**Technical Specifications**", various conditions of contract, formats, etc. can be downloaded from website of BSES Yamuna Power Limited - <https://www.bsesdelhi.com/web/bypl/open-tenders>. Only the documents submitted at the time of Bid Submission shall be used in evaluation process. Bidders are advised to ensure that all supporting documents are submitted at the time of Bid Submission as no further clarification/amendments would be entertained in this regard. Bidders are also encouraged to familiarize themselves with the MNRE scheme available at SPIN portal (www.solarrooftop.gov.in) for efficient execution.

Any amendment(s)/ corrigendum/ clarifications with respect to this Bid shall be uploaded on web page of the Delhi DISCOMs i.e. BYPL, BRPL and TPDDL. The Bidder should regularly follow up for any Amendment/ Corrigendum/ Clarification on the above websites.

The bidding process under this Phase-II Rooftop scheme is for cumulative capacity of 12 MWp comprising of CAPEX Part A, B, C & D and RESCO Part A & B Model.

Table No 1

1	2	3	4	5 (DISCOM wise capacity allocation in MW)			6	7
S. No	Category	Proposed Capacity	*Aggregate Capacity (12 MW)	BRPL (5 MW)	BYPL (3 MW)	TPDDL (4 MW)	Min Capacity (kW) <i>(for which the Bidder can submit its Bid)</i>	Max Capacity (kW) <i>(for which the Bidder can submit its Bid)</i>
1	CAPEX Part-A	1 kW to 3 kW	2.1	0.8	0.6	0.7	30	180
2	CAPEX Part-B	Above 3 kW to 10 kW	3.2	1.3	0.8	1.1	80	240
3	CAPEX Part-C	Above 10 kW to 100 kW	2	0.8	0.5	0.7	70	200
4	CAPEX Part-D	Above 100 kW to 500 kW	1.8	0.7	0.5	0.6	105	500
5	RESCO Part- A	25 kW to 100 kW	1	0.5	0.2	0.3	50	100
6	RESCO Part – B	Above 100 kW to 500 kW	1	0.5	0.2	0.3	105	500
7	Open Category		0.9	0.4	0.2	0.3		
TOTAL			12	5	3	4	440	1720

***Maximum bid capacity for which bidder can submit its bid shall be lower of the DISCOM wise capacity allocation in MW or Max bid capacity as indicated in column No 7 of above Table. Accordingly allocation shall be done.**

Remark: The capacities mentioned in the above table are **indicative only** and implementing agencies shall decide on the capacity range for each part. The implementing agencies can also invite rates for each kW of incremental capacity (preferably for small capacities) based on the requirements/previous experience. The CFA would be admissible as per MNRE scheme guidelines.

Note: For common facilities in Group Housing Societies/Residential Welfare Associations (GHS/RWA) etc. the allowed RTS capacity shall be limited up to 500 kWp (@ 10 kWp per house), with the upper limit being inclusive of individual rooftop plants already installed by individual residents in that GHS/RWA at the time of installation. Bidders are requested to quote Minimum Capacities in each part as per above table.

The bidder to quote bid under project categories as per above table for each DISCOM (BYPL, BRPL and TPDDL). Delhi DISCOMs reserves the right for diversion of capacity from one bidder/ category to another (including transfer of unallocated capacity to OPEN Category) for 100% utilization of capacity sanctioned by MNRE, GoI.

SCOPE OF WORK

BYPL (also on behalf of BRPL and TPDDL) invites bids for empanelment of firms for Design, supply, erection, testing and commissioning including warranty, comprehensive operation & maintenance for a period of 05 years for CAPEX and 25 years for RESCO of Grid connected Rooftop solar plants of various capacities in the NCT of Delhi.

Delhi DISCOMs i.e. BYPL, BRPL and TPDDL will empanel eligible vendors participating in this empanelment process and wish to provide their services on the price/rate discovered through transparent bidding process. The CFA available from MNRE would be limited to 40% of the prevailing Benchmark Cost or Discovered Rate, whichever is lower, for project capacity up to 3 kW. For project capacity above 3 kW and up to 10 kW, the available CFA would be 20% of the prevailing Benchmark Cost or Discovered Rate, whichever is lower. Group Housing Societies/Residential Welfare Associations (GHS/RWA) etc. are allowed to install RTS projects up to 500 kW capacity (@ 10 kWp per house), with the upper limit being inclusive of individual rooftop plants already installed by individual residents in that GHS/RWA at the time of installation of RTS for common activity.

Delhi DISCOMs i.e. BYPL, BRPL and TPDDL will not be responsible in case any empanelled vendors do not get any work order. The consumers under this scheme shall be free to install their projects from any empanelled vendors subject to the condition that project shall have to be installed/commissioned as per the MNRE Phase-II Guidelines and subsequent amendments.

The empanelled vendors will carry out the design, supply, erection, testing and commissioning including warranty, comprehensive operation & maintenance for a period of 05 years for CAPEX Model and 25 years for RESCO model of grid interactive rooftop solar PV power plant and shall make all necessary arrangement for evacuation and injection of surplus power to the grid at the interconnection point/ points as agreed with DISCOMs.

The CFA in RESCO A and B shall be limited to MNRE Benchmark Cost prevailing at the time of empanelment or price discovered in CAPEX C and CAPEX D respectively (whichever is lower)

1. The detailed Scope of Work for empanelled vendors shall essentially cover but not be limited to:

- 1.1. Identification of prospective beneficiaries and providing necessary assistance to the prospective beneficiary in submitting online applications for installation of RTS project.
- 1.2. Preparation of Detailed Project Report (DPR) of the proposed Proposal of Rooftop Solar Power Plant.
- 1.3. Obtaining Net-metering approval from concerned DISCOM/designated agency for providing grid connectivity/net-metering.
- 1.4. Submission of proposal with all required documents to DISCOM for sanctioning of the project.
- 1.5. Execution of the work shall be carried out in an approved manner as per the cal specification of RFP. In case of any dispute, relevant MNRE/BIS/ISI/NABL/ISO/IEC/IS specification shall be followed and work shall be carried out to the reasonable satisfaction of the engineer in charge.

- 1.6. The vendor shall complete the work of Design, supply, civil work, erection, testing and commissioning of SPV grid connected Power Plant within 6 months from the date of issue of the Consent Letter or upto 15 Months from Date of MNRE Sanction as mentioned in the bid information sheet, whichever is earlier. In event of failure to install and commission the RTS system within the mentioned timeframe, the entire Performance Bank Guarantee will be forfeited and may also lead to disqualification of the vendor at the sole discretion of respective DISCOM. The penalty for non-completion of allocated will be on pro-rata basis.
- 1.7. The work covers Design, supply, installation, commissioning and Comprehensive Maintenance Contract (CMC) for 05 (Five) Years for CAPEX and 25 years for RESCO.
- 1.8. Empanelled vendors shall establish a service Centre to cater the 05 Years CMC for CAPEX and 25 years for RESCO. In case if it is not economically viable for an individual vendor then Group of vendors can establish a common service Centre. The details of all such service centres (address, contact no. etc.) will be made available on the website of the respective DISCOMs. Also the vendor has to share monthly report on the queries received and addressed of consumers with the respective DISCOM.
- 1.9. All the material required for the installation of solar power plant as per the LoA issued shall be kept at site in custody of the vendor, Delhi DISCOMs shall not be responsible for any loss or damage of any material during the installation. The vendor shall be responsible and take an insurance policy for transit-cum-storage-erection for all the materials.
- 1.10. The vendor shall take entire responsibility of electrical safety of the installations including connectivity with the grid and follow all the safety rules and regulations applicable as per Indian Electricity Act-2003 and prevailing CEA guidelines and amendments, it shall be responsibility of the vendor to take NOC from concerned authority and engage person as per provisions as per in CEA Rules and Regulations.

The Empanelled vendor shall ensure proper safety of all the workmen, material, plants and equipment belonging to him/her. In case any accident occurs during the construction / erection or during guarantee period for work undertaken by Empanelled Vendor thereby causing any minor or major or fatal accident will be the responsibility of the Empanelled Vendor. The successful Vendors shall follow and comply with the employer's safety rules relevant provisions of applicable laws pertaining to the safety of workmen, employees, plant and equipment. The Empanelled vendors shall also arrange all certificates and test reports of the module and inverter and other equipment. The Empanelled Vendors must adhere to the Operation and Maintenance procedure given in **Annexure-C** of this document.

1.11 The CFA claims of the systems installed and commissioned shall be processed with following documents:

- 1.11.1 Dated Claim letter from the bidder on its letter head certifying that the SPV Modules and Cells deployed in the systems installed are Indian Made (DCR Undertaking as prescribed MNRE Format as **Annexure-W**), and all the technical specifications of the components supplied and installed are in accordance with the specifications given in this document and adhere to MNRE requirement and all the information / documents provided along with the claim letter are correct and factual.
- 1.11.2 Invoice of the System billed to the beneficiary.

- 1.11.3 Photograph of the system with placard held by the beneficiary showing the name of the beneficiary, DISCOM registration number (CA Number) and system capacity. Photo-shopped/edited images shall not be uploaded on the SPIN portal.
- 1.11.4 Certificate of the beneficiary that the system is installed and commissioned in all respect with the date of commissioning, system and inverter capacity, etc. and that he has been provided the 05 (Five) Year Warranty Card and the O&M Manual.
- 1.11.5 Overwritten certificates/ documents shall be outrightly rejected and will not be processed for CFA payment.
- 1.11.6 Self-certified copies of documents will be submitted in support of claims made by the Empanelled Vendors.
- 1.11.7 The CFA shall be released subject to availability and release of funds from MNRE, GoI to DISCOM.
- 1.11.8 If required, third party Inspection may also be carried for disbursement of CFA. Third party Inspection will be carried out by the Agency nominated by MNRE or Delhi DISCOMs.

Bid Information Sheet

Bid Description	<p>The bidding process under this Rooftop scheme is for 12 MWp comprising of CAPEX Part A, B, C, D and RESCO Part A&B. (As defined in Ref Table no I)</p> <ol style="list-style-type: none"> 1. Under PART-A- 1 to 3 kWp 2. Under PART-B- Above 3 to 10 kWp 3. Under PART-C- Above 10 to 100 kWp 4. Under PART-D-Above 100 to 500 kWp 5. Under RESCO PART -A-25 to 100 kWp 6. Under RESCO PART-B-Above 100 to 500 kWp <p>Bidder can bid for PART-A or PART-B or Part-C or PART-D and RESCO Part – A and RESCO –Part B of the respective category subject to meeting the eligibility criterion set forth herewith.</p> <p>Note: The project capacity range mentioned above are indicative only and the respective DISCOM will be at liberty to decide on the capacity range.</p>
Broad Scope	<p>Identification of rooftops/beneficiaries which includes but is not limited to submission of project sanction documents, EPC agreement between Empanelled Vendor and the Consumer(s) at the quoted project cost and Clearances from DISCOMs as per terms and conditions of RFP for the approval of capacity 12 MW for issue of project specific consent letter(s).</p> <p>Design, Engineering, Civil Work, Supply, Storage, Erection, Testing & Commissioning of the Grid-connected rooftop solar PV project including comprehensive Operation and Maintenance (O&M) of the project for a period of 05 years for CAPEX Model and 25 years for RESCO after commissioning of project.</p> <p>Total timeline for the above Scope of Work up to Commissioning of project is 15 months from dated of MNRE Sanction to Delhi DISCOMs i.e., 10.11.21 for BRPL & BYPL and 19.1.22 for TPDDL or as extended from time to time. The DISCOM shall decide on the timeline for completion of the work. However, it shall be ensured that MNRE sanction timelines are not breached.</p>
Downloading of RFP document	<p>The Bid Document can be downloaded from URL Address: https://www.bsesdelhi.com/web/bypl/open-tenders</p>
Pre-Bid Conference/Clarification meeting	<p>Date: 11th February 2022 (Friday) Time: 14:00 Hrs Venue: Online Zoom Meeting, bidder may submit their request for user & password via email to Mr Sumit Verma, E-mail: sumit.ra.verma@relianceada.com & Mr Santosh Singh, E-mail: Santosh.Kum.Singh@relianceada.com</p>

Bid submission Deadline (Physical submission of documents)	Date: 24th February 2022 (Thursday) Time: 15:00 Hrs												
Date of Techno-Commercial bids opening	Date: 25th February 2022 (Friday) Time: 15:00 Hrs Venue: Online Zoom Meeting												
Validity of Bid	Validity of bid shall be minimum 06 months from the date of techno-commercial bid opening date.												
Validity of Price and Empanelment Period	15 months from date of Sanction or as extended by DISCOM/MNRE from time to time.												
Processing Fee (In favour of BYPL (Non-refundable))	<p>Category wise Processing Fees:</p> <ul style="list-style-type: none"> ➤ CAPEX A - INR 9,440/- (inclusive of GST @18%) ➤ CAPEX B –INR 11,800/- (inclusive of GST @18%) ➤ CAPEX C - INR 21,240/- (inclusive of GST @18%) ➤ CAPEX D - INR 21,240/- (inclusive of GST @18%) ➤ RESCO A - INR 21,240/- (inclusive of GST @18%) ➤ RESCO B - INR 21,240/- (inclusive of GST @18%) <p><i>In case of participation in multiple categories by the bidders, the total processing fees is to be submitted after adding the individual category fees as mentioned herein.</i></p> <p>The processing fee may be furnished through Demand Draft (DD) drawn in favour of "BSES Yamuna Power Limited" payable at Delhi to be submitted in a separate sealed envelope along with physical documents. Or Online payment/transfer of processing fee to bank account, detailed below:</p> <table border="0"> <tr> <td>1. Name:</td><td>BSES Yamuna Power Limited</td></tr> <tr> <td>2. Name of the Bank:</td><td>Axis Bank Limited</td></tr> <tr> <td>2. Branch Name & Full Address:</td><td>Swasthya Vihar, New Delhi 110092</td></tr> <tr> <td>3. Branch Code:</td><td>055</td></tr> <tr> <td>4. Bank Account No:</td><td>911030003596085</td></tr> <tr> <td>5. IFSC Code:</td><td>UTIB0000055</td></tr> </table> <p><i>In case of online fund transfer, The Unique Transaction Reference number (UTR)/or transactions details is to be emailed to Mr Sumit Verma, E-mail: sumit.ra.verma@relianceada.com & Mr Santosh Singh, E-mail: Santosh.Kum.Singh@relianceada.com for verification and confirmation of receipt by BYPL. It is advisable to get the confirmations before the Bid submission Deadline.</i></p>	1. Name:	BSES Yamuna Power Limited	2. Name of the Bank:	Axis Bank Limited	2. Branch Name & Full Address:	Swasthya Vihar, New Delhi 110092	3. Branch Code:	055	4. Bank Account No:	911030003596085	5. IFSC Code:	UTIB0000055
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5. IFSC Code:	UTIB0000055												

<p>Bid Bond/EMD</p>	<p>Bid Bond Shall be calculated as: INR 10 Lacs X bid capacity in MWp.</p> <p>Bid Bond /EMD may be submitted in BG form Or Online payment/transfer to bank account, detailed below:</p> <table border="0"> <tr> <td>1. Name:</td><td>BSES Yamuna Power Limited</td></tr> <tr> <td>2. Name of the Bank:</td><td>Axis Bank Limited</td></tr> <tr> <td>2. Branch Name & Full Address:</td><td>Swasthya Vihar, New Delhi 110092</td></tr> <tr> <td>3. Branch Code:</td><td>055</td></tr> <tr> <td>4. Bank Account No:</td><td>911030003596085</td></tr> <tr> <td>5. IFSC Code:</td><td>UTIB0000055</td></tr> </table> <p><i>In case of online fund transfer, The Unique Transaction Reference number (UTR)/or transactions details is to be emailed to Mr Sumit Verma, E-mail: sumit.ra.verma@relianceada.com & Mr Santosh Singh, E-mail: Santosh.Kum.Singh@relianceada.com for verification and confirmation of receipt by BYPL. It is advisable to get the confirmations before the Bid submission Deadline.</i></p>	1. Name:	BSES Yamuna Power Limited	2. Name of the Bank:	Axis Bank Limited	2. Branch Name & Full Address:	Swasthya Vihar, New Delhi 110092	3. Branch Code:	055	4. Bank Account No:	911030003596085	5. IFSC Code:	UTIB0000055
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4. Bank Account No:	911030003596085												
5. IFSC Code:	UTIB0000055												
<p>Bid Process (Physical submission of documents)</p>	<p>This is a two part bid process. Bidders are to submit the bids in 2(Two) parts.</p> <p>Both these parts should be furnished in separate sealed covers super scribing RFP no. DUE DATE OF SUBMISSION, with particulars as PART-A TECHNICAL BID & COMMERCIAL TERMS & CONDITIONS [comprising documents other than Financial Bid] and Part-B FINANCIAL BID [comprising of 1 original only; Price strictly in the Format enclosed indicating Break up of basic price, taxes & duties, transportation etc. This envelope will be opened after techno-commercial evaluation and only of the qualified bidders] and both these sealed envelopes should again be placed in another sealed cover which shall be submitted before the due date & time specified.</p> <p>Bidders are requested to submit their offer strictly in line with this tender document. NO DEVIATION IS ACCEPTABLE. BYPL shall response to the pre bid clarifications raised by various bidders and the same will be distributed to all participating bidders through BYPL website/e-mail.</p> <p>Please mention our RFP Number: CMC/BY/21-22/RB/SV/39 on the Tender and drop the same in our Tender Box placed at: BSES Yamuna Power Ltd, Reception, Ground Floor, Shaktikiran Building, Karkardooma, Delhi 110032</p> <p>The bids and the outer envelope shall be addressed to: Head of Department Contracts & Materials Deptt. BSES Yamuna Power Ltd, Shaktikiran Building, Karkardooma, Delhi 110032</p>												

	<p>Kindly Note:</p> <ul style="list-style-type: none"> ➤ Bidder will inform BYPL through mail immediately after the submission or before the due date & time of submission to TPC & Buyer: <ol style="list-style-type: none"> 1. Mr Santosh Singh, E-mail: Santosh.Kum.Singh@relianceada.com, 2. Mr Sumit Verma, E-mail: sumit.ra.verma@@relianceada.com, ➤ Tender documents shall be submitted at BYPL office main gate in tender box, address is mentioned herein. ➤ Authorized person of TPC will collect the documents from tender box at scheduled time of tender submission and verify the bid documents with mails received. A confirmation of receipt shall be sent to bidder through mail by TPC on the same day ➤ Bidder has to ensure that tender copy is dropped in correct box designated for tender submission only ➤ BYPL shall not be responsible for any wrong placement of tender document by bidder
Name, Designation, Address and other details of Tender Inviting Authority	<p>Address:</p> <p>C&M Dept. 3rd Floor, A-Block, BSES Yamuna Power Ltd Shaktikiran Building, Karkardooma, Delhi 110032</p> <p>Contact Persons:</p> <p>Mr. Robin Sebastian VP (HOD-C&M) - robin.sebastian@relianceada.com Mr. Rajesh Srivastava VP (Head-Procurement) - rajesh.r.srivastava@relianceada.com Mr. Sumit Verma GM (C&M) - sumit.ra.verma@relianceada.com</p>
<p>Important Note: Prospective bidders are requested to remain updated for any notices/amendments/clarifications etc. to the RFP document through the BYPL website: https://www.bsesdelhi.com/web/bypl/open-tenders. No separate notifications will be issued for such notices/ amendments/ clarification etc. in the print media or individually. All the information related to this RFP shall be updated in the website.</p>	

DEFINITIONS

In this "Bid / RFP Document" the following words and expression will have the meaning as herein defined where the context so admits:

- 1.1 **"Affiliate"** shall mean a company that either directly or indirectly;
- (a) controls or
 - (b) is controlled by or
 - (c) is under common control with

A Bidding Company and "control" means ownership by one company of at least twenty six percent (26%) of the voting rights of the other company.

- 1.2 **"Beneficiary"** or **"Customer"** shall mean the residential category Consumers of Government owned or private DISCOMs, Distribution Licensee in Delhi for 1-phase / 3-phase connection of Supply of Electricity.
- 1.3 **"Bid"** shall mean the Techno Commercial and Price Bid submitted by the Bidder along with all documents/credentials/attachment's annexure etc., in response to this RFP, in accordance with the terms and conditions hereof.
- 1.4 **"Bidder"** shall mean Bidding Company submitting the Bid. Any reference to the Bidder includes Bidding Company its successors, executors and permitted assigns and lead member of the bidding company.
- 1.5 **"Bidding Company"** shall refer to such single company that has submitted the response in accordance with the provisions of this RFP.
- 1.6 **"Bidding consortium or consortium"** shall refer to a group of companies that have collectively submitted the response in accordance with the provisions of this RFP.
- 1.7 **"Bid Bond"** shall mean the unconditional and irrevocable bank guarantee to be submitted along with the Bid by the Bidder under Clause of this RFP, in the prescribed Format;
- 1.8 **"Bid Deadline"** shall mean the last date and time for submission of Bid in response to this RFP as specified in Bid information Sheet;
- 1.9 **"Bid Capacity"** shall means capacity offered by the bidder in his Bid under invitation.
- 1.10 **"CAPEX"** CAPEX Model.
- 1.11 **"CEA"** shall mean Central Electricity Authority.
- 1.12 **"Chartered Accountant"** shall mean a person practicing in India or a firm whereof all the partners practicing in India as a Chartered Accountant(s) within the meaning of the Chartered Accountants Act, 1949;

- 1.13 **"Competent Authority"** shall mean Chief Executive Officer (CEO) of Delhi DISCOMs himself and/or a person or group of persons nominated by CEO for the mentioned purpose herein;
- 1.14 **"Contract"** shall mean the agreement to be entered into by the DISCOM with the Empanelled Agency upon receiving the Letter of Empanelment from DISCOM for implementation of the Scheme/ Project and shall include the General and commercial terms & condition, scope of work, project requirement, technical conditions, schedules, appendixes, drawings and any other conditions specifically agreed between the parties forming a part of the contract.
- 1.15 **"Commissioning"** shall mean successful installation and grid-integration of the Solar Power Project by the Contractor as certified by the DISCOM and installation of net-meter by the DISCOM. Date of Commissioning shall be Date of net-meter installation.
- 1.16 **"Company"** shall mean a body incorporated in India under the Companies Act, 1956 or Companies Act, 2013, including any amendment there to.
- 1.17 **"Capacity Utilization Factor"** (CUF) means the ratio of the annual output of the plant in kWh versus installed plant capacity for number of days.
- CUF = plant output in kWh / (installed plant capacity in kW * 365 * 24).**
- 1.18 **"Circle"** means Operation and Maintenance Circles of DISCOM.
- 1.19 **"DNI"** shall means Direct Normal Irradiation.
- 1.20 **"Date of completion of project"** Should be same as Date of Commissioning, unless there is a specific reason for two separate dates.
- 1.21 **"Division"** Shall mean Operation and Maintenance Division of DISCOMs.
- 1.22 **"Eligibility Criteria"** shall mean the Eligibility Criteria as set forth in **Clause 5.5** of this RFP.
- 1.23 **"EMD"** shall mean Earnest Money Deposit which is required to be Paid as per the prevailing terms and conditions of RFP.
- 1.24 **"Empanelled Vendor(s)"** shall mean the Bidder(s) selected by Delhi *DISCOMs i.e. BYPL, BRPL and TPDDL* pursuant to this RFP
- 1.25 **"EPC"** Shall mean Engineering, Procurement and commissioning of the complete project as per the terms and condition of the RFP Document.
- 1.26 **"Financially Evaluated Entity"** shall mean the company which has been evaluated for the satisfaction of the Financial Eligibility Criteria.
- 1.27 **"Financial Year"** or "FY" shall mean the Period starting from 1 April of the first calendar year to 31 March of the consecutive calendar year.

- 1.28 **"Inter-connection point / Delivery / Metering Point"** shall mean the point at distribution voltage level where the power from the solar power Project is injected. Metering shall be done at this interconnection point where the power is injected into the Distribution System i.e. the Delivery Point. For interconnection with grid and metering, the EPC shall abide by the relevant State Net Metering Regulations and their amendments thereof.
- 1.29 **"DISCOM"** shall mean Distribution Company of the State responsible for implementation of Phase-II Rooftop Solar Scheme. **"DISCOM"** means BYPL/BRPL/TPPDL
- 1.30 **"kWp"** shall mean Kilo-Watt Peak.
- 1.31 **"kWh"** shall mean Kilo-Watthour.
- 1.32 **"Letter of Intent" or "LOI"** shall mean the letter issued by DISCOM to the Selected Bidder to secure their Intent for award of the Project.
- 1.33 **"Limited Liability Partnership (LLP)"** shall mean Limited Liability Partnership as per Limited Liability Partnership Act 2008.
- 1.34 **"LOA"** shall mean the letter issued by DISCOM to the selected Bidder for Award of Work.
- 1.35 **"MNRE"** shall mean Ministry of New and Renewable Energy, Government of India.
- 1.36 **"Maximum Bid Capacity"** shall mean a maximum capacity for which the Bidder can submit its Bid against each Part/ Category.
- 1.37 **"Model"** shall mean CAPEX and RESCO Model.
- 1.38 **"Net Meter"** means an appropriate energy meter capable of recording both import and export of electricity or a pair of meters one each for recording the net import and net export of electricity as the case may be.
- 1.39 **"O&M"** shall mean Operation & Maintenance of Rooftop Solar PV System for a period of 05 years for CAPEX Model and 25 years for RESCO Model.
- 1.40 **"Project"** shall mean the project of the Design, Supply, Installation, testing & Commissioning of Grid connected Rooftop Solar Systems including five years comprehensive maintenance for CAPEX model and twenty five years comprehensive maintenance for RESCO model.
- 1.41 **"Project Cost / Project Price"** shall mean the price offered by the Bidder for the Scope of work (upto 1 meter raised structure) as per RFP document.
- 1.42 **"Project capacity"** shall mean individual project capacity in kW for a single beneficiary within the license area of respective DISCOM's.

- 1.43 **"Performance Ratio"** (PR) means "Performance Ratio" (PR) means the ratio of plant output versus installed plant capacity at any instance with respect to the radiation measured.

*PR = (Measured output in kW / Installed Plant capacity in kW * (1000 W/m² / Measured radiation intensity in W/m²).*

- 1.44 **"Parent Company"** shall mean a company that holds at least twenty six percent (26%) of the paid-up equity capital directly or indirectly in the Bidding Company as the case may be.

- 1.45 **"Project Sanction Documents"** shall mean the documents required for sanction of project.

- 1.46 **"Price Bid"** shall mean **Envelope II: Price Bid** of the Bid, containing the Bidder's quoted Price as per this RFP;

- 1.47 **"Project Cost"** shall mean the Cost offered by the bidder for the scope of work as per the RFP document and shall be exclusive of GST

- 1.48 **"PV System or SPV System or RTS System"** for the purpose of this tender shall mean the Grid-connected Rooftop Solar Photo-Voltaic (PV) system including the PV modules, grid-connected inverter(s), module mounting structure(s), cables and connectors, safety and Earthing equipment, interconnection equipment, and inverter with remote monitoring with other components for Rooftop Solar System that shall be supplied, installed, commissioned and maintained by the Empanelled Agency.

- 1.49 **"Qualified Bidder"** shall mean the Bidder(s) who, after evaluation of their Techno Commercial Bid stand qualified for opening and evaluation of their Price Bid;

- 1.50 **"RFP"** shall mean Request for Proposals (RFP) /Bid Document/ Tender Document.

- 1.51 **"Renewable Energy Meter"** refers to a unidirectional energy meter, installed and used solely to record the renewable energy generation from the Renewable Energy System installed at the consumer's premises.

- 1.52 **"Rooftop Owner"** shall mean owner of roofs at various locations within the state of Delhi consisting of single or multiple rooftops.

- 1.53 **"Consent Letter"** shall mean the letter provided by respective DISCOM for a single or group of PV systems after the approval of the project sanction documents submitted by the contractor. It is same as project sanction letter issued by DISCOM.

- 1.54 **"Scheme"** shall mean Phase-II Grid Connected Rooftop Solar Scheme for Providing Grid-connected Rooftop Solar System for Residential Consumers announced by the Ministry of New and Renewable and Renewable Energy, Government of India.

- 1.55 **"Statutory Auditor"** shall mean the auditor of a Company appointed under the provisions of the Companies Act, 1956 or under the provisions of any other applicable governing law.
- 1.56 **"SNA"** shall mean State Nodal Agency.
- 1.57 **"Solar Power Developer (SPD)"** shall mean Empanelled Vendor(s) to whom the project is/are allocated.
- 1.58 **"Specification"** shall mean the RFP Document forming a part of the contract along with Proforma, schedules, appendixes and Annexures.
- 1.59 **"Sub-Division"** shall mean Operation and Maintenance Sub-Division of DISCOM.
- 1.60 **"Central Financial Assistance (CFA)"** shall mean subsidy to be provided by MNRE under the ambit of Phase-II Rooftop Solar Scheme.
- 1.61 **"System"** shall mean the Grid connected Rooftop Solar System as per RFP Document that shall be supplied, installed, commissioned and maintained with all other ancillary required by the vendor for satisfactory operation of the System.
- 1.61 **"Tendered Capacity"** shall mean the Total aggregate capacity in kW indicated by the Vendors through this bidding process as per terms and conditions specified therein.
- 1.63 **"Ultimate Parent Company"** shall mean a company which directly or indirectly owns at least twenty six percent (26%) paid up equity capital in the Bidding Company) and/or in the Financially Evaluated Entity and such Bidding Company and /or the Financially Evaluated Entity shall be under the direct control or indirectly under the common control of such company.
- 1.64 **"Wp"** shall mean Watt Peak.
- 1.65 **"Week"** shall mean the continuous period of seven days.
- 1.66 **"Work"** shall mean activities of Supply, Installation, testing & commissioning of the RFP Document item for which the offers are invited.
- 1.67 **"Allocated capacity"** shall mean the capacity allocated to a bidder by DISCOM based on the procedure defined in Section II of this tender document. The allocated capacity will be mentioned in the Letter of Allocation (LoA).
- 1.68 **"Installed Capacity"** shall mean the capacity of Grid connected Rooftop Solar Photovoltaic Systems installed and commissioned by the bidder during the empanelment period.
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ABBREVIATIONS

Abbreviations	Full Forms
DSC	Digital Signature Certificate
AC	Alternating Current
ACDB	Alternating Current Distribution Board
Ah	Ampere-hour
ALMM	Approved List of Models and Manufacturers
BOQ	Bill of Quantity
BIS	Bureau of Indian Standards
CCA	Controller of Certifying Authorities
CEA	Central Electricity Authority
CFA	Central Financial Assistance
CEI	Chief Electrical Inspector
CMC	Comprehensive Maintenance Contract
EP	Empanelled Partner
CUF	Capacity Utilization Factor
DC	Direct Current
DCDB	DC Distribution Board
DPR	Detailed Project Report
DG	Diesel Generator
DISCOM	Distribution Company
DPB	Distribution Panel Board
DSP	Digital Signal Processor
EMC	Electromagnetic Compatibility
EMD	Earnest Money Deposit
EMI	Electromagnetic Interference
EN	European Norms
EOI	Expression of Interest
EPDM	Ethylene Propylene Diene Monomers
FF	Fill Factor
FOR	Freight on Rail/Road
FRP	Fibre-reinforced plastic
GHI	Global Horizontal Irradiance
GHS	Group Housing Society
GI	Galvanised Iron
GPRS	General Packet Radio Service
GPS	Global Positioning System
GRP	Glass Reinforced Plastic
GST	Goods and Services Tax
HDPE	High Density Polythylene
Hz	Hertz
IEC	International Electrotechnical Commission

IEEE	Institute of Electrical and Electronics Engineers
IGBT	Insulated-gate bipolar transistor
Imp	Peak Power Current
INR	Indian Rupees
IP	Ingress Protection
IS	Indian Standard
Isc	Short Circuit Current
ISI	Indian Standards Institute
ISO	International Standards Organization
ITB	Instructions to Bidders
JB	Junction Box
SERC	State Electricity Regulatory Commission
JSON	JavaScript Object Notation
kg	Kilogram
km/hour	kilometres per hour
kVA	kilo-volt-ampere
kW	Kilowatt
LCD	Liquid Crystal Display
LED	Light Emitting Diode
LoA	Letter of Authorization
LoI	Letter of Intent
LPSC	Lightning Protection System Components
LT	Low Tension
MCB	Miniature Circuit Breaker
MCCB	Moulded Case Circuit Breaker
mm	Millimetre
MNRE	Ministry of New and Renewable Energy
MMS	Module Mounting Structure
MOSFET	Metal-Oxide Semiconductor Field-Effect Transistor
MOV	Metal Oxide Varistor
MPPT	Maximum Power Point Tracker
MSME	Micro, Small and Medium Enterprises
MW	Mega Watt
NIB	Notice Inviting Bid
NIT	Notice Inviting Tender
NOC	No Objection Certificate
O&M	Operations and Maintenance
PAN	Permanent Account Number
PBG	Performance Bank Guarantee
PCU	Power Conditioning Unit
PR	Performance Ratio
PGT	Performance Guarantee Test
PSU	Public Sector Undertaking

PV	Photovoltaic
PVC	Polyvinyl Chloride
PWM	Pulse width modulation
RFID	Radio Frequency Identification
RFP	Request for Proposal
RFS	Request for Selection
RTS	Rooftop Solar
RWA	Residential Welfare Association
SBD	Standard Bid Document
SIM	Subscriber Identification Module
SNA	State Nodal Agency
SPD	Surge Protection Device
SPIN	Solar Photovoltaic Installation
SPV	Solar Photo Voltaic
sq.m	square meter
STC	Standard Testing Condition
TAC	Tariff Advisory Committee
THD	Total Harmonic Distortion
TIN	Taxpayer Identification Number
UV	Ultraviolet
V	Volt
VA	Volt Ampere
Vmp	Peak Power Voltage
Voc	Open Circuit Voltage
W	Watt
XLPE	Cross-linked polyethylen
XLPO	Cross-linked Polyolefin
XML	Extensible Mark-up Language

SECTION-I

A: Introduction, Bid details and instructions to the Bidders

B: Conditions of Contract

A. INTRODUCTION, BID DETAILS AND INSTRUCTIONS TO THE BIDDERS

1. INTRODUCTION

- 1 The Ministry of New and Renewable Energy, Government of India (MNRE) is implementing Phase-II of Grid Connected Rooftop Solar (GCRT) Programme wherein central financial assistance (CFA) is being provided for installation of rooftop solar (RTS) projects in residential buildings. To implement the RTS activities in respect of the aforesaid programme, respective Power Distribution companies (DISCOMs) have been designated as the Implementing Agencies. Government of NCT of Delhi, has decided that BYPL shall be the common tendering agency for all DISCOMs (BYPL, BRPL and TPDDL) of Delhi and will identify L-1 rates and empanel vendors for implementation of the programme. The respective DISCOMs will execute RTS projects in their operational areas through the empanelled vendors, in accordance with the rates discovered in this tender.

- 1.1 This tender document is in accordance with MNRE Phase II guidelines vide notification 318/331/2017 dated 20.08.2019. The guidelines/scheme documents/amendments for Phase-II of GCRTS programme can be seen on SPIN portal (www.solarrooftop.gov.in).

Delhi DISCOMs may register interested applicants for RTS installation under the scheme and the same may be shared with empanelled vendors for installation. For identification of applicants/consumers, DISCOMs may assist empanelled vendors. However, the entire responsibility of finding the applicants/ consumers lies with the vendors. DISCOM/tendering authority/MNRE bears no responsibility in this regard.

- 1.2 This scheme with an aggregate capacity of 12 MW **as per clause No. 2.1** for state only envisages installation of grid-connected Rooftop solar projects on the roofs of consumers as specified by **MNRE vide Order No. 318/331/2017 – Grid Connected Rooftop Dated 20th August 2019** and their amendments issued from time to time i.e. broadly in following categories:

Sl. No.	Category	Coverage of Buildings
(i)	Residential	All types of Residential buildings and Group Housing Societies/Residential Welfare Associations (GHS/RWA) (Having Domestic/Single Point Delivery as billing category and for Domestic/Residential use only)

The Ministry of New and Renewable Energy (MNRE), Government of India vide OM No. 318/38/2018-GCRT Dated 18th August 2021 has notified the Benchmark cost for Rooftop Solar Plants for FY 2021-22 as under:

Sl. No.	Capacity Range*	Benchmark Cost (INR/Wp)
		General Category States /UTs
1.	1 kWp	51100
2.	2 kWp	46980
3.	3 kWp	45760
4.	Above 3-10 kWp	44640
5.	Above 10-100 kWp	41640
6.	Above 100-500 kWp	39080

*The project capacity shall be considered as Inverter capacity or the SPV module array capacity, whichever is lower, for the purpose of determining CFA.

Note:

- i. All the above benchmark costs are inclusive of total system cost including Photo-Voltaic solar modules, inverters, balance of systems including cables, Switches/Circuit Breakers /Connectors/ Junction Boxes, mounting structure, earthing, Lightening arrester, local connectivity cost, cost of civil works, foundations etc. and its installation, commissioning, transportation, insurance, comprehensive maintenance charges for five years, other applicable fees and taxes if any(excluding GST)etc. The cost of the data pack and internet connectivity shall be the responsibility of the Vendor for the Comprehensive AMC period of 5 years.
- ii. The above-mentioned benchmark costs are excluding net metering cost and battery back-up costs.
- iii. The above-mentioned benchmark cost is indicative only. All participating DISCOMs under the phase II of the rooftop solar programme will ensure that the rate is discovered through transparent bidding process. **Prevailing MNRE benchmark cost should NOT be considered as the ceiling rate for any bidding agency.**
- iv. The benchmark cost for financial year 2021-22 will be applicable for all LoAs to be issued/empanelment of developers/vendors to be done after Date of issuance of Benchmark Order, by the implementing agencies in States/UTs. Moreover, if revised benchmark cost is issued by the Ministry before the final date of bid submission in any tender, the final date of bid submission shall be extended by minimum 15 days so that the bidders may submit revised bids in accordance with the revised benchmark cost. For such cases, bidders shall not be asked to re-submit any fees/bond, already submitted. The benchmark cost indicated in the LOA issued to an empanelled vendor will be applicable till the project completion timeline specified by MNRE in the sanction order or as specified in the LOA, whichever is earlier.

The CFA structure applicable is as Tabulated below (As per MNRE Guidelines or as applicable at the time of commissioning of the project):

Type of Residential Sector	Central Financial Assistance (CFA) (as percentage of benchmark cost or cost discovered through competitive process, whichever is lower)
Residential sector (maximum up to 3 kW capacity)	40 % of Benchmark Cost/discovered cost, whichever is lower
Residential sector (above 3 kW capacity and up to 10 kW capacity)	40 % up to 3 kW Plus 20% for RTS system above 3 kW and up to 10 kW. (Percentage of benchmark cost/discovered cost, whichever is lower)

Type of Residential Sector	Central Financial Assistance (CFA) (as percentage of benchmark cost or cost discovered through competitive process, whichever is lower)
Group Housing Societies/Residential Welfare Associations (GHS/RWA) etc. for common facilities up to 500 kWp (@ 10 kWp per house), with the upper limit being inclusive of individual rooftop plants already installed by individual residents in that GHS/RWA at the time of installation of RTS for common activity.	20% of Benchmark Cost/discovered cost, whichever is lower

Note: Central Financial Assistance (CFA) disbursement will be governed as per MNRE Office Memorandum No.318/331/2017-GCRT Dated 3rd September 2019 on "Clarification on applicability of CFA individual residential households for installation of rooftop solar system under Phase-II of Grid-connected Rooftop Solar Programme".

- 1.3 On behalf of DISCOMs, which expression shall also include its successors and permitted assigns, hereby invites interested vendors to participate in the bidding process for the selection of Empanelment of vendors for implementation of Grid-connected Rooftop Solar Projects for 12 MWp aggregate capacity as per RFP.
- 1.4 The bidders who are techno-commercially qualified wish to provide their services on the project cost discovered through transparent E-bidding process, shall be empanelled for implementation of the said project. The CFA shall be calculated as indicated in the above table on the basis of discovered price or MNRE benchmark cost, whichever is lower. The tenure of empanelment shall be 15 months from date of Sanction to the Delhi DISCOMs or as extended by MNRE. The implementing agencies shall ensure that the tenure of empanelment shall be in synchronization with the timelines of MNRE sanction. Depending on requirement/contingencies and with prior approval of MNRE, *DISCOMs* may **extend the tenure of empanelled vendors for implementation of the project.**
- 1.5 The Bidders are advised to read carefully all instructions and conditions appearing in this document and understand them fully. All information and documents required as per the bid document must be furnished. Failure to provide the information and/ or documents as required may render the bid technically nonresponsive.
- 1.6 The bidder shall be deemed to have examined the bid document and MNRE scheme, to have obtained his own information in all matters whatsoever that might affect carrying out the works in line with the scope of work specified elsewhere in the document at the offered rates and to have satisfied himself to the level of sufficiency. The bidder shall be deemed to be in knowledge of the scope, nature and magnitude of the works and requirement of materials, equipment, tools and labour involved, wage structures and as to what all works, he has to complete in accordance with the bid documents irrespective of any defects, omissions or errors that may be found in the bid documents.

2.0 SIZE OF THE PROJECTS AND BID DETAILS:

2.1 The size of each project shall be in the range for each part as under:

- CAPEX Part-A : 1 kWp to 3 kWp.
- CAPEX Part-B : Above 3 kWp to 10 kWp.
- CAPEX Part-C : Above 10 kWp to 100 kWp.
- CAPEX Part-D : Above 100 kWp to 500 kWp.
- RESCO Part- A : 25 kWp to 100 kWp.
- RESCO Part-B : Above 100 kWp to 500 kWp.

The above capacity ranges **are indicative**. One part may however comprise of several rooftop units. Each Rooftop unit can separately connect with the grid through separate meters. *Bidders are advised to consider upto 1 meter height of the module mounting structure in their price bid. Subsidy will be applicable on cost discovered with structure height of 1 m only.*

2.2 Entire allocated capacity is bifurcated into different parts, bidders may quote one or more than one part:

Aggregate Capacity 12 MW (06 Different Parts)

1	2	3	4	5 (DISCOM wise capacity allocation in MW)			6	7
S. No	Category	Proposed Capacity	*Aggregate Capacity (12 MW)	BRPL (5 MW)	BYPL (3 MW)	TPDDL (4 MW)	Min Capacity (kW) <i>(for which the Bidder can submit its Bid)</i>	Max Capacity (kW) <i>(for which the Bidder can submit its Bid)</i>
1	CAPEX Part-A	1 kW to 3 kW	2.1	0.8	0.6	0.7	30	180
2	CAPEX Part-B	Above 3 kW to 10 kW	3.2	1.3	0.8	1.1	80	240
3	CAPEX Part-C	Above 10 kW to 100 kW	2	0.8	0.5	0.7	70	200
4	CAPEX Part-D	Above 100 kW to 500 kW	1.8	0.7	0.5	0.6	105	500
5	RESCO Part- A	25 kW to 100 kW	1	0.5	0.2	0.3	50	100
6	RESCO Part – B	Above 100 kW to 500 kW	1	0.5	0.2	0.3	105	500
7	Open Category		0.9	0.4	0.2	0.3		

** Maximum bid capacity for which bidder can submit its bid shall be lower of the DISCOM wise capacity allocation in MW or Max bid capacity as indicated in column No 7 of above Table. Accordingly, allocation shall be done.*

The bids are invited from the prospective bidders for the tendered capacity based on the Project Cost. In this part, bidders are to be required to quote the Project Cost for the capacity proposed by the bidder (*in between the minimum and maximum range*) for each DISCOM. CFA shall be provided to the successful bidders as per the provisions laid down in the MNRE scheme.

However, MNRE vide Office Memorandum **No. 318/331/2017- Grid Connected Rooftop Dated 19th February 2021** has kept a provision of minimum **10% of the total allocated capacity under the tender to L1 bidder** and If any of the empanelled vendors do not execute the allocated capacity, as a penalty his/her bank guarantee will be encashed and he/she shall be blacklisted for 5 years from all Government Tenders.

- 2.3 Bids not in conformity with above provisions & sub-clauses of **Clause 2.2** will not be considered and shall be treated as nonresponsive/incomplete and will be summarily rejected by the BYPL.
- 2.4 Further, Empanelled Vendors to whom letter of allocation have been issued will be allowed to submit single proposal for approval and issue of consent letter by DISCOM for RTS installation, as under:

S. No.	Category	Minimum Capacity for Project sanction (in kW)
1.	CAPEX Part-A	1
2.	CAPEX Part-B	3
3.	CAPEX Part-C	10
4.	CAPEX Part-D	100
5.	RESCO Part -A	25
6.	RESCO Part - B	100

Single consent letter will be issued for the minimum capacity submitted by the bidder for approval as per above.

- 2.5 Offer of the Vendors who will quote less than the minimum tendered capacity in respective category will be treated as non-responsive and shall be summarily rejected. However, Offer of the Vendors who have quoted more than the maximum tendered capacity in respective category will be limited to the maximum category wise tendered capacity.

3.0 Components/Package of Grid Connected Rooftop Solar PV System:

The bidders shall quote price of the complete package essentially covering -“design, supply, erection, testing and commissioning including warranty and 05 years of comprehensive operation & maintenance for CAPEX and 25 years comprehensive operation & maintenance under RESCO of grid-connected rooftop solar PV plant”. For the purpose of this tender, the components of a Grid

Connected Rooftop Solar PV System shall essentially comprise but not be limited to crystalline solar PV Panels/modules of required number, Inverters/PCU, module mounting structures of minimum 300mm ground clearance at the lowest point from the roof surface, total Cable/wiring up to 50 m in length (consumer to pay for additional length), cable conduits, required array junction boxes, DC distribution box, AC distribution box, various connectors, nut- bolts, civil and mechanical works, Protection-Earthing, lightning, surges, drawling & manual and other miscellaneous works. Empanelled vendor has to ensure the installation of ELCB at the consumer premises before raising the call for site inspection, however, the cost of ELCB shall be borne by the vendor.

The price quoted by the bidders shall be exclusive of GST (Goods and Services Tax).

The empanelled vendor shall not be allowed to charge any extra amount other than the L-1 price for the package of Grid Connected Rooftop Solar PV system as indicated above. However, in case of any customization desired by the beneficiary/consumer, the vendor is allowed to charge extra amount to the beneficiary/consumer, on actual basis, subject to signing of a declaration in this regard in the format attached at Annexure-Y. The DISCOM/MNRE shall not be held responsible for any dispute arising out of this agreement.

4. INSTRUCTIONS TO THE BIDDERS

- 4.1 Bidders should not be blacklisted from any of the agency with direct or indirect control of Central Government Ministries/ Departments/ Public Sector Units (PSUs)/ Institutions, State Government Departments/ Organizations /Institutions etc.
- 4.2 Bidder should have valid PAN & GST Registration Numbers as per statutory requirement. In addition to GST certification, Only Udyam certificate valid for MSME
- 4.3 Bidder must meet the eligibility criteria independently as Bidding Company. Bidder will be declared as a Qualified Bidder based on meeting the eligibility criteria (Technical and Financial) and as demonstrated based on documentary evidence submitted by the Bidder during the bidding process.
- 4.4 Bidding Consortium is not allowed in this Bidding Process.
- 4.5 Financial Consortium is **not allowed** in this Bidding Process. Further in-case where the bidding company has used the financial eligibility criteria of its parent company then it needs to be ensured that no change in the controlling equity of the Bidding Company is done before 2 years from the date of commissioning of the sanctioned capacity, requires prior approval of respective Delhi *DISCOM*.
- 4.6 Bidder can submit only one bid against RFP.
- 4.7 Bidder can however use the technical and financial strength of its Parent Company to fulfil the Technical and/or Financial Eligibility criteria. In such case, Bidders shall submit an Undertaking from the Parent Company as per **Format - 9** and also furnish a certificate of relationship of Parent

Company or Affiliate with the Bidding Company as per **Format-8**, Company Secretary certificate towards shareholding pattern of the Parent Company and the Bidding Company along with a Board resolution from the Parent Company.

5 TENDER

5.1 SUBMISSION OF BID-PARTS

TECHNO – COMMERCIAL DOCUMENTS (*To be submitted in One Original and One Soft Copy - USB Flash Drive*) for each part. If any discrepancies found in the documents, hard/original copy would be considered for evaluation.

The bidders are required to submit the following documents *in during Technical Bid Submission*. All required documents should be submitted in a Sealed Envelope, failing which the technical bids will not be opened.

- i. Covering letter as per **Format-1**.
- ii. General Particulars as per **Format-2**.
- iii. Original copy of the Bid Bond /EMD as per **Format -3** in the form of a Bank Guarantee. Check list as per **Format-5**. However, MSMEs are required to submit a **"Bid Security Declaration"** Letter on non-judicial stamp of appropriate value.
- iv. DD/ Bankers cheque / Online Payment Transfers (IMPS / NEFT / RTGS) for an amount as per bid document, drawn in favour of "BSES YAMUNA POWER LIMITED" against payment of tender processing fee.
- v. Original Power of Attorney supplemented with Board resolutions (as per **Format-6**)
- vi. Financial eligibility criterion (as per **Format -7**).
- vii. Certificate for certificate of relationship of Parent Company or Affiliate with the Bidding Company (as per **Format -8**), if required.
- viii. Undertaking from the Financially Evaluated Entity or its Parent Company/ Ultimate Parent Company (as per **Format -9**), if required.
- ix. Original copy of the Consortium Agreement, if any (**as per Format-10**)
- x. Share Holding certificate, if any (as per **Format -11**).
- xi. Self-Declaration, as per **Annexure-G**
- xii. Certificate of incorporation and updated Memorandum of Association (MoA).
- xiii. Scanned copy of MSME/DIPP registration certificate under Renewable Energy sector.
- xiv. Declaration on bidder's Letterhead for Non blacklisting from any Government Departments/ Public Sector Units (PSUs) / Distribution Companies etc.
- xv. PAN & GST Registration, however State GST Registration is mandatory for MSME Bidders.
- xvi. Technical Eligibility Criterion: scanned copy of the Commissioning certificate and Work order/ Contract/ Agreement/ from the Client/ Owner.
- xvii. Financial Eligibility Criterion: scanned copy Balance showing Average Annual Turnover or Net worth.
- xviii. Acceptance of RFP terms and conditions including amendments & clarification on letter head of the bidder.

5.2 -

5.3 -

5.4 Special Note on Security and Transparency of Bids

If variation is noted between the information contained in the Electronic Form and the 'Hard Copy', the contents of the Hard Copy and details shall prevail. In such cases, if the information/declaration/details contained in the document is found to be false, forged, incomplete or in-eligible, the bid shall be summarily rejected, and the tendering authority may initiate blacklisting/criminal/legal proceedings depending on the severity of the case.

In case of any discrepancy between the values mentioned in figures and in words, the value mentioned in words shall prevail.

Other Instructions

It shall be the sole responsibility of the bidders to regularly visit the website/tender portal/state portal/SPIN portal for any amendment or update on the tender process of project.

5.5 ELIGIBILITY CRITERIA:

5.5.1 General Condition:

To meet the General Conditions of Eligibility Criteria, Bidders must have one of the following credentials:

Bidder should have one of the following:

The Bidder should be either a body incorporated in India **under the Companies Act, 1956 or 2013** including any amendment thereto.

Or

The Bidders should be a **Limited Liability Partnership firm.**

Or

The Bidders should be a **Proprietor firm.**

The Bidder should have valid PAN & GST registration certificate for General Bidder, however for MSMEs, State GST Registration is mandatory.

TECHNICAL ELIGIBILITY CRITERIA:

The Bidder should have designed, supplied, installed & commissioned Grid connected Solar PV Power Projects having aggregate capacity not less than **250 kWp** which should have been commissioned prior to submission of bids. Vendor must submit scanned copy of the Commissioning certificate and Work order/ Contract/ Agreement/ from the Client/ Owner shall be submitted. The bids of only those bidders who qualify the minimum technical eligibility criterion shall be considered for determination of L-1 price.

Open Category: The bidders who do not have any prior experience or do not have minimum required prior experience in installation of grid connected solar PV power projects, shall not be allowed to submit price bids. Such bidders will be allowed to implement rooftop solar projects subject to matching of L-1 price. The tendering authority reserves the right to allocate/sanction project capacities to such bidders in batches.

FINANCIAL ELIGIBILITY CRITERIA:

The implementing agencies shall satisfy themselves with the eligibility criterion in accordance with the requirement of the respective states/areas and make suitable modifications in the same.

FOR GENERAL BIDDERS:

1) (1-10 kW)

The Bidders should have minimum Average Annual Turn Over or Net worth as indicated below to qualify under Financial Eligibility Criteria:

The **Average Annual turnover** of Rs. 2 Crore per MW of the capacity offered in its Bid in any one of the last 3 financial years preceding the Bid Deadline, subject to the condition that the Bidder should at least have completed one financial year.

OR

Net worth equals to or greater than the value calculated at rate of Rs1.5 Crore per MW of capacity offered by the Bidder in its Bid. The Computation of Net worth shall be based on unconsolidated audited annual accounts of the last financial year immediately preceding the Bid Deadline. Share premium can be included in the Net-worth calculation in case of listed companies in India only.

2) (10-500 kW)

The **Average Annual turnover** of Rs. 2 Crore per MW of the capacity offered in its Bid in any one of the last 3 financial years preceding the Bid Deadline, subject to the condition that the Bidder should at least have completed one financial year.

OR

Net worth equal to or greater than the value calculated at rate of Rs. 1.5 Crore per MW of capacity offered by the Bidder in its Bid. The Computation of Net worth shall be based on unconsolidated audited annual accounts of the last financial year immediately preceding the Bid Deadline. Share premium can be included in the Net-worth calculation in case of listed companies in India only.

In case of more than one Price Bid submitted by the Bidder, the financial eligibility criteria must be fulfilled by such Bidder for the sum total of the capacities being offered by it in its Price Bid.

Open Category: The bidders willing/eligible to apply under open category, as indicated above, shall not be allowed to quote price in the bid and can only get empanelled at L-1 rate discovered in the tender.

The formula of calculation of net-worth shall be as follows:

Net-worth = (Paid up share capital) + {(Free reserves – Share premium) + Share premium of listed companies} - (Revaluation of reserves) - (Intangible assets) - (Miscellaneous expenditure to the extent not written off and carry forward losses).

For the purposes of meeting financial requirements, only unconsolidated audited annual accounts

shall be used. However, audited consolidated annual accounts of the Bidder may be used for the purpose of financial requirements provided the Bidder has at least twenty six percent (26%) equity in each company whose accounts are merged in the audited consolidated accounts and provided further that the financial capability of such companies (of which accounts are being merged in the consolidated accounts) shall not be considered again for the purpose of evaluation of the Bid.

Bidders shall furnish documentary evidence as per the **Format-7** (online as well as offline), duly certified by Authorized Signatory and the Statutory Auditor/ Practicing Chattered Accountant of the Bidding Company in support of their financial capability.

FOR STATE REGISTERED MSME:

The Bidders who are local MSME and registered under the MSME Development Act, 2006 in the NCT of *Delhi* as per Section D, Division 35, Group 351 having NIC 5-digit code of 35105 (Electric power generation using solar energy) are exempted from the financial eligibility requirements. The Bidder being a local MSME must submit a valid copy of the certificate of registration issued by an appropriate authority. This is applicable only for the State registered MSMEs.

Or

Vendors registered with DIPP under Renewable Energy sector are eligible to participate in the Tender **Part A and B** only in line with Office Order of Department for Industrial Policy & Promotions issued vide no. 12 (11)/2017-SI dated 22.06.2017, which says that Central Ministries/ Departments may relax condition of prior turn over & prior experience in Public procurement subject to meeting of quality & technical specifications by Start-ups.

6. BID SUBMISSION BY THE BIDDER

- 6.1 **Bids are required to be submitted in offline mode for each part separately.** The offline documents are to be submitted in a single sealed cover comprises the list of documents as per **Clause 5.3.**
- 6.2 The envelope should be superscribed as **"Offline Documents for RFP – Empanelment of vendors for Implementation of Grid connected Roof Top Solar PV System for CAPEX PART - & kWp capacity"** and **RESCO part -&.....kWp capacity** along with the details of RFP No., "Bid Due Date and Time" on the envelope.
- 6.3 The Bidders can send Offline Documents either by registered post; or speed post; or courier; or by hand delivery, so as to reach BYPL by the Bid Submission Deadline. Documents submitted by telex/telegram/fax/e-mail shall not be considered under any circumstances. BYPL shall not be responsible for any delay in receipt of the Bid. Any Bid received after the Bid Deadline shall be returned unopened. BYPL shall not be responsible for premature opening of the Price Bids in case of non-compliance of above.
- 6.4 All pages of the offline documents, except for the Bid Bond/EMD/ Bid Security Declaration on non-judicial stamp papers (in case of MSMEs), and any other document executed on non-judicial stamp paper, forming part of the Bid and corrections in the Bid, if any, must be signed by the authorized

signatory on behalf of the Bidder. No change or supplemental information to a Bid will be accepted after the Bid Deadline, unless the same is requested for by the bidder and acceptance of same by the BYPL.

- 6.5 Strict adherence to the formats wherever specified, is required. Wherever, information has been sought in specified formats, the Bidder shall refrain from referring to brochures /pamphlets. Non-adherence to formats and / or submission of incomplete information may be a ground for declaring the Bid as non-responsive. Each format has to be duly signed and stamped by the authorized signatory of the Bidder then scanned and uploaded in the Techno- Commercial Bid Part.
- 6.6 The Bidder shall furnish documentary evidence in support of meeting Eligibility Criteria as indicated in the RFP. Bidder shall also furnish unconsolidated/ consolidated audited annual accounts in support of meeting financial requirement, which shall consist of unabridged balance sheet, profit and loss account, profit appropriation account, auditor's report, etc., as the case may be of Bidding Company or Financially Evaluated Entity for any of the last three (3) financial years immediately preceding the Bid Deadline which are used by the bidder for the purpose of calculation of Annual Turnover or of last Financial Year in case of Net Worth.
- 6.7 If the envelope (Covering Envelope) is not enclosed and not super scribed as per the specified requirement, BYPL will assume no responsibility for the Bid's misplacement or premature opening.

The sealed envelope shall be addressed to:

BSES Yamuna Power Ltd, Reception, Ground Floor, Shaktikiran Building, Karkardooma, Delhi 110032

- i. RFP NO CMC/BY/21-22/RB/SV/39
- ii. Offer for installation of Solar Power Plant under "*Grid Connected Rooftop Solar Power Plant Scheme*" under RFP for Empanelment of Vendors.
- iii. *Validity of the offer:* 12 months from the date of issuance of Letter of Allocation (LoA).
- iv. Name and Address of the Firm.
- v. Bid Bond and Bid Processing Fee details.
- vi. Bid Capacity Quoted: kWp
- vii. Bid Quoted for Capex Part: A/B/C/D or RESCO Part A/B

7. BID SUBMITTED BY A BIDDING COMPANY

The Bidding Company should designate one person to represent the Bidding Company in its dealings with DISCOM's. The person should be authorized to perform all tasks including, but not limited to providing information, responding to enquires, signing of Bid etc. The Bidding Company should submit, along with Bid, a Power of Attorney in original (**as per Format-6**), authorizing the signatory of the Bid.

8. CLARIFICATIONS AND PRE-BID MEETING

- 8.1 The DISCOM will not enter into any correspondence with the Bidders, except to furnish clarifications on RFP Documents, if necessary. The Bidders may seek clarifications or suggest amendments to RFP online, also soft copy by e-mail to reach the designated officials of DISCOM at the address, date and time mentioned in Bid information sheet. However, any amendment in the RFP shall be at the sole discretion of the tendering authority and in accordance with the MNRE scheme.
- 8.2 The Bidder(s) or their authorized representative(s) is /are invited to attend pre-bid meeting(s), which will take place on date(s) as specified in Bid information sheet, or any such other date as notified by DISCOM on its portal/website.
- 8.3 The purpose of the pre-bid meeting will be to clarify any issues regarding the RFP including in particular, issues raised in writing and submitted by the Bidders.
- 8.4 DISCOM is not under any obligation to entertain/ respond to suggestions made or to incorporate modifications sought for.

9. AMENDMENTS TO RFP BY DISCOM

- 9.1 At any time prior to the deadline for submission of Bids, DISCOM may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RFP document by issuing clarification(s) and/or amendment(s). However, any amendment in the RFP shall be at the sole discretion of the tendering authority and in accordance with the MNRE scheme.
- 9.2 The clarification(s)/ amendment(s) (if any) shall be notified on website and no separate communication in this regard would be sent to the bidders.
- 9.3 DISCOM will not bear any responsibility or liability arising out of non-receipt of the information regarding Amendments in time or otherwise. Bidders must check the website for any such amendment before submitting their Bid.
- 9.4 In case any amendment is notified after submission of the Bid (prior to the opening of Techno-Commercial Bid), due date /time shall be extended and it will be for the Bidders to submit fresh Bids/supplementary bids by the revised date notified by the DISCOM for the purpose.
- 9.5 All the notices related to RFP, which are required to be publicized shall be uploaded on BYPL website address.

10. BIDDING PROCESS

10.1 BID FORMATS – For each part

The Bidders are advised to submit bids against each Six Parts i.e. for CAPEX Part A, Part B, Part C and Part D and RESCO Part A & B as in the manner provided in **Clause 6 of Section-I** and submit requisite document as per **Clause 5.3**.

PRICE BID(S): The Bidders are advised to submit bids against each Six Parts i.e. for CAPEX Part A, Part B, Part C and Part D and RESCO Part A & B separately as per **SECTION-IV** against each part in sealed envelope only.

The implementing agencies shall also identify the quantum of capacity for Part-A, Part-B, Part-C and Part-D and also for respective license area upon the mode of implementation, considering 10%

of the capacity to be implemented by the L-1 bidder. In case bids are not received for a particular DISCOM, depending on the mode of implementation, re-tendering would be done to identify L-1 price for such cases. In the re-tendering, the bidders who have already participated in the tender will not be allowed to participate. In case L-1 price is not discovered for such areas through re-tendering, L-1 price for such areas would be identified by MNRE & implementing agencies from among the prices already discovered through first tender. All firms willing to match the L-1 price thus identified would be allowed to implement projects in such areas and for such cases the condition for 10% capacity implementation by L-1 would not be applicable. *Bidders are advised to consider 1 meter height of the raised structure in their price bid. Subsidy will be applicable on cost discovered with structure height of 1 m only.*

10.2 **BID DUE DATE**

The Bidder should submit the offline Bid documents so as to reach the address indicated below by on or before the technical opening date and time.

BSES Yamuna Power Ltd, Reception, Ground Floor, Shaktikiran Building, Karkardooma, Delhi 110032

Last Date of Receipt of Bid Documents: 24.02.2022, 15:00 PM.

10.3 **VALIDITY OF BID**

10.3.1 The bid and the Price Schedule included shall remain valid for the validity of MNRE sanction or timeline specified in the work order, whichever is earlier. The bidder shall have no right to withdraw, revoke or cancel his offer or unilaterally vary the offer submitted or any terms thereof during the entire process. In case of the bidder revoking or cancelling his offer or varying any term & conditions in regard thereof or not accepting letter of allocation, DISCOM shall forfeit the furnished Bid Bond/ EMD. Confirmation regarding the Bid offer validity shall be clearly mentioned in the covering letter.

10.3.2 In exceptional circumstances when letter of allocation is not issued, DISCOM may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing. The validity of submitted Bid Bond/EMD as per **Clause 10.9** shall also be suitably extended. A Bidder may refuse the request without forfeiting its Bid Bond / EMD. A Bidder granting the request will neither be required nor permitted to modify the articulated terms and conditions in any manner.

10.4 **METHOD OF BID SUBMISSION**

Bidders have to submit the bid against each part separately as per the procedure laid down under **Clause-6**.

10.5 **COST OF BIDDING**

The bidder shall bear all the costs associated with the preparation and submission of their offer, and the DISCOM will not be responsible or liable for those costs, under any conditions. The Bidder shall not be entitled to claim any costs, charges and expenses of and incidental to, or incurred by him, through or in connection with submission of bid even though DISCOM may elect to modify/withdraw the invitation of Bid.

10.6 **BID BOND/EMD (To be submitted in original form offline only)**

The Bidder shall furnish Interest free Bid Bond in the form of Bank Guarantee (BG) in favour of "BYPL", payable at Delhi. The validity of Bid Bond/EMD shall be for a period of one year from the Bid Deadline. Bid bond/EMD shall be submitted separately for each part. The Bid Bond/EMD of unsuccessful bidders shall be returned within 30 days from the date of issue of List of Empanelled Vendors. Bid bond(s) of Empanelled Vendor shall be released after the receipt of PBG in the format prescribed by DISCOM and after the receipt of confirmation of their PBG's from their respective banker. The formula applicable to calculate the Bid Bond amount under different parts will be:

Bid Bond = INR 10 Lacs X bid capacity in MWp

Bidders registered with Small Scale Industries/ National Small Scale Industries Corporation / DIPP /MSME registered under Renewable sector and Govt. Deptt/ PSU shall be exempted from the deposition of Bid Bond /EMD in all parts, provided the quoted value of the tender is within the **monetary limit** for the said unit set by NSIC/ State Director of Industries. *Bidders seeking exemption should enclose a photocopy of valid registration certificate giving details such as validity, stores and monetary limits failing which they run the risk of their tenders as ineligible.*

The Bid Bond shall be denominated in Indian Rupees and shall:

- i. Bank Guarantee shall be from List of banks as given in **Annexure-B**.
- ii. BG submitted in its original form, copies will not be accepted, and remain valid for a minimum period of 12 months from the date of Techno Commercial bid opening, or beyond any period of extension subsequently requested under **Clause 10.6.2**. MSMEs are exempted from submission of Bid Security /EMD / Bid Bond, subject to the condition that the quoted value of the tender is within the monetary limit for the said unit set by NSIC/State Director of Industries. However, MSMEs are required to submit a "Bid Security Declaration Letter" on non-judicial stamp paper of appropriate value as given in **Annexure-V**.
- iii. Empanelled Vendors shall sign and stamp the Letter of Allocation (LoA) and return the signed & stamped duplicate copy of the same to the address of DISCOM within 30 days from the date of its issue.
- iv. The Bid Bond /EMD shall be forfeited without prejudice to the Bidder being liable for any further consequential loss or damage incurred to the plant under following circumstances:
 - a. Hundred percent (100%) of Bid Bond / EMD amount of the proposed capacity, if a Bidder withdraws/revokes or cancels or unilaterally varies their bid in any manner during the period of Bid Validity specified in the RFP document and in accordance with the **Clause 10.6.2** of Section-I.
 - b. Hundred percent (100%) of Bid Bond /EMD amount of the proposed capacity, if the Empanelled Vendor fails to unconditionally accept the Letter of Intent (LoI)/LOA/Work Order, whoever is issued first, within 15 days from the date of its issue.
 - c. Hundred percent (100%) of Bid Bond amount of the proposed capacity, if the Empanelled

Vendor fails to furnish the "Performance Bank Guarantee" within 30 days of issuance of Letter of Intent (LoI)/LOA/Work order, whichever is issued first.

10.7 **PERFORMANCE BANK GUARANTEE (PBG to be submitted in Bank Guarantee format only)**

Performance Bank Guarantee:

The bidder has to submit the PBG in the following manner:

Performance Bank Guarantee for Installation and Commissioning (I&C): The bidder shall furnish the performance bank guarantee for installation and commissioning based on the allocated capacity.

PBG amount = INR per kW [3% X *Insert the Amount (cost discovered)* X Allocated Capacity in kWp].

The PBG shall be submitted within 30 days from the date of issue of LOI/LOA/Work Order, whichever is issued first, and be valid for 15 months. Bidders should submit Single PBG based on the allocated capacity in each category. The Performance Bank Guarantee shall be released after completion of the empanelment period with the compliance of entire obligations in the contract.

Further, any delay in submission of PBG for I & C period beyond 60 days, DISCOM at its sole discretion may cancel the allocated capacity and forfeit 100% of Bid bond. Such Vendors (who have not submitted PBG) shall be debarred from participating in DISCOM's future tenders for a period as decided by Competent Authority. Part PBG shall not be accepted.

Performance Bank Guarantee for Operation and Maintenance: The bidder shall furnish the performance bank guarantee for O&M based on the installed capacity.

PBG amount = INR per kW [3% X *Insert the Amount (cost discovered)* X Allocated Capacity in kWp].

The PBG shall be submitted within 30 days from the end of the empanelment period and be valid for 05 year + 3 months. Bidders should submit Single PBG based on the installed capacity in each category. The Performance Bank Guarantee shall be released after completion of the O&M period with the compliance of entire obligations in the contract.

Further, any delay in submission of PBG for O&M period beyond 60 days, DISCOM at its sole discretion may forfeit 100% of PBG for the I&C period. Such Vendors (who have not submitted PBG) shall be debarred from participating in DISCOM's future tenders for a period as decided by Competent Authority. Part PBG shall not be accepted.

The Performance Bank Guarantee shall be denominated in Indian Rupees and shall be in the following forms: Bank guarantee from the List of banks as given in **Annexure-B**.

Notwithstanding the above mentioned clauses on submission of PBG, the DISCOM shall be at liberty to make suitable provisions in the tender to deduct PBG from payment of CFA to empanelled vendor for each system and return the deducted amount upon submission of PBG.

The PBG shall be forfeited as follows without prejudice to the Bidder being liable for any further consequential loss or damage incurred to the Plant.

- i. If the Empanelled Vendor is not able to commission the projects to the satisfaction of DISCOM, PBG (for I&C period) amount on pro-rata basis by the empanelled vendor shall be 100% encashed.
- ii. In all the above cases corresponding unidentified/non-commissioned capacity shall stand cancelled.
- iii. If the empanelled vendor is unable to submit the PBG (for O&M period), the PBG (for I&C period) shall be encashed.

Any quality or operational aspect and non-performance during the O&M phase shall be amicably attempted for resolution by customer and vendor between themselves. In case of non-resolution the matter may be referred to respective DISCOM. The vendor shall ensure compliance of O&M terms and submit to respective DISCOM an ATR in case the matter is highlighted to respective DISCOM.

10.10.1 OPENING OF BIDS

Offline Document Envelope, of the Bidders shall be opened at 25.02.2022 on *15:00 Hrs through Online Zoom Meeting*, bidder may submit their request for user & password via email to Mr Sumit Verma, E-mail: *sumit.ra.verma@relianceada.com* & Mr Santosh Singh, E-mail: *Santosh.Kum.Singh@relianceada.com* in the presence of one representative from each of the Bidders who wish to be present.

The bidders are required to submit the offline documents in a Sealed Envelope as per **clause 10** above, failing which the Technical bids will be considered as non-responsive.

Name of the Bidder and capacity offered for in Part-A, Part B, Part-C, part D, part E & part F shall be read out to all the Bidders at the time of opening of **Envelope-I** for each part.

10.10 RIGHT TO WITHDRAW THE RFP AND TO REJECT ANY BID

- 10.10.1 This RFP may be withdrawn or cancelled by the DISCOM at any time without assigning any reasons thereof. BYPL further reserves the right, at its complete discretion, to reject any or all of the Bids without assigning any reasons whatsoever and without incurring any liability on any account. However, if the RFP is withdrawn, the tender fees shall be returned to the participating vendors.
- 10.10.2 DISCOM reserves the right to interpret the Bid submitted by the Bidder in accordance with the provisions of the RFP and make its own judgment regarding the interpretation of the same. In this regard the DISCOM shall have no liability towards any Bidder and no Bidder shall have any recourse to the DISCOM with respect to the selection process. DISCOM shall evaluate the Bids using the evaluation process specified in Section -I, at its sole discretion. DISCOM decision in this regard shall be final and binding on the Bidders.
- 10.10.3 DISCOM reserves its right to vary, modify, revise, amend or change any of the terms and conditions of the Bid before submission. The decision regarding acceptance of bid by DISCOM

will be full and final.

10.11 ZERO DEVIATION

- 10.11.1 This is a ZERO Deviation Bidding Process. Bidder is to ensure compliance of all provisions of the Bid Document and submit their Bid accordingly. Tenders with any deviation to the bid conditions shall be liable for rejection.

10.12 EXAMINATION OF BID DOCUMENT

- 10.12.1 The Bidder is required to carefully examine the Technical Specification, Terms and Conditions of Contract, and other details relating to supplies as given in the Bid Document.
- 10.12.2 The Bidder shall be deemed to have examined the bid document including the agreement/ contract, to have obtained information on all matters whatsoever that might affect to execute the project activity and to have satisfied himself as to the adequacy of their bids. The bidder shall be deemed to have known the scope, nature and magnitude of the supplies and the requirements of material and labour involved etc. and as to all supplies, he has to complete in accordance with the Bid document.
- 10.12.3 Bidder is advised to submit the bid on the basis of conditions stipulated in the Bid Document. Bidder's standard terms and conditions if any will not be considered. The cancellation / alteration / amendment / modification in Bid documents shall not be accepted by DISCOM.
- 10.12.4 Bid not submitted as per the instructions to bidders is liable to be rejected. Bid shall confirm in all respects with requirements and conditions referred in this bid document.

B: CONDITIONS OF CONTRACT

1. SCOPE OF WORK

- 1.1 The Bidders shall be obliged to complete the Work as per the articulated detailed Scope of work under **Clause No. 1 and in accordance with the package of Grid Connected Rooftop Solar PV project defined above.**

2. PROJECT COST

- 2.1 The Project cost shall include all the costs related to above Scope of Work. Bidder shall quote for the entire facilities on a "single responsibility" basis such that the total Bid Price covers all the obligations mentioned in the Bidding Documents in respect of Design, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance (for a period of 5 years), goods and services including spares required if any during O&M period. The Bidder has to take all permits, approvals and licenses, insurance etc., provide training and such other items and services required to complete the scope of work as mentioned above.
- 2.2 The Project cost is on lump sum turnkey basis and the bidder is responsible for the entire Scope of work as per RFP.
- 2.3 The Project cost shall remain firm and fixed and shall be binding on the Successful Bidder till completion of work for payment of CFA amount irrespective of his actual cost of execution of the project. No escalation will be granted on any reason whatsoever. The bidder shall not be entitled to claim any additional charges, even though it may be necessary to extend the completion period for any reasons whatsoever.
- 2.4 The Project cost shall be **inclusive of cost of all components and duties/taxes/insurance during transit/purchase of materials.** The prices quoted by the firm shall be complete in all respect and no price variation /adjustment shall be payable by DISCOM. However, the prices shall be exclusive of GST.
- 2.5 Operation & Maintenance of Solar PV Power Plant would include wear, tear, overhauling, machine breakdown, and replacement of defective modules, invertors / Power Conditioning Unit (PCU) spares, consumables & other parts for a period of 05 years projects.
- 2.6 The Project cost shall be specified in consent letter based on Empanelled Vendor's quote for each project. The project cost shall be in accordance with all terms, conditions, specifications and other conditions of the Contract as accepted by the DISCOM and incorporated into the consent letter.
- 2.7 The Bidder shall complete the Price Bid as per applicable **Formats** online only (Section-IV) furnished in the RFP Documents.
- 2.8 INSURANCE**
- 2.8.1 The Empanelled Vendor in its own interest shall be responsible to take an insurance policy, if required, for all the materials to cover all risks and liabilities for supply and storage of materials at site, installation, testing and commissioning. However, this shall not include any insurance of commissioned plant after handing over to the beneficiary.

- 2.8.2 The DISCOM or beneficiary shall not be in any case liable for any third party damages covering loss of human life, engineers and workmen and also covering the risks of damage to the third party/material/equipment/properties during execution of the contract/work. The Empanelled Vendor will be solely responsible for against any damage, loss, injury or death of its employees and representatives arising out of the execution of the work or in carrying out the Contract. Liquidation, Death, Bankruptcy etc., shall be the responsibility of bidder. The empanelled vendors for its own interest is advised to take any insurance for any unforeseen circumstances.

2.9 WARRANTIES AND GUARANTEES

The Empanelled Vendor shall provide warrantee covering the rectification of any and all defects in the design of equipment, materials and workmanship including spare parts for a period of 5 years from the date of commissioning for projects. Period for which there is Under Warranty shut down of Solar PV due to equipment's failure would be added to the warranty period.

2.10 Penalty Provisions

2.10.1 Penalty will be imposed on bidder by DISCOM if following conditions are encountered:

- i. If L1 bidder fails to execute 10% of the total allocated capacity under this tender, as a penalty his/her bank guarantee will be encashed, and he/she shall be blacklisted for 5 years from all government tenders. For any of unidentified capacity/non commissioned capacity, PBG shall be forfeited on pro rata basis as per clause 10.7 of section I.
- ii. If bidders demand for additional amount/remuneration against the installation of work on and above the discovered L1 rate for the identified package. This shall however not be applicable for cases of customized installations such as raised structure etc, as indicated in earlier para.
- iii. If bidders are defaulting in submission of Bank Guarantee/Required Relevant Documents during the bidding/empanelment process.
- iv. If bidders denied implementing projects in allocated districts/regions/clusters etc.
- v. Non- performance of the RTS plant based on PR as mentioned in the **clause No. 2.14.**
- vi. If bidders are failed to comply with DCR, ALMM and other mandatory requirements of Phase-II Guidelines and issued Amendments.
- vii. Penalties may lead to withholding CFA amount or encashment of Partial/full Performance Bank Guarantee and subsequently debarring or blacklisting from the future State/Central Government Tender.

2.11 TYPE AND QUALITY OF MATERIALS AND WORKMANSHIP

- 2.11.1 The design, engineering, manufacture, supply, installation, testing and performance of the equipment shall be in accordance with latest appropriate IEC/ Indian Standards as detailed in the **Section- III (Technical specifications)** of the bid document.
- 2.11.2 The specifications of the components should meet the technical specifications mentioned in **Section III.**
- 2.11.3 Any supplies which have not been specifically mentioned in this Contract but which are necessary for the design, engineering, manufacture, supply & performance or completeness of the project

shall be provided by the Bidder without any extra cost and within the time schedule for efficient and smooth operation and maintenance of the SPV plant.

2.12 OPERATION & MAINTENANCE (O&M) GUIDELINES TO BE MANDATORILY FOLLOWED BY BIDDERS.

2.12.1 The bidder shall be responsible for all the required activities for successful operation and maintenance of the Rooftop Solar PV system for a period of 5 years from the date of commissioning of the plant.

2.12.2 Below mentioned guidelines, shall be followed for O&M practices, which is not limited to **Annexure-D.**

- i. O&M of Solar Power Plant shall be compliant with grid requirements to achieve committed energy generation. As defined in clause 2.10.1.v
- ii. Deputation of qualified and experienced personnel till the O&M period at project site as & when required.
- iii. Quarterly checks of the Modules, PCUs and BoS shall be carried out as a part of routine preventive and breakdown maintenance.
- iv. Immediate replacement of defective Modules, Invertors/PCUs and other equipment as and when required.
- v. Supply of all spares, consumables and fixtures as required. Such stock shall be maintained for all associated equipment and materials as per manufacturer/ supplier's recommendations.
- vi. All the equipment testing instrument required for Testing, Commissioning and O&M for the healthy operation of the Plant shall be maintained by the Bidder. The testing equipment must be calibrated once every 2 years from NABL accredited labs and the certificate of calibration must be kept for reference as required.
- vii. If negligence/ mal-operation on part of the Bidder's operator results in failure of equipment, such equipment should be repaired/ replaced by the Bidder free of cost.

2.12.3 If any jobs covered in O&M Scope as per RFP are not carried out by the contractor/ Bidders during the O&M period, the designated Official shall take appropriate action as deemed fit. *DISCOMs* reserves the right to make surprise checks/ inspection visits at its own or through authorized representative to verify the O&M activities being carried out by the Bidder. ***Failure to adhere to above guidelines will result in penal action including debarring from participation in next tender.***

2.12.4 The Bidders should have their service network in or around *respective DISCOMs*, within a radius of 50 Kms of each DISCOM and shall provide address of service centre in O&M manual. A copy of the same shall also be provided to the respective *DISCOMs*.

2.12.5 The bidder shall use the original parts in case of any fault in the PCU/Inverter during the AMC period of 5 years. In case the original part/parts are not available with the manufacturer of the PCU/Inverter (Based on certificate from the manufacturer), the bidder shall use the new parts of other standard brands of similar specifications available in the market or will use the repaired parts.

- 2.12.6 ***If Bidders are fail to comply with the O&M guidelines, it may lead to the encashment of Performance Bank Guarantee and subsequently debarring or blacklisting from the future State/Central Government Tender.***

2.13 METERING AND GRID CONNECTIVITY

Metering and grid connectivity of the Solar Rooftop Plants under this scheme would be the responsibility of the electricity Distribution Companies (Disom) in accordance with the terms and conditions laid down in bid document and prevailing guidelines/regulation of State Electricity Regulatory Commission (SERC)/ Central Electricity Authority (CEA) and issued amendments.

2.14 PLANT PERFORMANCE EVALUATION

The successful bidder shall be required to meet minimum guaranteed generation with Performance Ratio (PR) at the time of commissioning and related Capacity Utilization Factor (CUF) as per the GHI levels of the location during the O&M period. PR should be shown minimum of 75% at the time of inspection for initial commissioning acceptance to qualify for release of applicable CFA. Minimum Annual generation guarantee of 1100 units per kWp per year should be maintained after considering the degradation of solar PV modules for a period of 5 years after considering the degradation of modules for fulfilling one of the conditions for release of PBG. The PR will be measured at Inverter output level during peak radiation conditions.

2.15 PROGRESS REPORT

The bidder shall submit the progress report to the respective *DISCOMs* during the period of installation in any mode decided by the concerned DISCOM. *DISCOM* will have the right to depute its representatives to ascertain the progress of contract at the premises of works of the empanelled vendors.

2.15.1 Submission of Project Completion Report (PCR)

The Empanelled Vendor shall submit the Project Completion Report in (soft copy and signed copy) after commissioning of the project as per the Scope of RFP to the respective DISCOM as per the Format given in Annexure J. Non submission of the report shall be considered as "Breach of Contract" and shall attract punitive actions as per the relevant provisions of the Contract including non-release of CFA. However, the decision of Engineer-in -charge / DISCOM shall be final in this regard.

2.15.2 Submission of O&M Report (OMR)

The bidder shall prepare quarterly O&M Report as per the Format enclosed at **Annexure H** and submit to DISCOM. The report will be kept by vendor and produce whenever asked by DISCOM.

2.16 INVOICE TO CONSUMER

The selected bidders shall raise the Tax invoice to the consumers after completion of the project as per the **Annexure I**. The tax invoice should contain all invocable items with the applicable tax as per GoI GST slabs. The net invoice amount shall not exceed per kW discovered rate, exclusive of GST. If additional charges have been levied on the consumer for any customization, it shall be

clearly specified in the invoice.

2.17 CHANGE IN LAW

In the event a Change in Law results in any adverse financial loss/ gain to the Empanelled Vendor then, in order to ensure that the Empanelled Vendor is placed in the same financial position as it would have been had it not been for the occurrence of the Change in Law, the Empanelled Vendor/DISCOMs on behalf of residential consumer shall be entitled to compensation by the other party, as the case may be, subject to the condition that the quantum and mechanism of compensation payment shall be determined and shall be effective from such date as decided by the DISCOM's.

In these Guidelines, the term Change in Law shall refer to the occurrence of any of the following events after the last date of the bid submission, including (i) ***the enactment of any new law; or (ii) an amendment, modification or repeal of an existing law; or (iii) the requirement to obtain a new consent, permit or license; or (iv) any modification to the prevailing conditions prescribed for obtaining an consent, permit or license, not owing to any default of the empanelled vendor; or (v) any change in the rates of any Taxes which have a direct effect on the Project.*** However, Change in Law shall not include any change in taxes on corporate income or any change in any withholding tax on income or dividends.

The bidders are required to study carefully the conditions of the tender document, the enclosed specifications and the relevant provision of the relevant BIS/IS/MNRE specifications wherever necessary before submitting the proposal. Technical particulars of the material offered must comply with the enclosed specifications and the relevant provisions of the BIS/IS/MNRE as far as possible.

Any changes in the constitution of the firm/company shall be notified forth with by the Empanelled Vendor in writing to the Company and such change shall not relieve the tenderer from any liability under the contract.

Bidder will have to submit GST registration certificate number and GST clearance certificate from the competent authority concerned along with the proposal without which proposals may not be considered provided that the purchasing authority has reason to believe (to be recorded in writing) that the bidder has not been able to submit clearance certificate of GST on bona-fide grounds, the authority may consider the tender asking the bidder to furnish the certificate later on but in any case before the execution of the agreement by the successful bidder.

The bidder shall sign on each page at the end in token of acceptance of all the terms and it would be attached /uploaded with the proposal along with the declaration. He should also sign at the bottom of each of the pages of his tender.

The authorisation for installing SPV system can be repudiated at any time by the respective DISCOM if the systems are not supplied and installed to its satisfaction. The reasons for repudiation shall be recorded by the respective DISCOM. In case of non-performance in any form and shape of the terms & conditions of the agreement Appropriate Authority, of the respective DISCOM has power

to cancel the authorisation pertaining to the supply and installation of systems.

If a bidder imposes conditions, which are in addition to/or in contravention with the conditions mentioned herein, his tender is liable to be summarily rejected. In any case none of such conditions will be deemed to have been accepted unless specifically mentioned in the letter of authorisation issued by DISCOM.

If any question is raised or issue arises between the consumer and Empanelled Vendor and matter is taken to a consumer court, the DISCOMs and the holding company shall not be responsible in any manner and shall not be made a party in it.

2.18 PROJECT INSPECTION

All project progress will be monitored by the respective *DISCOM* and the projects can be inspected for quality at any time during commissioning or after the completion of the project by officer(s) from MNRE and/or respective *DISCOM* and/or any agency/ experts designated / authorized by MNRE and/or respective *DISCOM* from time to time. *DISCOM* shall depute a technical person from its office or from list of empanelled experts/ agencies updated from time to time for inspection, third party verification, monitoring of system installed to oversee the implementation as per required standards. The cost of inspection at the time of commissioning shall be borne by the Empanelled Vendor. However, if the project is not found to be installed in an appropriate manner, all arrangement for the next visit of the authorized representative of the DISCOM shall be made by the vendor. There shall be no separate charges/fees for the inspections. The inspection shall be broadly governed by the following mechanism:

- 2.18.1 After complete installation of the system, the Bidders shall immediately intimate to DISCOM/DISCOM in writing for such inspections. The DISCOM/DISCOM will complete the inspection of the PV system within ten working days of the receipt of the intimation. Visual inspection shall be carried for 100% of SPV systems. All cost pertaining to this inspection shall be borne by the DISCOM/DISCOM.
- 2.18.2 The material/installation found sub-standard or faulty is to be replaced by the bidder with new material as per the specifications. The systems shall be offered for inspection again after necessary rectification. Expenses for such re-inspection shall be borne by the Bidders. DISCOM at its discretion may also pick up samples from the lot of systems being supplied by the vendor at random from the warehouse for quality check only. If required, samples picked up will be tested for acceptance test as decided by DISCOM at MNRE/ Government approved laboratory in presence of representatives of supplier and DISCOM as per relevant IEC/IS/BIS/ DISCOM specifications.
- 2.18.3 The test results will be binding on the suppliers and DISCOM, in general will not allow re-sampling. If the material fails in any of the acceptance tests carried out, those components that fail the test shall be rejected, and the Bidder shall have to supply and install the new component as per the specifications. The loss of generation during such time when the system is taken away for testing shall be at the cost of the Bidder, who shall compensate the Beneficiary for such loss of generation as per the pro-rata PR as per RFP.

- 2.18.4 The Bidders will offer Solar PV Systems for inspection at their site/warehouse by MNRE or DISCOMS or its authorized quality inspection agency. If required, MNRE/DISCOM may carry out random testing/inspection of SPV systems at the site. However, all costs towards such inspection shall be borne by MNRE/DISCOM
- 2.18.5 If required, DISCOM reserves the right to inspect any number of SPV systems, at the addresses of the beneficiaries given by the Bidders. Pre-dispatch inspection of the components is not mandatory as 100% visual inspection is being carried out by the DISCOM and declaration for DCR modules is being furnished by the bidder. However, pre-dispatch inspection may be carried out by the DISCOM at the works of OEM (Original Equipment Manufacturer), where SPV (Solar Photovoltaic) panels are being manufactured. Any cost towards pre-dispatch inspection shall be solely borne by the Empanelled Vendor. It shall be the utmost duty of the DISCOM that pre-dispatch inspection, if being done, shall not cause delay in implementation of the project and be a basis of extension request/complaints from the vendors of manufacturers.
- 2.18.6 **Cost of Inspection:** All the expenses related to inspection team like lodging, boarding, travelling, air tickets to be borne by the Empanelled Vendor.

2.19 SETTLEMENT OF DISPUTE

- 2.19.1 All disputes and differences arising out of or under the contract including, however, without prejudice to the generality of the aforesaid, any question regarding the existence, validity or termination, in respect thereof, the parties at the first instance shall endeavour to resolve such dispute or differences amicably by mutual consultation.
- 2.19.2 If the parties fail to resolve, the disputes or differences amicably by mutual consent, within 45 days of its arising, the disputes or differences shall be referred to arbitration either party may refer the disputes or differences to arbitration as provided hereinafter, by giving notice in writing to the other party of its intention to refer the disputes or differences to arbitration and such arbitration proceedings shall commence with the receipt of the aforesaid notice by the other party. Any dispute in respect of which a notice of intention to refer the same to arbitration has been given in terms of sub **Clause No. 2.22**, shall be finally settled by arbitration.

2.19.3 IN CASE THE CONTRACTOR IS A PUBLIC SECTOR ENTERPRISE OR A GOVERNMENT DEPARTMENT.

In case the Contractor is a Public Sector Enterprise or a Government Department, the dispute shall be referred by either party for Arbitration to the sole Arbitrator to be nominated by the **Secretary (Power)**, of the Delhi.

2.19.4 IN ALL OTHER CASES

- i. In case the contractor is not a public sector enterprise or a Govt. Deptt. And in all other cases, any dispute referred to arbitration by a party shall be heard by an arbitration panel composed of three arbitrators, in accordance with the provisions as set forth below.

- ii. The DISCOM and the Contractor shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the two arbitrators do not succeed in appointing a third arbitrator within twenty (20) days after the latter of the two arbitrators has been appointed, the third arbitrator shall, at the request of either party, be appointed by the Appointing Authority for third arbitrator who shall be the Secretary (Power), of the State.
 - iii. If one party fails to appoint its arbitrator within thirty-two (32) days after the other party has named its arbitrator, the party which has named an arbitrator may request the Appointing Authority to appoint the second arbitrator.
 - iv. If for any reason an arbitrator is unable to perform its function, the mandate of the Arbitrator shall terminate in accordance with the provisions of applicable laws and a substitute shall be appointed in the same manner as the original arbitrator.
 - v. The venue of arbitration shall be Delhi or a place of mutual consent. The provisions of Arbitration and Conciliation Act, 1996, as amended from time to time shall govern the Arbitration proceedings conducted in respect of the disputes and the differences arising out of or under the contract, except to the extent, otherwise agreed herein by the parties.
 - vi. The decision of a majority of the arbitrators (or of the third arbitrator chairing the arbitration panel, if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction as decree of the court. The parties thereby waive any objections to or claims of immunity from such enforcement.
 - vii. The arbitrator(s) shall give Honorarium as per the extant rules of the govt.
- 2.19.5 Notwithstanding any reference to the arbitration herein, the parties shall continue to perform their respective obligations under the agreement unless they otherwise agree.
- 2.19.6 Each party to cover its own cost of arbitration.

2.20 FORCE MAJEURE

- 2.20.1 Notwithstanding the provisions of clauses contained in this RFP document; the contractor shall not be liable to forfeit (a) PBG for delay and (b) termination of contract; if he/she is unable to fulfil his obligation under this contract due to force majeure conditions.
- 2.20.2 For purpose of this clause, "Force Majeure" means an event beyond the control of the contractor and not involving the contractor's fault or negligence and not foreseeable, either in its sovereign or contractual capacity. Such events may include but are not restricted to Acts of God, wars or revolutions, fires, floods, epidemics, quarantine restrictions, Grid Problems/ shutdowns and fright embargoes etc. Whether a "Force majeure" situation exists or not, shall be decided by *DISCOM and MNRE* and this decision shall be final and binding on the contractor and all other concerned.
- 2.20.3 In the event that the contractor is not able to perform his obligations under this contract on

account of force majeure, he will be relieved of his obligations during the force majeure period. In the event that such force majeure extends beyond Six (06) months, DISCOM has the right to terminate the contract in which case, the PBG shall be refunded to the vendor.

- 2.20.4 If a force majeure situation arises, the contractor shall notify DISCOM in writing promptly, not later than 14 days from the date such situation arises. The contractor shall notify DISCOM not later than 3 days of cessation of force majeure conditions. After examining the cases, DISCOM shall decide and grant suitable additional time for the completion of the work, if required.

2.21 LANGUAGE

All documents, drawings, instructions, design data, calculations, operation, maintenance and safety manuals, reports, labels and any other data shall be in English Language only. The contract agreement and all correspondence between the DISCOM and the bidder shall be in English language. O&M manual and warranty card should be in English & local languages.

2.22 OTHER CONDITIONS

- 2.22.1 The Empanelled Vendor shall not transfer, assign or sublet the work under this contract or any substantial part thereof to any other party without the prior consent of DISCOM in writing.
- 2.22.2 The Empanelled Vendor shall not display the photographs of the work and not take advantage through publicity of the work without written permission of consumer.
- 2.22.3 The Empanelled Vendor shall not make any other use of any of the documents or information of this contract, except for the purposes of performing the contract.
- 2.22.4 DISCOM will not be bound by any Power of Attorney granted/ issued by the Empanelled Vendor or its subcontractors or by any change in the composition of the firm made during or subsequent to the execution of the contract. However, recognition to such Power of Attorney and change (if any) may be given by DISCOM after obtaining proper legal advice, the cost of which will be chargeable to the Empanelled Vendor concerned.

2.23 SUCCESSORS AND ASSIGNEES:

In case the DISCOM or Empanelled Vendor may undergo any merger or amalgamation or a scheme of arrangement or similar re-organization & this contract is assigned to any entity(ies) partly or wholly, the contract shall be binding mutatis mutandis upon the successor entities & shall continue to remain valid with respect to obligation of the successor entities.

2.24 SEVERABILITY:

It is stated that each paragraph, clause, sub-clause, schedule or annexure of this contract shall be deemed severable & in the event of the unenforceability of any paragraph, clause sub-clause, schedule or the remaining part of the paragraph, clause, sub-clause, schedule annexure & rest of the contract shall continue to be in full force & effect.

2.25 RIGHTS & REMEDIES UNDER THE CONTRACT ONLY FOR THE PARTIES

This contract is not intended & shall not be construed to confer on any person other than the DISCOM & Empanelled Vendor hereto, any rights and / or remedies herein.

2.26 CORRESPONDENCE

Bidder requiring any Techno-Commercial clarification of the bid documents may contact in writing or by E Mail.

Name & Designation	Contact Address	Email id
Mr Robin Sebastian VP (HOD-C&M)	C&M Dept. 3 rd Floor, A-Block, BSES Yamuna	robin.sebastian@relianceada.com
Mr Rajesh Srivastava VP (Head-Procurement)	Power Ltd Shaktikiran Building,	rajesh.r.srivastava@relianceada.com
Mr Sumit Verma GM (C&M)	Karkardooma, Delhi 110032	sumit.ra.verma@relianceada.com

Verbal clarifications and information given by the DISCOM or its employees or its Representatives shall not be in any way entertained.

DISCOM's role is limited to selection of vendors and disbursement of CFA after successful installation of the solar PV plant. The vendor will be solely responsible for plant performance and maintenance and any liability arising on this account shall lie solely with the vendors, provided the beneficiary has given proper access and facilitation to the vendor for regular O&M and there has not been alteration in solar irradiance due to alteration in building or its surrounding over which the vendor has no control.

SECTION – II

[Bid Evaluation Criteria and CFA Disbursement]

1. EVALUATION CRITERIA AND CFA DISBURSEMENT

1.1 BID EVALUATION AND CFA DISBURSEMENT

BID EVALUATION

The evaluation process comprises the following four steps:

Step I	Responsiveness check of Techno Commercial Bid
Step II	Evaluation of Bidder's fulfilment of Techno-Financial Eligibility Criteria as per Clause 5.5 of Section-I
Step III	Evaluation of Price Bid for all Techno-Commercial Qualified Bidders
Step IV	Successful Bidders(s) selection /empanelment

1.2 RESPONSIVENESS CHECK OF TECHNO COMMERCIAL BID

The Techno-Commercial Bid submitted by Bidders shall be scrutinized to establish responsiveness to the requirements laid down in the RFP subject to **Clause 5.5 of Section-I**. Any of the following may cause the Bid to be considered "*Non-responsive*", at the sole discretion of DISCOM:

- i. Bids that are incomplete, i.e. Not accompanied by any of the applicable formats inter alia covering letter, power of attorney supported by a board resolution, Bid Bond, "Bid Security Declaration Letter" on non-judicial stamp paper. etc.
- ii. Bid not signed by authorized signatory and /or stamped in the manner indicated in this RFP.
- iii. Material inconsistencies in the information /documents submitted by the Bidder, affecting the Eligibility Criteria.
- iv. Information not submitted in the formats specified in this RFP.
- v. Bid being conditional in nature.
- vi. Bid not received by the Bid Deadline.
- vii. Bid having Conflict of Interest.
- viii. More than one Member of a Bidding Company using the credentials of the same Parent Company /Affiliate.
- ix. Bidder delaying in submission of additional information or clarifications sought by *DISCOM* as applicable.
- x. Bidder makes any misrepresentation.

Each Bid shall be checked for compliance with the submission requirements set forth in this RFP before the evaluation of Bidder's fulfilment of Eligibility Criteria is taken up. **Clause 5.5 of Section-I** shall be used to check whether each Bidder meets the stipulated requirement.

1.3 PRELIMINARY EXAMINATION

1.3.1 The DISCOM will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed and stamped and whether the Bids are otherwise in order.

1.3.2 Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total Amount that is obtained by multiplying the unit price and quantity, the unit price

shall prevail, and the total amount shall be corrected. If there is a discrepancy between words and figures, the amount written in words will prevail.

2 EVALUATION OF BIDDER'S FULFILMENT OF ELIGIBILITY CRITERIA

- 2.1 Evaluation of Bidder's Eligibility will be carried out based on the information furnished by the Bidder as per the prescribed Formats and related documentary evidence in support of meeting the Eligibility Criteria as specified in **Clause 5.5 of Section-I**. Non-availability of information and related documentary evidence for the satisfaction of Eligibility Criteria may cause the Bid non-responsive.

2.2 EVALUATION OF PRICE BID

Price Bid (s) of the Qualified Bidders shall be opened online in presence of the representatives of such Qualified Bidders, who wish to be present, on a date as may be intimated by DISCOM to the Bidders through Email. The evaluation of Price Bid shall be carried out based on the information furnished in Financial Bid (Price Bid). The Price Bid submitted by the Bidders shall be scrutinized to ensure conformity with the RFP. Any Bid not meeting any of the requirements of this RFP may cause the Bid to be considered "**Non-responsive**" at the sole decision of the BYPL.

2.2.1 CAPEX PART-A, PART-B, PART-C & Part-D and RESCO Part A&B:

- i. The Price bids for the CAPEX **PART-A, PART-B, PART-C & Part-D and RESCO Part A&B** etc shall be evaluated separately and lowest quoted bidder in each category shall be declared as L1 and CFA will be determined on the basis of discovered rate and prevailing Benchmark Cost for that respective category, whichever is lower.
- ii. The Project Cost shall be calculated up to two decimal places. However, in case of a tie, capacity shall be allocated to the bidder having **the maximum proposed capacity as per the covering letter**.
- iii. Total Project cost shall be considered during evaluation as mentioned in **formats annexed with this RFP**.

2.3 SUCCESSFUL BIDDER(S) SELECTION

- i. Bids qualifying in **Clause 5.5 of Section-I** shall only be evaluated in this stage.
- ii. Project Cost quoted in all Price Bids of Qualified Bidders shall be ranked from the lowest to the highest for **PART-A, PART-B, PART-C & PART-D** etc. separately.
- iii. **Allocation of Capacity and Empanelment of Vendors for CAPEX Part-A, Part-B, Part-C & Part D and RESCO Part A& B.**

2.3.1 CAPEX PART-A, PART-B, PART-C & PART-D and RESCO Part A& B: Based on the price bid quoted by the bidders, BYPL shall arrange the bids in the ascending order i.e. L1, L2, L3, _ _ _ (L1 being the lowest quote).

- i. Lowest bidder will be declared as the L1 against each Part/Category. The L1 bidder's quoted capacity shall be allocated to the L1 successful bidder subject to the condition that it should not be less than 10% of aggregated capacity for respective part/category. On acceptance, capacity will be allocated to the L1 bidder. In case L-1 bidder did not accept the maximum bid capacity or 10% of L1 aggregated capacity for the respective part/category, then Submitted Bank Guarantee will be encashed, and L-1 bidder shall be blacklisted from all the Government Tenders for 5 Years.

- ii. The bids will be arranged in ascending order Starting from L1, L2, L3..... The Approved Lowest Rate against each part/category will be the project cost and bidder will be allocated their quoted capacity as on the cover letter. The remaining bidders, i.e. L2, L3, L4....., will be given 14 Days' time to submit the letter of acceptance of L1 Rate. The bidders, who provide their consent to work on L1 Rate, will be allocated their quoted capacity in the order of merit, till the entire capacity is exhausted. If quantity/capacity is left unallocated in any category, DISCOM reserves the right to reallocate the left-over capacity to the bidders' subject to their consent and at the sole discretion of DISCOM.
- iii. If the DISCOM is going for price discovery for different/special categories, the same may be included under this section and accordingly the forms and formats may be referred.
- iv. The selection process shall stand completed once the Tender Capacity has been achieved through the summation of the capacity offered by the Successful Bidders.
- v. At any step during the selection of Successful Bidder(s) in accordance with the provision laid down in RFP, the DISCOM reserves the right to increase/decrease the Tender Capacity of the capacity indicated to achieve the balance Tender Capacity and select the Successful Bidder with the lowest Project Cost/ lowest evaluated price amongst the remaining Bids.
- vi. The Letter(s) of Intent (LoI) shall be issued to all such Empanelled Vendors(s) selected as per the provisions laid down in RFP document.
- vii. Each Empanelled Vendor shall acknowledge the LoI and return duplicate copy with signature of the authorized signatory of the Empanelled Vendor to the DISCOM within Fifteen (15) days of issue of LoI.
- viii. If the Empanelled Vendor, to whom the LoI has been issued does not fulfil any of the conditions specified in Bid document, the DISCOM reserves the right to annul/cancel the award of the LoI of such Empanelled Vendor.
- ix. The vendors have to submit the Performance Bank Guarantee (PGB) of appropriate value as per **Clause No. 10.10 (As per Format-4)** along with submission of signed copy of LoI for further issuance of Letter of Allocation.
- x. The DISCOM at its own discretion, has the right to reject any or all the Bids without assigning any reason whatsoever, at its sole discretion.
- xi. **Duration of Empanelment**
The Successful Bidders selected as described in **Clause No.3 of Section-II** above shall be empanelled for empanelment period as described in to the Bid Information Sheet.
- xii. The list of the empanelled bidder/firm will be circulated to the registered applicant and has to be uploaded on DISCOM's Portal/Website in alphabetical order.

2.4 **INCREASE/DECREASE OF BIDDER ALLOCATED CAPACITY**

- i. DISCOM reserves the right to increase/decrease the Bidder(s) Allocated Capacity at the sole discretion of DISCOM.
- ii. In case capacity is enhanced by DISCOM as per **Clause No. 2.4 of Section-II** above, Empanelled Vendor shall submit the equivalent amount of PBG to DISCOM within 15 days from the date of issue of LoA, failing which sanctioned capacity shall stand cancelled.

2.5 **TRANSFER OF CAPACITY**

Only on execution on current capacity or as per sole discretion of *DISCOM* the capacity may be transferred from PART A, B, C & D or vice-versa, in such case lowest rate of that part shall be the reference price for capacity execution.

Note: It is the discretion of DISCOM to increase/decrease/transfer the Empanelled Vendor allocated capacity on bidder's request.

3 **NOTIFICATION TO SUCCESSFUL BIDDERS**

The name and contact details of Empanelled Vendors shall be notified indicating the allocated capacity and the offered price on respective *DISCOMs* website and also shall be notified individually through Letter of Allocation.

4 **PROJECT ALLOCATION AND SANCTION**

- 4.1 The identification of the projects (roof tops) at the time of bidding is not mandatory. The Bidders, however, in their own interest are advised to make a preliminary survey of availability of roof tops for which they intend to Bid and as prescribed in the RFP, as well as issue of Grid connectivity, as non-availability of roof tops and non-completion of other formalities after allocation of project will result in forfeiture of Bid Bond/PBG amount submitted by them.
- 4.2 The Successful Bidders selected as described in **Clause No. 3 of Section-II** above shall be empanelled for timeline specified in the LoA or 15 months from Date of MNRE Sanction, whichever is earlier. DISCOM shall be issued Letter of Allocation (LOA) indicating the allocated capacity & Project Cost etc.
- 4.3 For identification of projects, DISCOM may provide help. However, the entire responsibility of finding the buildings lies with the Bidder.
- 4.4 Documentation like finalizing the Project report and entering into agreements with the buildings/rooftops owners lies with the Empanelled Vendor within the above-mentioned time frame even for the buildings/rooftops identified by DISCOM for preferential installation.
- 4.5 After the Project Consent Documents have been submitted by the Empanelled Vendor/Project Developer and accepted by the respective *DISCOM* will issue the Consent Letter(s) for the Project (s) indicating the CFA amount(s) which will be disbursed in line with the provisions of the RFP document. The Empanelled Vendor shall complete the design, engineering, manufacture, supply,

storage, civil work, erection, testing & commissioning of each project 6 months from the date of issue of the Consent Letter or upto 15 Months from Date of MNRE Sanction as mentioned in the bid information sheet, whichever is earlier. In case the project is not executed and commissioned within timeline, the consent/sanction for subsidy shall stand cancelled.

- 4.6 If the Empanelled Vendor fails to commission the sanctioned project within specified time, no CFA will be disbursed by DISCOM.
- 4.7 The Empanelled Vendor shall apply for net metering at least 60 days and apply for sanction /consent letter from the respective Discoms at least 45 days before end of empanelment period.

5 CFA DISBURSEMENT & PAYMENT CLAUSES:

5.1 For PART-A, Part-B, Part-C & Part-D

The vendor shall be allowed to charge only balance of the project cost, excluding CFA amount, from the consumer. The proportion of admissible CFA shall be disbursed by DISCOM to the empanelled vendor directly after successful commissioning of the project as per MNRE Operational Guidelines issued vide OM No. 318/ 331/2017- Grid Connected Rooftop Dated 20th August 2020 and their amendments. The admissible CFA would be 40% of the benchmark cost or tender cost, whichever is lower, for capacity up to 3 kW. For project capacity above 3 kWp and up to 10 kWp, the admissible CFA would be 20% of project cost or the MNRE benchmark cost, whichever is lower. For CFA calculation, the project capacity would be decided based on PV array capacity or inverter capacity, whichever is lower. The consumers are allowed to install the capacity higher than 10 KW, however, the quantum of CFA would be limited to 10 KW capacity only. The maximum permissible limit for group housing societies would be up to 500 kW and the admissible CFA would be 20% of the benchmark cost or tender cost, whichever is lower.

The net amount of project cost (i.e. project cost - CFA) shall be paid by the concerned roof top owner to any of the empanelled vendors as per the following methodology:

- 20% payment in advance after signing of agreement.
- 20% payment after installation of structure
- 20% payment after installation of SPV modules and inverters at site
- 20% payment after completing plant installation (including net-metering) and submission of written inspection request to the DISCOM
- Final 20% payment after commissioning of the plant and injection of power to the grid.

It shall be noted that beneficiary/customer shall be solely responsible for financial transaction with the vendor for the net of CFA (Total cost – Admissible CFA) amount. The beneficiary/customer are advised to thoroughly check the documents/claims of the vendors and shall make only online payments wherever required. DISCOM or MNRE in no way shall be responsible for disputes arising out of payments of agreements between vendor and the beneficiary.

5.2 The CFA as calculated under **Clause No. 5 of Section-II for Parts under CAPEX Model will be released on submission of following documents-**

- i. Joint Commissioning Report (JCR) **as per Annexure-O.**

- ii. Claim Letter as per the **Annexure - M**.
- iii. Guarantee certificate on Letter Head of the Vendor.
- iv. Geo-coordinates and photos of the site

5.3 The CFA shall be released by the respective *DISCOMs*, only after receipt of the same from MNRE, within a period of 120 days from date of successful commissioning subject to the submission of all the requisite documents as specified in the tender.

5.4 The CFA shall be released to the Vendor only after the completion and successful commissioning of the Project(s) including installation of net meter as per terms & conditions vide **Clause No. 5 of Section-II**.

5.5 The whole or part of the CFA shall be recovered from the Vendor's PBG or future Payments (to be released), in case of violation of any Terms & Conditions of MNRE/ DISCOM. This shall apply only when PBG amount exceeds recovery amount. In case it is not so Balance to be paid by vendor.

6 OTHER CONDITIONS

Bidder has to obtain all the necessary approvals/Consents/Clearances required for Erection, Testing, Commissioning and O&M of the project including Grid connectivity. DISCOM shall not have any responsibility in this regard.

7. BID BOND/EMD AND PROCESSING FEE SUBMISSION:

As per **Bid Information Sheet**, Bid bond/EMD shall be submitted separately for the offered capacity in a separate envelop along with processing fee & other details. However, MSMEs are exempted from submission of Bid Security /EMD / Bid Bond and "Bid Security Declaration Letter" on non-judicial stamp paper.

8. TAX EXEMPTIONS:

Price bids are invited exclusive of GST. However, Tax exemptions including certificates of any sort, if available may be dealt with the concerned Department of Govt. of India/ Delhi by the bidder. DISCOM in no case will be responsible for providing any tax exemptions to the bidder.

9. Eligibility of standalone system:

Standalone system is not allowed under this scheme. The system should be Grid-connected Rooftop Solar System.

10. Requirement of approvals on makes of the Components:

The Modules and Cells should be manufactured in India and should be complied with the prevailing Approved List of Models and Manufacturers of Solar Photovoltaic Modules (*Requirement for Compulsory Registration*) Order 2019 - Implementation issued vide OM NO. 283/54/2018-GRID SOLAR -Part (I) Dated 10th March 2021 and subsequent amendments Rest of the components can be procured from any source. However, these items should meet the Technical specification and standards mentioned in RFP. A reference bidders' Declaration format associated with Implementation of ALMM (**Annexure T**) order will also be required to be signed by the bidder as per the format provided vide MNRE OM No. 283/54/2018-GRID SOLAR -Part (I) Dated 2nd June 2021.

11. OPERATION OF THE SYSTEM DURING WEEKENDS AND GENERAL HOLIDAYS AND CALCULATION OF CUF

N/A

12. LIQUIDATED DAMAGES (LD) FOR DELAY IN PROJECT IMPLEMENTATION

- 12.1 DISCOM will issue the consent letter(s) for the Project (s) indicating the CFA amount(s) which will be disbursed in line with the provisions of the RFP document. The Bidder shall complete Design, Engineering, Manufacture, Supply, storage, civil work, erection, testing & commissioning of each project within stipulated timeline.
- 12.2 If the bidder fails to commission the sanctioned project within specified time, the project will get cancelled and CFA will not be disbursed by DISCOM.

13 TIME OF COMPLETION OF SANCTIONED CAPACITY

- 13.1 The Empanelled Vendor shall complete the roofs identification, submission of project sanction documents as per the requirement of DISCOM, Design, Engineering, Manufacture, Supply, storage, civil work, erection, testing & commissioning of each project within the empanelment period.
- 13.2 The period of execution given in time schedule includes the time required for mobilization as well as testing, rectifications if any, re-testing and completion in all respects to the entire satisfaction of the Engineer-in- Charge.

14 UPDATING THE PROJECT PROGRESS

The empanelled vendors shall apprise the DISCOM of the progress made on monthly basis.

15 INSPECTION AND AUDIT BY THE DISCOM

The Empanelled vendor shall permit the DISCOM to inspect the site, accounts and records relating to the performance and to have them audited by auditors appointed by the DISCOM, if so required by the DISCOM any time.

16 COMMISSIONING /COMPLETION CERTIFICATE:

Application for completion/commissioning certificate:

When the Empanelled Vendor fulfils his obligation under the Contract, he shall be eligible to apply for Completion/Commissioning Certificate. The Engineer- in-Charge shall normally issue the Completion Certificate to the Empanelled Vendor within one month after receiving any application therefore from the Empanelled Vendor after verifying from the completion documents and satisfying himself that the work has been completed in accordance with and as set out in Contract documents. The Empanelled Vendor, after obtaining the Completion Certificate, is eligible to avail the CFA as per the **Clause No. 5 of Section-II.**

Empanelled vendor shall submit all the necessary documents simultaneously inform respective DISCOM 15 days prior to Commissioning of plant so that the same is considered under subsidy and for subsequent installation of net meter is carried out by DISCOM for commissioning.

17 DOCUMENT SUBMISSION FOR ISSUE OF COMMISSIONING/ COMPLETION CERTIFICATE:

For the purpose of **Clause No. 16 of Section-II** the following documents will be deemed to form the completion documents:

- i. Documents as per Checklist prescribed in **Annexure-K**.
- ii. Project completion/satisfaction certificate from roof top owner's/project developers.

18 DEDUCTIONS FROM THE CONTRACT PRICE:

- 18.1 All costs, damages or expenses which DISCOM may have paid or incurred, which under the provisions of the Contract, the Empanelled Vendor is liable/will be liable, will be claimed by the DISCOM. All such claims shall be billed by the DISCOM to the Contractor within 15 (fifteen) days of the receipt of the payment request and if not paid by the Empanelled Vendor within the said period, the DISCOM may, then, deduct the amount from any moneys due i.e., PBG or becoming due to the contractor or Empanelled Vendor under the contract or may be recovered by actions of law or otherwise, if the Empanelled Vendor fails to satisfy the DISCOM of such claims.

19 CORRUPT OR FRAUDULENT PRACTICES

The DISCOM requires that Empanelled Vendors/ Contractors should follow the highest standard of ethics during the execution of contract. In pursuance of this policy, the DISCOM defines, for the purposes of this provision, the terms set forth as follows:

- 19.1 **"corrupt practice"** means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the bid process or in contract execution; and
- 19.2 **"fraudulent practice"** means a misrepresentation of facts in order to influence a bid process or the execution of a contract to the detriment of the DISCOM /Govt scheme, 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 them of the benefits of free and open competition;
- 19.3 A firm will be declared ineligible/debarred, either indefinitely or for a specific period of time, a GOVT contract if at any time it is found that the firm has engaged in corrupt or fraudulent practices in competing for, or in executing, a Government/ DISCOM schemes.

20 DEBARRED FROM PARTICIPATING IN TENDER

- 20.1 BYPL on the behalf on BRPL and TPDDL reserves the right to carry out the performance review of each Bidder from the time of submission of Bid onwards. In case it is observed that a bidder has not fulfilled its obligations in meeting the various timelines envisaged, in addition to the other provisions of the RFP, such Bidders may be debarred from participating in any future tender for a period as decided by BYPL.

SECTION – III

TECHNICAL SPECIFICATIONS

TECHNICAL SPECIFICATIONS

The proposed projects shall be commissioned as per the technical specifications given below. Any shortcomings will lead to cancelation of CFA in full or part as decided by DISCOM. Domestic Modules are to be used failing which it will be assumed that system is not matching the requirement of the scheme and bidder's PBG shall be forfeited. DISCOM decision will be final and binding on the bidder.

All the installations should follow the specifications and standards as mentioned in the tender or may follow higher standard for installations.

1. DEFINITION

A Roof Top Solar (RTS) Photo Voltaic (PV) system shall consist of following equipment/components:

1. Solar Photo Voltaic (SPV) modules consisting of required number of CrystallinePV modules
2. Inverter/PCU
3. Module Mounting structures
4. Energy Meter
5. Array Junction Boxes
6. DC Distribution Box
7. AC Distribution Box
8. Protections – Earthing, Lightning, Surge
9. Cables
10. Drawing & Manuals
11. Miscellaneous

1. Solar PV modules

- 1.1. The PV modules and Solar Cell used should be **made in India.**
- 1.2. The PV modules used must qualify to the latest edition of IEC standards or equivalent BIS standards, i.e. IEC 61215/IS14286, IEC 61853-Part I/IS 16170-Part I, IEC 61730 Part-1 & Part 2 and IEC 62804 (PID). For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC 61701/IS 61701.
- 1.3. The rated power of solar PV module shall have maximum tolerance up to +3%.
- 1.4. The peak-power point current of any supplied module string (series connected modules) shall not vary by +1% from the respective arithmetic means for all modules and/or for all module strings (connected to the same MPPT), as the case may be.
- 1.5. The peak-power point voltage of any supplied module string (series connected modules) shall not vary by + 2% from the respective arithmetic means for all modules and/or for all module strings (connected to the same MPPT), as the case may be.
- 1.6. The temperature co-efficient power of the PV module shall be equal to or better than - 0.45%/°C.
- 1.7. Solar PV modules of minimum capacity 250 Wp to be used.
- 1.8. The PV Module efficiency should be minimum 16%.
- 1.9. Solar PV modules of minimum fill factor 75%, to be used.
- 1.10. All electrical parameters at STC (as per IEC standard) shall have to be provided

- 1.11. The PV modules shall be equipped with IP 65 or better protection level junction box with required numbers of bypass diodes of appropriate rating and appropriately sized output power cable of symmetric length with MC4 or equivalent solar connectors. The IP level for protection may be chosen based on following conditions:
 - i. An IP 65 rated enclosure is suitable for most outdoor enclosures that won't encounter extreme weather such as flooding.
 - ii. An IP 67 rated enclosure is suitable at locations which may encounter temporary submersion at depths of up to one meter.
 - iii. An IP 68 enclosure is recommended if there may exist situations of submergence for extended periods of time and at substantial depths.
- 1.12. All PV modules should carry a performance warranty of >90% during the first 10 years, and >80% during the next 15 years. Further, module shall have performance warranty of >97% during the first year of installation—degradation of the module below 1 % per annum.
- 1.13. 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 five (05) years from the date of commissioning:
 - 1.14. Defects and/or failures due to manufacturing.
 - 1.15. Defects and/or failures due to quality of materials.
 - 1.16. Nonconformity 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 Owners sole option.
- 1.17. PV modules must be tested and approved by one of the NABL accredited and BIS approved test centres.
- 1.18. Modules deployed must use a RF identification tag laminated inside the glass. The following information must be mentioned in the RFID used on each module:
 - i. Name of the manufacturer of the PV module
 - ii. Name of the manufacturer of Solar Cells.
 - iii. Month & year of the manufacture (separate for solar cells and modules)
 - iv. Country of origin (separately for solar cells and module)
 - v. I-V curve for the module Wattage, I_m , V_m and FF for the module
 - vi. Unique Serial No and Model No of the module
 - vii. Date and year of obtaining IEC PV module qualification certificate.
 - viii. Name of the test lab issuing IEC certificate.
 - ix. Other relevant information on traceability of solar cells and module as per ISO 9001 and ISO 14001.
 - x. Nominal wattage +3%.
 - xi. Brand Name, if applicable.
- 1.19. Other details as per IS/IEC 61730-1 clause 11 should be provided at appropriate place. In addition to the above, the following information should also be provided:
 - i. The actual Power Output P_{max} shall be mentioned on the label pasted on the back side of PV Module.

- ii. The Maximum system voltage for which the module is suitable to be provided on the back sheet of the module.
 - iii. Polarity of terminals or leads (colour coding is permissible) on junction Box housing near cable entry or cable and connector.
- 1.20. Unique Serial No, Model No, Name of Manufacturer, Manufacturing year, Make in India logo and module wattage details should be displayed inside the laminated glass.

2. Inverter/PCU

- 2.1. Inverters/PCU should comply with applicable IEC/equivalent BIS standard for efficiency measurements and environmental tests as per standard codes IEC 61683/IS 61683, IS 16221 (Part 2), IS 16169 and IEC 60068-2(1,2,14,30) /Equivalent BIS Std.
- 2.2. Maximum Power Point Tracker (MPPT) shall be integrated in the inverter/PCU to maximize energy drawn from the array. Charge controller (if any) / MPPT units environmental testing should qualify IEC 60068-2(1, 2, 14, 30)/Equivalent BIS standard. The junction boxes/enclosures should be IP 65 or better (for outdoor)/ IP 54 or better (indoor) and as per IEC 529 Specifications.
- 2.3. All inverters/PCUs shall be IEC 61000 compliant for electromagnetic compatibility, harmonics, Surge, etc.
- 2.4. The PCU/ inverter shall have overloading capacity of minimum 10%.
- 2.5. Typical technical features of the inverter shall be as follows-
 - i. Switching devices: IGBT/MOSFET
 - ii. Control: Microprocessor/DSP
 - iii. Nominal AC output voltage and frequency: as per CEA/State regulations
 - iv. Output frequency: 50 Hz
 - v. Grid Frequency Synchronization range: as per CEA/State Regulations
 - vi. Ambient temperature considered: -20°C to 60°C
 - vii. Humidity: 95 % Non-condensing
 - viii. Protection of Enclosure: IP-54 (Minimum) for indoor and IP-65(Minimum) for outdoor.
 - ix. Grid Frequency Tolerance range: as per CEA/State regulations
 - x. Grid Voltage tolerance: as per CEA/State Regulations
 - xi. No-load losses: Less than 1% of rated power
 - xii. Inverter efficiency (Min.): >93% (In case of 10 kW or above with in-built galvanic isolation) >97% (In case of 10 kW or above without inbuilt galvanic isolation)
 - xiii. Inverter efficiency (minimum): > 90% (In case of less than 10 kW)
 - xiv. THD: < 3%
 - xv. PF: > 0.9 (lag or lead)
 - xvi. Should not inject DC power more than 0.5% of full rated output at the interconnection point and comply to IEEE 519.
- 2.6. The output power factor of inverter should be suitable for all voltage ranges or sink of reactive power, inverter should have internal protection arrangement against any sustain fault in feeder line and against the lightning on feeder.

- 2.7. All the Inverters should contain the following clear and indelible Marking Label & Warning Label as per IS16221 Part II, clause 5. The equipment shall, as a minimum, be permanently marked with:
- The name or trademark of the manufacturer or supplier;
 - A model number, name or other means to identify the equipment,
 - A serial number, code or other marking allowing identification of manufacturing location and the manufacturing batch or date within a twelve-month time period.
 - Input voltage, type of voltage (a.c. or d.c.), frequency, and maximum continuous current for each input.
 - Output voltage, type of voltage (a.c. or d.c.), frequency, maximum continuous current, and for a.c. outputs, either the power or power factor for each output.
 - The Ingress Protection (IP) rating
- 2.8. Marking shall be located adjacent to each fuse or fuse holder, or on the fuse holder, or in another location provided that it is obvious to which fuse the marking applies, giving the fuse current rating and voltage rating for fuses that may be changed at the installed site.
- 2.9. In case the consumer is having a 3- ϕ connection, 1- ϕ /3- ϕ inverter shall be provided by the vendor as per the consumer's requirement and regulations of the State.
- 2.10. Inverter/PCU shall be capable of complete automatic operation including wake-up, synchronization & shutdown.
- 2.11. For CFA calculation, minimum of following two shall be considered:
- Solar PV array capacity in KWp
 - Inverter Capacity in KW
- 2.12. Integration of PV Power with Grid & Grid Islanding:
- The output power from SPV would be fed to the inverters/PCU which converts DC produced by SPV array to AC and feeds it into the main electricity grid after synchronization.
 - In the event of a power failure on the electric grid, it is required that any independent power-producing inverters attached to the grid turn off in a short period of time. This prevents the DC-to-AC inverters from continuing to feed power into small sections of the grid, known as "islands." Powered islands present a risk to workers who may expect the area to be unpowered, and they may also damage grid-tied equipment. The Rooftop PV system shall be equipped with islanding protection. In addition to disconnection from the grid (due to islanding protection) disconnection due to under and over voltage conditions shall also be provided, if not available in inverter.
 - MCB/MCCB or a manual isolation switch, besides automatic disconnection to grid, would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance. This switch shall be locked by the utility personnel.

3. Module Mounting Structure (MMS):

- 3.1. Supply, installation, erection and acceptance of module mounting structure (MMS) with all necessary accessories, auxiliaries and spare part shall be in the scope of the work.
- 3.2. Module mounting structures can be made from three types of materials. They are Hot Dip Galvanized Iron, Aluminium and Hot Dip Galvanized Mild Steel (MS). However, MS will be preferred for raised structure.

- 3.3. MMS Steel shall be as per latest IS 2062:2011 and galvanization of the mounting structure shall be in compliance of latest IS 4759. MMS Aluminium shall be as per AA6063 T6. For Aluminium structures, necessary protection towards rusting need to be provided either by coating or anodization.
- 3.4. All bolts, nuts, fasteners shall be of stainless steel of grade SS 304 or hot dip galvanized, panel mounting clamps shall be of aluminium and must sustain the adverse climatic conditions. Structural material shall be corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts.
- 3.5. The module mounting structures should have angle of inclination as per the site conditions to take maximum insolation and complete shadow-free operation during generation hours. However, to accommodate more capacity the angle of inclination may be reduced until the plant meets the specified performance ratio requirements.
- 3.6. The Mounting structure shall be so designed to withstand the speed for the wind zone of the location where a PV system is proposed to be installed. The PV array structure design shall be appropriate with a factor of safety of minimum 1.5.
- 3.7. The upper edge of the module must be covered with wind shield so as to avoid build air ingress below the module. Slight clearance must be provided on both edges (upper & lower) to allow air for cooling.
- 3.8. Suitable fastening arrangement such as grouting and calming should be provided to secure the installation against the specific wind speed. The Empanelled Agency shall be fully responsible for any damages to SPV System caused due to high wind velocity within guarantee period as per technical specification.
- 3.9. The structures shall be designed to allow easy replacement, repairing and cleaning of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels. Necessary testing provision for MMS to be made available at site.
- 3.10. Adequate spacing shall be provided between two panel frames and rows of panels to facilitate personnel protection, ease of installation, replacement, cleaning of panels and electrical maintenance.
- 3.11. The structure shall be designed to withstand operating environmental conditions for a period of minimum 25 years.
- 3.12. The Rooftop Structures maybe classified in three broad categories as follows (drawings at **Annexure-X**):

i. Ballast structure

- a. The mounting structure must be Non-invasive ballast type and any sort of penetration of roof to be avoided.
- b. The minimum clearance of the structure from the roof level should be in between 70-150 mm to allow ventilation for cooling, also ease of cleaning and maintenance of panels as well as cleaning of terrace.
- c. The structures should be suitably loaded with reinforced concrete blocks of appropriate weight made out of M25 concrete mixture.

ii. Tin shed

- a. The structure design should be as per the slope of the tin shed.
- b. The inclination angle of structure can be done in two ways-

- b.1. Parallel to the tin shed (flat keeping zero-degree tiling angle), if the slope of shed in Proper south direction
- b.2. With same tilt angle based on the slope of tin shed to get the maximum output.
- c. The minimum clearance of the lowest point from the tin shade should be more than 100mm.
- d. The base of structure should be connected on the Purlin of tin shed with the proper riveting.
- e. All structure member should be of minimum 2 mm thickness.

iii. RCC Elevated structure: It can be divided into further three categories:

A. Minimum Ground clearance (300MM – 1000 MM)

- a. The structure shall be designed to allow easy replacement of any module and shall be in line with site requirement. The gap between module should be minimum 30MM.
- b. Base Plate – Base plate thickness of the Structure should be 5MM for this segment.
- c. Column – Structure Column should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
- d. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 70MM in Web side (y-axis) and 40MM in flange side (x-axis).
- e. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 60MM in Web side and 40MM in flange side in Lip section.
- f. Front/back bracing – The section for bracing part should be minimum 2MM thickness.
- g. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.
- h. For single portrait structure the minimum ground clearance should be 500MM.

B. Medium Ground clearance (1000MM – 2000 MM) (for reference only)

- a. Base Plate – Base plate thickness of the Structure should be Minimum 6MM for this segment.
- b. Column – Structure Column should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 80MM in Web side and 50MM in flange side in Lip section.
- c. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in C-Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
- d. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
- e. Front/back bracing – The section for bracing part should be minimum 2MM thickness.
- f. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.

C. Maximum Ground clearance (2000MM – 3000 MM) (for reference only)

- a. Base Plate – Base plate thickness of the Structure should be minimum 8 MM for this segment.
- b. Column – Structure Column thickness should be minimum 2.6MM in square hollow section (minimum 50x50) or rectangular hollow section (minimum 60x40) or 3MM in C-Channel section.
- c. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in Channel section. The minimum section should be 80MM in Web side and 50MM in flange side in Lip section.
- d. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 80MM in Web side and 50MM in flange side in Lip section.
- e. Front/back bracing – The section for bracing part should be minimum 3MM thickness.
- f. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.

D. Super elevated structure (More than 3000 MM) (for reference only)

D.1. Base structure

- a. Base Plate – Base plate thickness of the Structure should be 10MM for this segment.
- b. Column – Structure Column minimum thickness should be minimum 2.9MM in square hollow section (minimum 60x60) or rectangular hollow section (minimum 80x40).
- c. Rafter - Structure Rafter minimum thickness should be minimum 2.9MM in square hollow section (minimum 60x60) or rectangular hollow section (minimum 80x40).
- d. Cross bracing – Bracing for the connection of rafter and column should be of minimum thickness of 4mm L-angle with the help of minimum bolt diameter of 10mm.

D.2. Upper structure of super elevated structure –

- a. Base Plate – Base plate thickness of the Structure should be minimum 5MM for this segment.
- b. Column – Structure Column should be minimum 2MM in Lip section / 3MM in Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
- c. Rafter - Structure rafter should be minimum 2MM in Lip section / 3MM in Channel section. The minimum section should be 70MM in Web side and 40MM in flange side in Lip section.
- d. Purlin - Structure purlin should be minimum 2MM in Lip section. The minimum section should be 60MM in Web side and 40MM in flange side in Lip section.
- e. Front/back bracing – The section for bracing part should be minimum 2MM thickness.
- f. Connection – The structure connection should be bolted completely. Leg to rafter should be connected with minimum 12 diameter bolt. Rafter and purlin should be connected with minimum 10 diameter bolt. Module mounting fasteners should be SS-304 only and remaining fasteners either SS-304 or HDG 8.8 Grade.

- D.3. If distance between two legs in X-Direction is more than 3M than sag angle/Bar should be provide for purlin to avoid deflection failure. The sag angle should be minimum 2MM thick, and bar should be minimum 12Dia.

- D.4. Degree - The Module alignment and tilt angle shall be calculated to provide the maximum annual energy output. This shall be decided on the location of array installation.
- D.5. Foundation – Foundation should be as per the roof condition; two types of the foundation can be done- either penetrating the roof or without penetrating the roof.
- a. If penetration on the roof is allowed (based on the client requirement) then minimum 12MM diameter anchor fasteners with minimum length 100MM can be used with proper chipping. The minimum RCC size should be 400x400x300 cubic mm. Material grade of foundation should be minimum M20.
 - b. If penetration on roof is not allowed, then foundation can be done with the help of 'J Bolt' (refer IS 5624 for foundation hardware). Proper Neto bond solution should be used to adhere the Foundation block with the RCC roof. Foundation J - bolt length should be minimum 12MM diameter and length should be minimum 300MM.

3.13. Material standards:

- i. Design of foundation for mounting the structure should be as per defined standards which clearly states the Load Bearing Capacity & other relevant parameters for foundation design (As per IS 6403 / 456 / 4091 / 875).
- ii. Grade of raw material to be used for mounting the structures so that it complies the defined wind loading conditions (As per IS 875 - III) should be referred as follows (IS 2062 – for angles and channels, IS 1079 – for sheet, IS 1161 & 1239 for round pipes, IS 4923 for rectangular and square hollow section)
- iii. Test reports for the raw material should be as per IS 1852 / 808 / 2062 / 1079 / 811.
- iv. In process inspection report as per approved drawing & tolerance should be as per IS 7215.
- v. For ascertaining proper welding of structure part following should be referred:
 - a. D.P. Test (Pin Hole / Crack) (IS 822)
 - b. Weld wire grade should be of grade (ER 70 S - 6)
- vi. For ascertaining hot dip galvanizing of fabricated structure following should be referred: -
 - a. Min coating required should be as per IS 4759 & EN 1461.
 - b. Testing of galvanized material
 - Pierce Test (IS 2633)
 - Mass of Zinc (IS 6745)
 - Adhesion Test (IS 2629)
 - CuSO4 Test (IS 2633)
 - Superior High-Grade Zinc Ingot should be of 99.999% purity (IS 209) (Preferably Hindustan Zinc Limited or Equivalent).
- vii. Foundation Hardware – If using foundation bolt in foundation then it should be as per IS 5624.

4. Metering

- 4.1. A Roof Top Solar (RTS) Photo Voltaic (PV) system shall consist of following energy meters:
 - i. Net meter: To record import and export units

- ii. Generation meter: To keep record for total generation of the plant.
- 4.2. "The installation of meters including CTs & PTs, wherever applicable, shall be carried out by DISCOM as per the terms, conditions and procedures laid down by the concerned SERC/DISCOMs. Installation of ELCB (Earth Leakage Circuit Breaker) would be in vendor's scope. Meter installation shall be carried out by Discom only after ELCB is installed at consumer's premises"

5. Array Junction Boxes:

- 5.2 The junction boxes are to be provided in the PV array for termination of connecting cables. The Junction Boxes (JBs) shall be made of GRP/FRP/Powder Coated aluminum /cast aluminum alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JB's shall be such that input & output termination can be made through suitable cable glands. Suitable markings shall be provided on the bus-bars for easy identification and cable ferrules will be fitted at the cable termination points for identification.
- 5.3 Copper bus bars/terminal blocks housed in the junction box with suitable termination threads conforming to IP 65 or better standard and IEC 62208 Hinged door with EPDM rubber gasket to prevent water entry, Single /double compression cable glands should be provided.
- 5.4 Polyamide glands and MC4 Connectors may also be provided. The rating of the junction box shall be suitable with adequate safety factor to interconnect the Solar PV array.
- 5.5 Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification.
- 5.6 Junction boxes shall be mounted on the MMS such that they are easily accessible and are protected from direct sunlight and harsh weather.

6 DC Distribution Box (DCDB):

- 6.2 May not be required for small plants, if suitable arrangement is available in the inverter.
- 6.3 DC Distribution Box are to be provided to receive the DC output from the PV array field.
- 6.4 DCDBs shall be dust & vermin proof conform having IP 65 or better protection, as per site conditions.
- 6.5 The bus bars are made of EC grade copper of required size. Suitable capacity MCBs/MCCB shall be provided for controlling the DC power output to the inverter along with necessary surge arrestors. MCB shall be used for currents up to 63 Amperes, and MCCB shall be used for currents greater than 63 Amperes.

7 AC Distribution Box (ACDB):

- 7.2 AC Distribution Panel Board (DPB) shall control the AC power from inverter, and should have necessary surge arrestors, if required. There is interconnection from ACDB to mains at LT Bus bar while in grid tied mode.
- 7.3 All switches and the circuit breakers, connectors should conform to IEC 60947:2019, part I, II and III/ IS 60947 part I, II and III.
- 7.4 The isolators, cabling work should be undertaken as part of the project.

- 7.5 All the Panel's shall be metal clad, totally enclosed, rigid, floor mounted, air -insulated, cubical type suitable for operation on $1-\phi/3-\phi$, 415 or 230 volts, 50 Hz (or voltage levels as per CEA/State regulations).
- 7.6 The panels shall be designed for minimum expected ambient temperature of 45 degree Celsius, 80 percent humidity and dusty weather.
- 7.7 All indoor panels will have protection of IP 54 or better, as per site conditions. All outdoor panels will have protection of IP 65 or better, as per site conditions.
- 7.8 Should conform to Indian Electricity Act and CEA safety regulations (till last amendment).
- 7.9 All the 415 or 230 volts (or voltage levels as per CEA/State regulations) AC devices / equipment like bus support insulators, circuit breakers, SPDs, Voltage Transformers (VTs) etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions.
- i. Variation in supply voltage: as per CEA/State regulations
 - ii. Variation in supply frequency: as per CEA/State regulations
- 7.10 The inverter output shall have the necessary rated AC surge arrestors, if required and MCB/ MCCB. RCCB shall be used for successful operation of the PV system, if inverter does not have required earth fault/residual current protection.

8 Protections

The system should be provided with all necessary protections like earthing, Lightning, and Surge Protection, as described below:

8.2 Earthing Protection

- i. The earthing shall be done in accordance with latest Standards.
- ii. Each array structure of the PV yard, Low Tension (LT) power system, earthing grid for switchyard, all electrical equipment, inverter, all junction boxes, etc. shall be grounded properly as per IS 3043-2018.
- iii. All metal casing/ shielding of the plant shall be thoroughly grounded in accordance with CEA Safety Regulation 2010. In addition, the lightning arrester/masts should also be earthed inside the array field.
- iv. Earth resistance should be as low as possible and shall never be higher than 5 ohms.
- v. For 10 KW and above systems, separate three earth pits shall be provided for individual three earthing viz.: DC side earthing, AC side earthing and lightning arrester earthing.
- vi. Total Nos. of Earth pits for Solar PV plant: For Solar PV plant upto 25KW: 03 Nos. Earth pits: AC-01, DC-01, LA-01. For Solar PV plant above 25KW: 06 Nos. Earth Pits: AC-02, DC-02, LA- 02 (double run of earthing conductors for AC & DC)

8.3 Lightning Protection

- i. The SPV power plants shall be provided with lightning & over voltage protection, if required. The main aim in this protection shall be to reduce the overvoltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc. Lightning arrester shall not be installed on the mounting structure.

- ii. The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors (LAs). Lightning protection should be provided as per NFC17-102:2011/IEC 62305 standard.
- iii. The protection against induced high-voltages shall be provided by the use of Metal Oxide Varistors (MOVs)/Franklin Rod type LA/Early streamer type LA.
- iv. The current carrying cable from lightning arrestor to the earth pit should have sufficient current carrying capacity according to IEC 62305. The earthing conductor made up of dip galvanized steel, should be installed with GI strip (25*6 mm) with insulator or 16 Sq mm or above copper conductor only. Separate pipe for running earth wires of Lightning Arrestor shall be used.

8.4 Surge Protection

- i. Internal surge protection, wherever required, shall be provided.
- ii. It will consist of three SPD type-II/MOV type surge arrestors connected from +ve and -ve terminals to earth.

9 CABLES

- 9.2 All cables should conform to latest edition of IEC/equivalent BIS Standards alongwith IEC 60227/IS 694, IEC 60502/IS 1554 standards.
- 9.3 Cables should be flexible and should have good resistance to heat, cold, water, oil, abrasion etc.
- 9.4 Armored cable should be used and overall PVC type 'A' pressure extruded insulation or XLPE insulation should be there for UV protection.
- 9.5 Cables should have Multi Strand, annealed high conductivity copper conductor on DC side and copper/FRLS type Aluminum conductor on AC side. For DC cabling, multi-core cables shall not be used.
- 9.6 Cables should have operating temperature range of -10°C to +80°C and voltage rating of 660/1000 V.
- 9.7 Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop less than 2% (DC Cable losses).
- 9.8 The size of each type of AC cable selected shall be based on minimum voltage drop. However; the maximum drop shall be limited to 2%.
- 9.9 The electric cables for DC systems for rated voltage of 1500 V shall conform to BIS 17293:2020.
- 9.10 All cable/wires are to be routed in a RPVC pipe/ GI cable tray and suitably tagged and marked with proper manner by good quality ferule or by other means so that the cable is easily identified.
- 9.11 All cable trays including covers to be provided.
- 9.12 Thermo-plastic clamps to be used to clamp the cables and conduits, at intervals not exceeding 50 cm.
- 9.13 Size of neutral wire shall be equal to the size of phase wires, in a three phase system.
- 9.14 The Cable should be so selected that it should be compatible up to the life of the solar PV panels i.e. 25 years.
- 9.15 All cables and conduit pipes shall be clamped to the rooftop, walls, and ceilings with thermo-plastic clamps at intervals not exceeding 50 cm; the minimum DC cable size shall be 4.0 mm² copper; the minimum AC cable size shall be 4.0 mm² copper. In three phase systems, the size of the neutral wire size shall be equal to the size of the phase wires. The suitable required size copper cable to be used from inverter to ACDB. 4 Core Aluminum/ Copper armored cables of required size in case of

three phase inverter and 2 Core Aluminum/ Copper armored cables of required size in case of single-phase inverters per IS-894 as amended from time to timescale used from ACDB to LT panel only. Individual single core cables are not permitted for AC termination as well as for earthing in the cable's cores. Cable Should embossed with proper manufacture Name, Size and Dimension of Core.

10 DRAWINGS & MANUALS:

- 10.2 Operation & Maintenance manual/user manual, Engineering and Electrical Drawings shall be supplied along with the power plant.
- 10.3 The manual shall include complete system details such as array lay out, schematic of the system, inverter details, working principle etc.
- 10.4 The Manual should also include all the Dos & Don'ts of Power Plant along with Graphical Representation with indication of proper methodology for cleaning, Operation and Maintenance etc.
- 10.5 Step by step maintenance and troubleshooting procedures shall also be given in the manuals.
- 10.6 Vendors should also educate the consumers during their AMC period.

11 Miscellaneous:

- 11.2 Connectivity: The maximum capacity for interconnection with the grid at a specific voltage level shall be as specified in the SERC regulation for Grid connectivity and norms of DISCOM and amended from time to time.
- 11.3 Safety measures: Electrical safety of the installation(s) including connectivity with the grid must be taken into account and all the safety rules & regulations applicable as per Electricity Act, 2003 and CEA Safety Regulation 2010 etc. must be followed.
- 11.4 Shadow analysis: The shadow analysis report with the instrument such as Solar Pathfinder or professional shadow analysis software of each site should be provided and the consumer should be educated to install the system only in shadow free space. Lower performance of the system due to shadow effect shall be liable for penalty for lower performance.

Quality Certification, Standards and Testing for Grid-Connected Rooftop Solar PV Systems/Power Plants

Solar PV Modules/Panels	
IEC 61215 and IS 14286	Design Qualification and Type Approval for Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
IEC 61701:2011	Salt Mist Corrosion Testing of Photovoltaic (PV) Modules
IEC 61853- 1:2011 / IS 16170-1:2014	Photovoltaic (PV) module performance testing and energy rating –: Irradiance and temperature performance measurements, and power Rating.
IEC 62716	Photovoltaic (PV) Modules – Ammonia (NH ₃) Corrosion Testing (as per the site condition like dairies, toilets etc)
IEC 61730-1,2	Photovoltaic (PV) Module Safety Qualification – Part 1: Requirements for Construction, Part 2: Requirements for Testing
IEC 62804	Photovoltaic (PV) modules – Test method for detection of potential-induced degradation. IEC 62804-1: Part 1: Crystalline Silicon
Solar PV Inverters	
IEC 62109 or IS : 16221	Safety of power converters for use in photovoltaic power systems – Part 1: General requirements, and Safety of power converters for use in photovoltaic power systems Part 2: Particular requirements for inverters. Safety compliance (Protection degree IP 65 or better for outdoor mounting, IP 54 or better for indoor mounting)
IS/IEC 61683 latest (as applicable)	Photovoltaic Systems – Power conditioners: Procedure for Measuring Efficiency (10%, 25%, 50%, 75% & 90-100% Loading Conditions)
IEC 60068-2 /IEC62093 (as applicable)	Environmental Testing of PV System – Power Conditioners and Inverters
IEC 62116:2014/ IS16169	Utility-interconnected photovoltaic inverters - Test procedure of islanding prevention measures
Fuses	
IS/IEC 60947 (Part 1, 2 & 3), EN 50521	General safety requirements for connectors, switches, circuit breakers (AC/DC): 1) Low-voltage Switchgear and Control-gear, Part 1: General rules 2) Low-Voltage Switchgear and Control-gear, Part 2: Circuit Breakers 3) Low-voltage switchgear and Control-gear, Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units 4) EN 50521: Connectors for photovoltaic system-Safety requirements and tests
IEC 60269-6:2010	Low-voltage fuses - Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems

Solar PV Roof Mounting Structure	
IS 2062/IS 4759/AA6063 T6	Material for the structure mounting
Surge Arrestors	
BFC 17-102:2011/ NFC 102:2011/ IEC 62305	Lightening Protection Standard
IEC 60364-5-53/ IS15086-5 (SPD) IEC 61643- 11:2011	Electrical installations of buildings - Part 5-53: Selection and erection of electrical equipment - Isolation, switching and control Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods
Cables	
IEC 60227/IS 694, IEC60502/IS 1554 (Part 1 & 2)/ IEC69947 (as applicable)	General test and measuring method for PVC (Polyvinyl chloride) insulated cables (for working voltages up to and including 1100 V, and UV resistant for outdoor installation)
BS EN 50618	Electric cables for photovoltaic systems (BT(DE/NOT)258), mainly for DC Cables
Earthing /Lightning	
IEC 62561/IEC 60634 Series (Chemical earthing) (as applicable)	IEC 62561-1: Lightning protection system components (LPSC) - Part: Requirements for connection components IEC 62561-2: Lightning protection system components (LPSC) – Part 2: Requirements for conductors and earth electrodes IEC 62561-7: Lightning protection system components (LPSC) - Part 7: Requirements for earthing enhancing compounds
Junction Boxes	
IEC 60529	Junction boxes and solar panel terminal boxes shall be of the thermo-plastic type with IP 65 or better protection for outdoor use, and IP 54 or better protection for indoor use

SECTION – IV

FORMATS FOR PRICE BID

FORMAT: A**PRICE BID****(To be submitted online separately)**

Performa for submission of rates of different capacity of roof top Solar Power Projects under RFP No. CMC/BY/21-22/RS/SV/39 by BYPL

Name of Bidder: -

Scope of Work	Cat-egory	Quoted Bid Capacity in BRPL (in kW) (A)	Quoted Bid Capacity in BYPL (in kW) (B)	Quoted Bid Capacity in TPDDL (in kW) (C)	Total Quoted Bid Capacity (in kW) (D=A+B+C)	Quoted Rate per kWp (in INR) (E)	Quote d Rate per kWp in words (F)
Design, supply, erection, testing and commissioning including warranty, Comprehensive operation & maintenance of grid connected rooftop solar power plant of various capacities in the NCT of Delhi under Phase-II Scheme.	CAPEX Part A						
	CAPEX Part B						
	CAPEX Part C						
	CAPEX Part D						
	RESCO Part A*						
	RESCO Part B*						
	TOTAL						

- For RESCO : Rates for RESCO be quoted in INR per Kilo watt Hours (INR/kWh)
- Rates quoted will be exclusive of GST.
- In case there is difference between Figure Rate & Words Rate, then the rates given in words column will be accepted by BYPL.
- In case of discrepancy in price bid (Excel file) and electronic form, the price mentioned in Excel file will prevail.
- Bidders are advised to consider 1 meter hight of the raised structure in their price bid, Subsidy will be applicable on cost discovered with structure height of 1 m only.

SECTION – V

FORMATS FOR SUBMITTING RFP

Format-1

Covering Letter

(The covering letter should be on the Letter Head of the Bidding Company)

Ref.No. _____

Date: _____

From: _____ **(Insert name and address of Bidding Company)**

Tel.#: Fax#:

E-mail address#

To,

BSES Yamuna Power Limited,
Contracts and Materials,
3rd Floor, Shakti Kiran Building,
Kakardooma Delhi - 110032

Sub: RFP for the empanelment of vendors for "Design, supply, erection, testing and commissioning including warranty, Comprehensive operation & maintenance of grid connected rooftop solar power plant of various capacities in the NCT of Delhi for Part-A/ Part-B/ Part C/ Part- D/Part- E/Part-F).

Dear Sir,

1. We, the undersigned....[*insert name of the Bidder*] having read, examined and understood in detail the RFP Document for Implementation of Grid connected Roof Top Solar System hereby submit our Bid comprising of Price Bid and Techno Commercial Bid. We confirm that neither we nor any of our Parent Company / Affiliate/Ultimate Parent Company has submitted Bid other than this Bid directly or indirectly in response to the aforesaid RFP.
2. We give our unconditional acceptance to the RFP, dated.....and RFP Documents attached thereto, issued by *DISCOM*, as amended. As a token of our acceptance to the RFP documents, the same have been initiated by us and enclosed with the bid. We shall ensure that we execute such RFP as per the provisions of the RFP and provisions of such RFP Documents shall be binding on us.

Bid Capacity: We have bid for the capacity of kWp for Part-A/ Part-B/ Part C/ Part- D/Part- E/Part-F separately as per RFP terms and conditions.

Bid Bond: We have enclosed a Bid Bond of Rs.....(Insert Amount), in the form of bank guarantee no.....(Insert number of the bank guarantee) dated.....[Insert date of bank guarantee] as per

Formatfrom(Insert name of bank providing Bid Bond) and valid up toin terms of Clauseof this RFP. The offered quantum of power by us is(*Insert total capacity offered*) kWp in _____(Part-A/ Part-B/ Part C/ Part- D/Part- E/Part-F).

3. We have submitted our Price Bid strictly as per Section IV of this RFP, without any deviations, conditions and without mentioning any assumptions or notes for the Price Bid in the said format(s).
4. In case we are a Empanelled Vendor, we shall furnish a declaration at the time of commissioning of the project to the affect that neither we have availed nor we shall avail in future any CFA other than received from DISCOM for implementation of the project.

5. Acceptance:

We hereby unconditionally and irrevocably agree and accept that the decision made by DISCOM in respect of any matter regarding or arising out of the RFP shall be binding on us. We hereby expressly waive any and all claims in respect of Bid process.

We confirm that there are no litigations or disputes against us, which materially affect our ability to fulfil our obligations with regards to execution of projects of capacity offered by us.

6. Familiarity with Relevant Indian Laws & Regulations

We confirm that we have studied the provisions of the relevant Indian laws and regulations as required to enable us to submit this Bid and execute the RFP Documents, in the event of our selection as successful bidder. We further undertake and agree that all such factors as mentioned in RFP have been fully examined and considered while submitting the Bid.

7. Contact Person

Details of the contact person are furnished as under:

Name :

Address :

Phone Nos. :

Fax No. :

E-Mail :

8. We are enclosing herewith the Envelope-I (Covering letter, Processing fee and Bid Bonds etc as per **clause No. 10.2 of Section-I** of the RFP) (through Offline) and Techno-Commercial documents (through online) and Price Bids (through online) containing duly signed formats, each one duly sealed separately, in one original as desired by you in the RFP for your consideration as per **clause No. 10.3 of Section-I** of the RFP.

It is confirmed that our Bid is consistent with all the requirements of submission as stated in the RFP and subsequent communications from DISCOM. The information submitted in our Bid is complete, strictly

as per the requirements stipulated in the RFP and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our Bid. We confirm that all the terms and conditions of our Bid are valid for acceptance for a period of 6 month from the Bid deadline. We confirm that we have not taken any deviation so as to be deemed non-responsive.

Dated the day of , 2022

Yours faithfully,

Signature:

Name:

Designation with Seal

Name, Designation and Signature of Authorized Person in whose name Power of Attorney/Board Resolution/Declaration (Annexure G).

General Particulars of the bidder

S. No.	Particulars	Details
1.	Name of the Company	
2.	Registered Office Address	
3.	E-mail ID	
4.	Web site	
5.	Authorized Contact Person(s) with name, designation Address and Mobile Phone No., E-mail address/ Fax No. to whom all references shall be made	
6.	Year of Incorporation	
7.	Have the bidder/Company ever been debarred By any Govt. Dept. / Undertaking for undertaking any work	
8.	Reference of any document information attached by the Bidder other than specified in the RFP.	
9.	Details of the Ownership structure (Details of persons owning 10% or more of the Total Paid up equity of the Bidding Company in the Format as below	Yes/No
10.	Whether company is MSME as on the bidding date	Yes/No
11.	Whether the Company has valid GST Registration Number (Enclose a Copy)	
12.	PAN number (enclosed a copy)	
13.	Bank Account Details	

Please strike-off whichever is not applicable.

Signature:

Name:

Designation with Seal:

PROFORMA FOR BANK GUARANTEE FOR BID BOND/EMD

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

Ref.:

Date:

Bank Guarantee No.:

To,

[Name and Address of State DISCOM]

In consideration of the ----- *[Insert name of the Bidder]* (hereinafter referred to as 'Bidder') submitting the response to RFP inter alia for selection of the Project of the capacity of MW *[Insert Capacity of Plant]* in response to the RFP No. _____ Dated by *[Name and Address of State DISCOM]* (hereinafter referred to as DISCOM) and DISCOM considering such response to the RFP of*[insert the name of the Bidder]* as per the terms of the RFP, the *[insert name & address of bank]* hereby agrees unequivocally, irrevocably and unconditionally to pay to DISCOM at *[Insert Name of the Place from the address of DISCOM forthwith on demand in writing from DISCOM or any Officer authorized by it in this behalf, any amount up-to and not exceeding Rupees ----- [Insert amount not less than that derived on the basis of INR. [Insert the amount] Lakhs per MW of cumulative capacity proposed in Group] only, on behalf of M/s. [Insert name of the Bidder].*

This guarantee shall be valid and binding on this Bank up to and including *[insert date of validity in accordance with **Clause 10.9** of this RFP and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.*

Our liability under this Guarantee is restricted to *[Insert the Value of Amount in INR]*. Our Guarantee shall remain in force until *[insert date of validity in accordance with **Clause 10.9** of this RFP]. DISCOM shall be entitled to invoke this Guarantee till [Insert date which is [Insert the Number of] days after the date in the preceding sentence].*

The Guarantor Bank hereby agrees and acknowledges that the DISCOM shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The guarantor bank acknowledged that this Bank Guarantee may be assigned by the DISCOM, in whole or in part (whether absolutely or by way of security) to the successor entity (ies) coming into being as a result of any merger or amalgamation or scheme of arrangement or similar re-organization of the DISCOM.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written

demand by *DISCOM*, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to *DISCOM*.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by ----- [*Insert name of the Bidder*] and/or any other person. The Guarantor Bank shall not require *DISCOM* to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against *DISCOM* in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at [*Delhi/District*] shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly *DISCOM* shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the Bidder, to make any claim against or any demand on the Bidder or to give any notice to the Bidder or to enforce any security held by *DISCOM* or to exercise, levy or enforce any distress, diligence or other process against the Bidder.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to Rs. (Rs. only) and it shall remain in force until [*Date to be inserted on the basis of **Clause 10.9** of this RFP*] with an additional claim period of Ninety (90) days thereafter.

We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if *DISCOM* serves upon us a written claim or demand.

Signature

Name

Power of Attorney No.

For

[*Insert Name of the Bank*]

Banker's Stamp and Full Address. Dated this _____ day of __ , 2021

Note: 1. (*) the amount shall be as specified in the Bid document.

(#) Complete mailing address of the Head Office of the Bank to be given.

The Performance Bank Guarantee (PBG) shall be executed by any of the Bank from the List of Banks

enclosed as per Annexure-B.

2. The Stamp Paper of appropriate value shall be purchased in the name of guarantee issuing Bidder/bank issuing the guarantee.

FORMAT FOR PERFORMANCE BANK GUARANTEE (PBG)

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

In consideration of the [Insert name of the Bidder] (Hereinafter referred to as selected Solar Power Developer') submitting the response to RFP inter alia for selection of the Project under CAPEX Model (Part-A/ Part-B/ Part C/ Part- D) and RESCO Model (Part A/Part B) of the capacity of kWp / MWp under Roof Top scheme in response to the RFP no. dated issued by *DISCOM* and *DISCOM* considering such response to the RFP of insert the name of the selected Solar Power Developer] (which expression shall unless repugnant to the context or meaning thereof include its executors, administrators, successors and assignees) and selecting the Solar Power Project of the Solar Power Developer and issuing Letter of allocation no. to (Insert Name of selected Solar Power Developer) as per terms of RFP and the same having been accepted. As per the terms of the RFP, the [insert name & address of bank] hereby agrees unequivocally, irrevocably and unconditionally to pay to *DISCOM* at [Insert Name of the Place from the address of the *DISCOM* forthwith on demand in writing from *DISCOM* or any Officer authorized by it in this behalf, any amount upto and not exceeding Rupees..... [total value] only, on behalf of M/s [Insert name of the selected Solar Power Developer / Project Company] This guarantee shall be valid and binding on this Bank up to and including..... and shall not be terminable by notice or any change in the constitution of the Bank or the term of contract or by any other reasons whatsoever and our liability hereunder shall not be impaired or discharged by any extension of time or variations or alternations made, given, or agreed with or without our knowledge or consent, by or between parties to the respective agreement.

Our liability under this Guarantee is restricted to INR.....

Our Guarantee shall remain in force until..... *DISCOM* shall be entitled to invoke this Guarantee till [Insert date which is [*Insert the number*] of days after the date in the preceding sentence].

The Guarantor Bank hereby agrees and acknowledges that *DISCOM* shall have a right to invoke this BANK GUARANTEE in part or in full, as it may deem fit.

The Guarantor Bank hereby expressly agrees that it shall not require any proof in addition to the written demand by *DISCOM*, made in any format, raised at the above mentioned address of the Guarantor Bank, in order to make the said payment to *DISCOM*.

The Guarantor Bank shall make payment hereunder on first demand without restriction or conditions and notwithstanding any objection by -----[Insert name of the selected bidder]. The Guarantor Bank shall not require *DISCOM* to justify the invocation of this BANK GUARANTEE, nor shall the Guarantor Bank have any recourse against *DISCOM* in respect of any payment made hereunder.

This BANK GUARANTEE shall be interpreted in accordance with the laws of India and the courts at [Delhi/District] shall have exclusive jurisdiction.

The Guarantor Bank represents that this BANK GUARANTEE has been established in such form and with

such content that it is fully enforceable in accordance with its terms as against the Guarantor Bank in the manner provided herein.

This BANK GUARANTEE shall not be affected in any manner by reason of merger, amalgamation, restructuring or any other change in the constitution of the Guarantor Bank.

This BANK GUARANTEE shall be a primary obligation of the Guarantor Bank and accordingly *DISCOM* shall not be obliged before enforcing this BANK GUARANTEE to take any action in any court or arbitral proceedings against the selected Solar Power Developer / Project Company , to make any claim against or any demand on the Empanelled Vendor or to give any notice to the selected Solar Power Developer / Project Company or to enforce any security held by *DISCOM* or to exercise, levy or enforce any distress, diligence or other process against the selected Solar Power Developer / Project Company.

Notwithstanding anything contained hereinabove, our liability under this Guarantee is restricted to INR..... (INR..... only) and it shall remain in force until [Insert date which is *[Insert the number]* of days after the date in the preceding sentence]. We are liable to pay the guaranteed amount or any part thereof under this Bank Guarantee only if *DISCOM* serves upon us a written claim or demand.

Signature

Name

Power of Attorney No.

For,

..... [Insert the bank name]

Banker's Stamp and Full Address.

Dated this day of , 2022

Witness:

1. Signature Name and Address	2. Signature Name and Address
--	--

Notes:

1. The Stamp Paper should be in the name of the Executing Bank and of appropriate value.
2. The Performance Bank Guarantee (PBG) shall be executed by any of the Bank from the List of Banks enclosed as per Annexure-B.

CHECK LIST FOR BANK GUARANTEES

Sl. No.	Details of checks	YES/NO.
a)	Is the PBG on non-judicial Stamp paper of appropriate value, as per applicable Stamp Act of the place of execution	
b)	Whether date, purpose of purchase of stamp paper and name of the purchaser are indicated on the back of Stamp paper under the Signature of Stamp vendor? (The date of purchase of stamp paper should be not later than the date of execution of BG and the stamp paper should be purchased either in the name of the executing Bank or the party on whose behalf the BG has been issued. Also, the Stamp Paper should not be older than six months from the date of execution of BG).	
c)	Has the executing Officer of BG indicated his name, designation and Power of Attorney No. /Signing Power no. on the BG?	
d)	Is each page of BG duly signed / initiated by executants and whether stamp of Bank is affixed thereon? Whether the last page is signed with full particulars including two witnesses under seal of Bank as required in the prescribed Performa?	
e)	Does the Bank Guarantees compare verbatim with the Performa prescribed in the Bid Documents?	
f)	Are the factual details such as Bid Document No. / Specification No., / LoA No. (if applicable) / Amount of BG and Validity of BG/correctly mentioned in the BG	
g)	Whether overwriting/cutting if any on the BG have been properly authenticated under signature & seal of executants?	
h)	Contact details of issuing bank including email id, mobile number etc.	

POWER OF ATTORNEY

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

(a) Power of Attorney to be provided by the Bidding Company in favour of its representative as evidence of authorized signatory's authority.

Know all men by these presents, We name and address of the registered office of the Bidding Company as applicable) do hereby constitute, appoint and authorize Mr./Ms (name & residential address) who is presently employed with us and holding the position of as our true and lawful attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to submission of our Bid for implementation of grid connected Roof top solar in response to the RFP No. dated issued by *DISCOM*, including signing and submission of the Bid and all other documents related to the Bid, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document which the *DISCOM* may require us to submit. The aforesaid attorney is further authorized for making representations to the *DISCOM*, and providing information / responses to *DISCOM*, representing us in all matters before *DISCOM* and generally dealing with *DISCOM* in all matters in connection with Bid till the completion of the bidding process as per the terms of the above mentioned RFP.

We hereby agree to ratify all acts, deeds and things done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall be binding on us and shall always be deemed to have been done by us.

All the terms used herein but not defined shall have the meaning ascribed to such terms under the RFP.

Signed by the within named

..... (Insert the name of the executant's company) through the hand of

Mr.

duly authorized by the Board to issue such Power of Attorney

Dated this day of

Accepted.....

Signature of Attorney

(Name, designation and address of the Attorney)

Attested.....

(Signature of the executant)

(Name, designation and address of the executant)

Signature and stamp of Notary of the place of execution

Common seal of..... has been affixed in my/our presence pursuant to Board of Director's Resolution dated.....

Witness:

1. Signature Designation Name and Address	2. Signature Designation Name and Address
---	---

Notes:

- i. The mode of execution of the power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and the same should be under common seal of the executant affixed in accordance with the applicable procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executant(s) in this regard.
- ii. The person authorized under this Power of Attorney, in the case of the Bidding Company / Lead Member being a public company, or a private company which is a subsidiary of a public company, in terms of the Companies Act, 1956, with a paid up share capital of more than Rupees Five crores, should be the Managing Director / whole time director/manager appointed under section 269 of the Companies Act, 1956. In all other cases the person authorized should be a director duly authorized by a board resolution duly passed by the Company.
- iii. Also, wherever required, the executant(s) should submit for verification the extract of the chartered documents and documents such as a Board resolution / power of attorney, in favour of the person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).

FINANCIAL ELIGIBILITY CRITERIA REQUIREMENT
(AS PER CLAUSE 10.9 of Section-I)
(To be submitted on the letterhead of Bidding Company)

To,

BSES Yamuna Power Limited,
 Contracts and Materials,
 3rd Floor, Shakti Kiran Building,
 Karkardooma Delhi – 110032

Sub: Bid for Implementation of Grid connected Roof Top Solar System scheme in response to the RFP No:

Dear Sir,

We submit our Bid/Bids for the total capacity of kWp in Part-A/ Part-B/ Part C/ Part- D put together for which details of our Financial Eligibility Criteria Requirements are as follows.

We certify that the Financially Evaluated Entity(ies) had an Annual Turnover as follows:

The Annual turnover of [*Insert the amount*] per kW of the capacity offered in its Bid in any one of the last 3 financial years preceding the bid deadline subjected to the condition that the bidder should at least have completed one financial year.

OR

Net worth (strike out whichever is not applicable) of Rs.....Crore computed as per instructions provided in **Clause 5.5.2** of this RFP based on unconsolidated audited annual accounts (refer Note-1 below) any of the last 3 Years immediately preceding the Bid Deadline.

Name of Financially Evaluated Entity*	Relationship with Bidding Company**	Financial year	Year of Incorporation	Annual Turnover (Rs. Crore)	Net worth as per Clause 5.5.2 (in Rs. Crore)

* The Financially Evaluated Entity may be the Bidding Company itself.

** The column for "Relationship with Bidding Company" is to be filled in only in case financial capability of Parent Company and/or Affiliate has been used for meeting Qualification Requirements.

Yours faithfully

(Signature and stamp (on each page) of Authorized Signatory of Bidding Company.

Name:

Date:

Place:

(Signature and stamp (on each page) of Chartered Accountant/Statutory Auditors of Bidding Company.

Name:

Date:

Place:

Notes:

- i. Audited consolidated annual accounts of the Bidder may also be used for the purpose of financial criteria provided the Bidder has at least 26% equity in each company whose accounts are merged in the audited consolidated accounts and provided further that the financial capability of such companies (of which accounts are being merged in the consolidated accounts) shall not be considered again for the purpose of evaluation of the Bid.*

Format-8

Format for certificate of relationship of Parent Company or Affiliate with the Bidding Company.

To,

BSES Yamuna Power Limited,
Contracts and Materials,
3rd Floor, Shakti Kiran Building,
Karkardooma Delhi – 110032

Sub: Bid for Implementation of Grid connected Roof Top Solar System.

Dear Sir,

We hereby certify that M/s.....,M/s.....,M/s.....are the Affiliate(s) /Parent Company of the Bidding Company as per the definition of Affiliate/Parent Company as provided in this RFP and based on details of equity holding as on seven (7) days prior to the Bid Deadline.

The details of equity holding of the Affiliate/Parent Company/Bidding Company or vice versa as on seven (7) days prior to the Bid Deadline are given as below:

Name of Bidding Company	Name of the Affiliate of the Bidding Company/ Name of the Parent Company of the Bidding Company	Name of the Company having common control on the Affiliate and the Bidding Company	Percentage of Equity Holding of Parent Company in the Bidding Company

*Strike out whichever is not applicable.

.....

(Insert Name and Signature of Statutory Auditor or practicing Company Secretary of theBidder)

Undertaking from the Financially Evaluated Entity or its Parent Company/ Ultimate Parent Company

(On the Letter Head of the Financially Evaluated Entity or its Parent Company/Ultimate Parent Company)

Name:

Full Address:

Telephone No.:

E-mail

address:

Fax/No.:

To,

BSES Yamuna Power Limited,
Contracts and Materials,
3rd Floor, Shakti Kiran Building,
Karkardooma Delhi – 110032

Dear Sir,

We refer to the RFP No..... dated..... for "Implementation of Grid connected Roof Top Solar Systems".

"We have carefully read and examined in detail the RFP, including in particular, Clause of the RFP, regarding submission of an undertaking, as per the prescribed Format at Annexure..... of the RFP.

We confirm that M/s..... (Insert name of Bidding Company/) has been authorized by us to use our financial capability for meeting the Financial Eligibility as specified in Clause.... of the RFP referred to above.

We have also noted the amount of the Performance Guarantee required to be submitted as per Clause....of the RFP the(Insert the name of the Bidding Company) in the event of it being selected as the Empanelled Vendor.

In view of the above, we hereby undertake to you and confirm that in the event of failure of(Insert name of the Bidding Company) to submit the Performance Guarantee in full or in part at any stage, as specified in the RFP, we shall submit the Performance Guarantee not submitted by(Insert name of the Bidding Company).

We have attached hereto certified true copy of the Board Resolution Whereby the Board of Directors of our Company has approved issue of this Undertaking by the Company.

All the terms used herein but not defined, shall have the meaning as ascribed to the said terms under the RFP.

Signature of Authorized Signatory

Common seal of has been affixed in my/our presence pursuant to Board of Director's Resolution dated.....

WITNESS

..... (Signature)

Name.....

Designation.....

(Signature).....

Name.....

Designation.....

(Shareholding Certificate)

Name of the Equity holder	Type and Number of shares owned	% of equity holding	Extent of Voting rights

(Signature of Authorized Signatory) With Stamp

(Signature of Company Secretary/Director/Chartered Accountant)

Section – VI

Annexure (A to X)

DOCUMENTS REQUIRED FOR PROJECT SANCTION

Following documents will be required to be submitted for project sanction:

Check List**For issuance of Sanction Order by DISCOM**

S. No.	Documents	Yes / NO	Page No.
1.	Sanction Request letter on Letter head (Annexure D)		
2.	Copy of CAPEX/RESCO Agreement		
3.	NOC/ Approval Letter from DISCOM		
4.	Copy of Latest Electricity paid Bill		
5.	Coloured Site Photos with Date & Time stamping		
6.	BOM & SLD		
7.	Solar PV Module Specs Sheet		
8.	Solar PV Module IEC Certificates		
9.	Inverter Specs Sheet		
10.	Inverter IEC Certificates		
11.	Project Report (As per Annexure F)		
12.	Connection Agreement (CAPEX/RESCO)		

Signature

Annexure B**List of Banks**

1. SCHEDULED COMMERCIAL BANKS	2. OTHER PUBLIC SECTOR BANKS
SBI AND ASSOCIATES	1. IDBI Bank Ltd.
1. State Bank of India	3. FOREIGN BANKS
2. State Bank of Bikaner & Jaipur	1. Bank of America NA
3. State Bank of Hyderabad	2. Bank of Tokyo Mitsubishi UFJ Ltd.
4. State Bank of Indore	3. BNP Paribas
5. State Bank of Mysore	4. Calyon Bank
6. State Bank of Patiala	5. Citi Bank N.A.
7. State Bank of Travancore	6. Deutsche Bank A.G
NATIONALISED BANKS	7. The Hong Kong and Shanghai Banking Corpn. Ltd.
1. Allahabad Bank	8. Standard Chartered Bank
2. Andhra Bank	9. Societe Generale
3. Bank of India	10. Barclays Bank
4. Bank of Maharashtra	11. Royal Bank of Scotland
5. Canara Bank	12. Bank of Nova Scotia
6. Central Bank of India	13. Development Bank of Singapore (DBS, Bank Ltd.)
7. Corporation Bank	14. Credit Agricole Corporate and Investment Bank
8. Dena Bank	4. SCHEDULED PRIVATE BANKS
9. Indian Bank	1. Federal Bank Ltd.

10. Indian Overseas Bank	2. ING Vysya Bank Ltd.
11. Oriental Bank of Commerce	3. Axis Bank Ltd.
12. Punjab National Bank	4. ICICI Bank Ltd.
13. Punjab & Sind Bank	5. HDFC Bank Ltd.
14. Syndicate Bank	6. Yes Bank Ltd.
15. Union Bank of India	7. Kotak Mahindra Bank
16. United Bank of India	8. IndusInd Bank Ltd
17. UCO Bank	9. Karur Vysya Bank
18. Vijaya Bank	19. Bank of Baroda

Operation and Maintenance Guidelines of Grid Connected PV Plants for Part A & B, C & D

1. For the optimal operation of a PV plant, maintenance must be carried out on a regular basis.
2. All the components should be kept clean. It should be ensured that all the components are fastened well at their due place.
3. Maintenance guidelines for various components viz. solar panels, inverter, wiring etc. are discussed below:

SOLAR PANELS

Although the cleaning frequency for the panels will vary from site to site depending on soiling, it is recommended that

- i. The panels are cleaned at least once every fifteen days.
- ii. Any bird droppings or spots should be cleaned immediately.
- iii. Use water and a soft sponge or cloth for cleaning.
- iv. Do not use detergent or any abrasive material for panel cleaning.
- v. Iso-propyl alcohol may be used to remove oil or grease stains.
- vi. Do not spray water on the panel if the panel glass is cracked or the back side is perforated.
- vii. Wipe water from module as soon as possible.
- viii. Use proper safety belts while cleaning modules at inclined roofs etc.
- ix. The modules should not be cleaned when they are excessively hot. Early morning is particularly good time for module cleaning.
- x. Check if there are any shade problems due to vegetation or new building. If there are, make arrangements for removing the vegetation or moving the panels to a shade-free place.
- xi. Ensure that the module terminal connections are not exposed while cleaning; this poses a risk of electric shock.
- xii. Never use panels for any unintended use, e. g. drying clothes, chips etc.
- xiii. Ensure that monkeys or other animals do not damage the panels.

CABLES AND CONNECTION BOXES

- i. Check the connections for corrosion and tightness.
- ii. Check the connection box to make sure that the wires are tight, and the water seals are not damaged.
- iii. There should be no vermin inside the box.
- iv. Check the cable insulating sheath for cracks, breaks or burns. If the insulation is damaged, replace the wire
- v. If the wire is outside the building, use wire with weather-resistant insulation.
- vi. Make sure that the wire is clamped properly and that it should not rub against any sharp edges or corners.
- vii. If some wire needs to be changed, make sure it is of proper rating and type.

INVERTER

- i. The inverter should be installed in a clean, dry, and ventilated area which is separated from, and not directly above, the battery bank.
- ii. Remove any excess dust in heat sinks and ventilations. This should only be done with a dry cloth or brush.
- iii. Check that vermin have not infested the inverter. Typical signs of this include
- iv. Spider webs on ventilation grills or wasps' nests in heat sinks.
- v. Check functionality, e.g. automatic disconnection upon loss of grid power supply, at least once a month.
- vi. Verify the state of DC/AC surge arrestors, cable connections, and circuit breakers.

SHUTTING DOWN THE SYSTEM

- i. Disconnect system from all power sources in accordance with instructions for all other components used in the system.
- ii. Completely cover system modules with an opaque material to prevent electricity from being generated while disconnecting conductors.
- iii. To the extent possible, system shutdown will not be done during daytime or peak generation.

INSPECTION AND MAINTENANCE SCHEDULE:

Component	Activity	Description	Interval	By
PV Module	Cleaning	Clean any bird droppings/ dark spots on module	Immediately	Beneficiary
	Cleaning	Clean PV modules with plain water or mild dishwashing detergent. Do not use brushes, any types of solvents, abrasives, or harsh detergents.	Fortnightly/ Monthly or as per the site conditions	Beneficiary
	Inspection (for plants > 100 kWp)	Use infrared camera to inspect for hot spots; bypass diode failure	Annual	Technician
PV Array	Inspection	Check the PV modules and rack for any damage. Note down location and serial number of damaged modules.	Annual	User/Technician

	Inspection	Determine if any new objects, such as vegetation growth, are causing shading of the, array and move them if possible.	Annual	User/Technician
	Vermin Removal	Remove bird nests or Vermin from array and rack area.	Annual	User/Technician
Junction Boxes	Inspection	Inspect electrical boxes for corrosion or intrusion of water or insects. Seal boxes if required. Check position of switches and breakers. Check operation of all protection devices.	Annual	Electrician
Wiring	Inspection	Inspect cabling for signs of cracks, defects, loose connections, overheating, arcing, short or open circuits, and ground faults.	Annual	Electrician
Inverter	Inspection	Observe	Quarterly	Electrician
Component	Activity	Description	Interval	By
		Instantaneous operational indicators on the faceplate of the inverter to ensure that the amount of power being generated is typical of the conditions. Inspect Inverter housing or shelter for physical maintenance, if required.		
Inverter	Service	Clean or replace any air filters.	As needed	Electrician
Instruments	Validation	Spot-check monitoring instruments pyranometer etc.) with standard instruments to ensure that they are operational and within specifications.	Annual	PV Specialist

Transformer	Inspection	Inspect transformer oil level, temperature gauges, breather, silica gel, meter, connections etc.	Annual	Electrician
Tracker (if present)	Inspection	Inspect gears, gear boxes, bearings as required.	Annual	Technician
	Service	Lubricate tracker mounting bearings, gearbox as required.	Bi-annual	Technician
Plant	Monitoring	Daily Operation and Performance Monitoring	Daily	Beneficiary
Inverter	Inspection	Observe instantaneous operational indicators on the faceplate of the inverter to ensure that the amount of power being generated is typical of the conditions. Inspect Inverter housing or shelter for physical maintenance, if required.	Quarterly	Electrician
Inverter	Service	Clean or replace any air filters.	As needed	Electrician
Instruments	Validation	Spot – check monitoring instruments (pyranometer etc.) with standard instruments to ensure that they are operational and within specifications.	Annual	PV Specialist
Transformer	Inspection	Inspect transformer oil level, temperature gauges, breather, silica gel, meter, connections etc.	Annual	Electrician
Tracker (if present)	Inspection	Inspect gears, gear boxes, bearings as required.	Annual	Technician
	Service	Lubricate tracker mounting bearings, gearbox as required.	Bi-annual	Technician
Plant	Monitoring	Daily Operation and Performance Monitoring	Daily	Beneficiary

Spare Parts	Management	Manage inventory of spare parts.	As needed	Site in charge
Logbook	Documentation	Document all O&M activities in a workbook available to all service personnel	Continuous	Site in charge

Operation and Maintenance Guidelines of Grid Connected PV Plants

- i. Periodic cleaning of solar modules, preferably once every fortnight. As this task has to be done by the beneficiary, the vendors shall apprise the beneficiary on the importance and proper technique for cleaning.
- ii. O&M of Solar Power Plant shall be compliant with grid requirements to achieve committed energy generation.
- iii. Periodic checks of the Modules, PCUs and BoS shall be carried out as a part of routine preventive and breakdown maintenance.
- iv. Immediate replacement of defective Modules, Invertors/PCUs and other equipment as and when required.
- v. Supply of all spares, consumables and fixtures as required. Such stock shall be maintained for all associated equipment and materials as per manufacturer/ supplier's recommendations.
- vi. All the equipment testing instrument required for Testing, Commissioning and O&M for the healthy operation of the Plant shall be maintained by the Bidder. The testing equipment must be calibrated once every 2 years from NABL accredited labs and the certificate of calibration must be kept for reference as required.
- vii. If negligence/ mal operation on part of the Bidder's operator results in failure of equipment, such equipment should be repaired/ replaced by the Bidder free of cost.
- viii. If any jobs covered in O&M Scope as per RFP are not carried out by the contractor/ Bidders during the O&M period, the Engineer-In-Charge shall take appropriate action as deemed fit.
- ix. *Concerned DISCOM* reserves the right to make surprise checks/ inspection visits at its own or through authorized representative to verify the O&M activities being carried out by the Bidder. Failure to adhere to above guidelines will result in penal action including debarring from participation in next tender.

Note: * Further modification of RTS plant will not be allowed O&M.

Sanction Request Letter*(On Letterhead of the Vendor)*

Letter No. _____

Dated _____

To,Name and Address of *BYPL/BRPL/TPDDL***Sub: Application for approval of project sanction for disbursement of CFA for Installation and Commissioning of Solar PV Plant under XXXX Model in Part X**

Ref: 1. Your Allocation Letter No. _____ Dated _____

2. Project Sanction documents received vide letter number XXX dated XX.XX.XXXX

Dear Sir,

In reference to the above allocation letter dated _____, allocating us an aggregate capacity of XX kWp (allocated capacity in the category) Solar PV Project under XXXX model under Part X, we request you to kindly issue this consent letter for installation and commissioning of solar PV projects in *BYPL/BRPL/TPDDL* area under the grid connected rooftop scheme as per the following details:

Total allocated capacity	Project Cost (Rs/ kWp)	Capacity Sanctioned (kWp)	CFA Amount
1.			
2.			
3.			

We shall complete the Installation & Commissioning of the sanctioned projects as per the terms and conditions of the RFP document and work order issued by the *BYPL/BRPL/TPDDL*.

Please find the check list of documents attached for sanction of projects

S.No	Documents	Yes/ No	Page No.
1.	Covering letter on Letterhead		
2.	Copy of CAPEX Agreement/ RESCO Agreement (PPA)		
3.	NOC and Acknowledgement from DISCOM		

4.	Copy of Latest Paid Electricity Bill		
5.	Coloured Site Photos with Date & Time Stamping and Geo-coordinates		
6.	BOM & SLD		
7.	Solar PV Module Specs Sheet		
8.	Solar PV Module IEC Certificates		
9.	Inverter Specs Sheet		
10.	Inverter IEC Certificates		
11.	DCR Undertaking (individually for each project)		
12.	Project report as per format (Annexure - F)		
13.	ALMM Undertaking as per Annexure – T		

Thanking You

Yours Faithfully,
(Name of Authorized signatory of the Vendor)
(Designation)

Annexure E

Quality Certification, Standards and Testing for Grid-connected Rooftop Solar PV Systems/Power Plants

Quality certification and standards for grid-connected rooftop solar PV systems are essential for the successful mass-scale implementation of this technology. It is also imperative to put in place an efficient and rigorous monitoring mechanism, adherence to these standards. Hence, all components of grid-connected rooftop solar PV system/ plant must conform to the relevant standards and certifications given below:

Solar PV Modules/Panels	
IEC 61215/ IS 14286	Design Qualification and Type Approval for Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
IEC 61701	Salt Mist Corrosion Testing of Photovoltaic (PV) Modules
IEC 61853- Part 1/ IS 16170: Part 1	Photovoltaic (PV) module performance testing and energy rating: Irradiance and temperature performance measurements, and power rating
IEC 62716	Photovoltaic (PV) Modules – Ammonia (NH ₃) Corrosion Testing (As per the site condition like dairies, toilets)
IEC 61730-1,2	Photovoltaic (PV) Module Safety Qualification – Part 1: Requirements for Construction, Part 2: Requirements for Testing
IEC 62804	Photovoltaic (PV) modules - Test methods for the detection of potential-induced degradation. IEC TS 62804-1: Part 1: Crystalline silicon (mandatory for applications where the system voltage is > 600 VDC and advisory for installations where the system voltage is < 600 VDC)
IEC 62759-1	Photovoltaic (PV) modules – Transportation testing, Part 1: Transportation and shipping of module package units
Solar PV Inverters	
IEC 62109-1, IEC 62109-2	Safety of power converters for use in photovoltaic power systems – Part 1: General requirements, and Safety of power converters for use in photovoltaic power systems Part 2: Particular requirements for inverters. Safety compliance (Protection degree IP 65 for outdoor mounting, IP 54 for indoor mounting)
IEC/IS 61683 (as applicable)	Photovoltaic Systems – Power conditioners: Procedure for Measuring Efficiency (10%, 25%, 50%, 75% & 90-100% Loading Conditions)

BS EN 50530 (as applicable)	Overall efficiency of grid-connected photovoltaic inverters: This European Standard provides a procedure for the measurement of the accuracy of the maximum power point tracking (MPPT) of inverters, which are used in grid- connected photovoltaic systems. In that case the inverter energizes a low voltage grid of stable AC voltage and constant frequency. Both the static and dynamic MPPT efficiency is considered.
IEC 62116/ UL 1741/ IEEE 1547 (as applicable)	Utility-interconnected Photovoltaic Inverters - Test Procedure of Islanding Prevention Measures
IEC 60255-27	Measuring relays and protection equipment – Part 27: Product safety requirements
IEC 60068-2 (1, 2, 14, 27, 30 & 64)	Environmental Testing of PV System – Power Conditioners and Inverters a) IEC 60068-2-1: Environmental testing - Part 2-1: Tests - Test A: Cold b) IEC 60068-2-2: Environmental testing - Part 2-2: Tests - Test B: Dry heat c) IEC 60068-2-14: Environmental testing - Part 2-14: Tests - Test N: Change of temperature d) IEC 60068-2-27: Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock e) IEC 60068-2-30: Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle) f) IEC 60068-2-64: Environmental testing - Part 2-64: Tests - Test Fh: Vibration, broadband random and guidance
IEC 61000 – 2,3,5 (as applicable)	Electromagnetic Interference (EMI) and Electromagnetic Compatibility (EMC) testing of PV Inverters
Fuse	
IS/IEC 60947 (Part 1, 2 & 3), EN 50521	General safety requirements for connectors, switches, circuit breakers (AC/DC): a) Low-voltage Switchgear and Control-gear, Part 1: General rules b) Low-Voltage Switchgear and Control-gear, Part 2: Circuit Breakers c) Low-voltage switchgear and Control-gear, Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units d) EN 50521: Connectors for photovoltaic systems – Safety requirements and tests
IEC 60269-6	Low-voltage fuses - Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems
Surge Arrestors	

IEC 62305-4	Lightening Protection Standard
IEC 60364-5-53/ IS 15086-5 (SPD)	Electrical installations of buildings - Part 5-53: Selection and erection of electrical equipment - Isolation, switching and control
IEC 61643-11:2011	Low-voltage surge protective devices - Part 11: Surge protective devices connected to low-voltage power systems - Requirements and test methods
Cables	
IEC 60227/IS 694, IEC 60502/IS 1554 (Part 1 & 2)/ IEC69947	General test and measuring method for PVC (Polyvinyl chloride) insulated cables (for working voltages up to and including 1100 V, and UV resistant for outdoor installation)
BS EN 50618	Electric cables for photovoltaic systems (BT(DE/NOT)258), mainly for DC Cables
Earthing /Lightning	
IEC 62561 Series (Chemical earthing)	IEC 62561-1: Lightning protection system components (LPSC) - Part 1: Requirements for connection components IEC 62561-2: Lightning protection system components (LPSC) - Part 2: Requirements for conductors and earth electrodes IEC 62561-7: Lightning protection system components (LPSC) - Part 7: Requirements for earthing enhancing compounds
Junction Boxes	
IEC 60529	Junction boxes and solar panel terminal boxes shall be of the thermo-plastic type with IP 65 protection for outdoor use, and IP 54 protection for indoor use
Energy Meter	
IS 16444 or as specified by the DISCOMs	A.C. Static direct connected watt-hour Smart Meter Class 1 and 2 — Specification (with Import & Export/Net energy measurements)
Solar PV Roof Mounting Structure	
IS 2062/IS 4759	Material for the structure mounting

Note: Equivalent standards may be used for different system components of the plants

PROJECT REPORT FORMAT
Format for Summary Project Report for
Grid Connected Rooftop Solar Plants

1. Name of Bidder:
2. RFP no.
3. Project details (Site location & Address):
4. Brief about the Rooftop Solar Power Generation System:
5. Details of the beneficiary:
6. Specifications of the Components and Bill of Material/ Quantities:

S. No.	Component	Specifications	Quantity	Make
A	Solar PV module			
A.1	Aggregate Solar PV capacity (kWp)			
B	Grid Tie inverter (Type and Capacity)			
B.1	Aggregate Inverter capacity (kVA)			
C	Module mounting structure			
D	Array Junction Box			
E	AC Distribution Board			
F	Cable (All type)			
G	Earthing Kit (maintenance free)			
H	Meters			
I	Online monitoring system			
J	Any other component			
K	Transformer			

7. Unit cost of solar power generation:
8. Expected output/annum:
9. Respective drawings for layout, electrical wiring connections, earthing, components etc.
10. Connectivity details with grid and metering arrangement (with sketch diagram)
11. Copy of electricity bill of the beneficiary and consumer number
12. Any other information.
13. Documentary proof regarding beneficiary type as per of the RFP document.

DECLARATION of AUTHORIZATION

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

I/ We..... (name and address of the registered office of the Bidding Company as applicable) do hereby constitute, appoint and authorize Mr./Ms. (name & residential address) who is presently employed with us and holding the position of to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to submission of our Bid for implementation of grid-connected Roof top solar projects in response to the RFP No dated issued by *BYPL*, including signing and submission of the Bid and all other documents related to the Bid, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document which the *BYPL/BRPL/TPDDL* may require us to submit.

The aforesaid undertaking is further authorized for making representations to the *BYPL/BRPL/TPDDL* and providing information / responses in all matters before *BYPL/BRPL/TPDDL* and generally dealing with *BYPL/BRPL/TPDDL* in all matters in connection with Bid till the completion of the bidding process as per the terms of the above-mentioned RFP.

We hereby agree to ratify all acts, deeds and things done by our said undertaking pursuant to this undertaking and that all acts, deeds and things done by our aforesaid undertaking shall be binding on us and shall always be deemed to have been done by us.

All the terms used herein but not defined shall have the meaning ascribed to such terms under the RFP.

Signed by (Insert the name of the executants' company) Name: Company:

Phone :

E-mail: Address :

Sincerely

Quarterly O&M report

Month and year:

Name of the bidder:

RFP ref no.:

Project Capacity:

Address of the site:

Part A

Component	Activity	Description	Date	Name / Signature	*Remarks
PV Module	Cleaning	Immediately clean any bird droppings/dark spots on module.			
	Cleaning	Clean PV modules with plain water or mild dishwashing detergent.			
	Inspection (for plants > 100 kWp)	Infrared camera inspection for hot spots; bypass diode failure.			
PV Array	Inspection	Check the PV modules and rack for any damage.			
	Inspection	If any new objects, such as vegetation growth etc., are causing shading of the array. Remove if any.			
	Vermin Removal	Remove bird nests or vermin from array and rack area.			
Junction Boxes	Inspection	Inspect electrical boxes for corrosion, intrusion of water or vermin. Check position of switches and breakers. Check status of all protection devices.			
Wiring	Inspection	Inspect cabling for signs of cracks, defects, loose connections, corrosion, overheating, arcing, short or open circuits, and ground faults.			

Inverter	Inspection	Observe instantaneous operational indicators on the faceplate. Inspect Inverter housing or shelter for any physical maintenance. Check for connection tightness.			
Inverter	Service	Clean or replace any air filters.			
Instruments	Validation	Verify monitoring instruments (pyranometer etc.) with standard instruments to verify their operation within tolerance limits.			
Transformer	Inspection	Inspect transformer oil level, temperature gauges, breather, silica gel, meter, connections etc.			
Plant	Monitoring	Daily Operation and Performance Monitoring.			
Spare Parts	Management	Manage inventory of spare parts.			
Logbook	Documentation	Maintain daily log records.			
Tracker (if any)	Inspection	Inspect gears, gear boxes, bearings, motors.			
	Service	Lubricate bearings, gear as required.			

*Provide details of any replacement of systems/components, damages, plant/inverter shut down (planned/forced), breakdown, etc under remarks.

The same may be inspected by respective *DISCOM* or its authorized representative at any time 5 years of O&M period. The Register will have the information about the daily generation, Inverter downtime if any, Grid outages.

Annexure I

(Tax Invoice on Company letter Head with GST No.)									
Invoice No.:				Place of Supply:					
Invoice Date:									
Bill To									
Name, contact no. and Address of the consumers									
SI No	Item and Description	HSN/SAC	Qty	Rate	CGST		SGST		Amt
					%	Amt	%	Amt	
To tal									x
Total in Words							Total amount	x	
							Admissible CFA @ 40%	y	
Terms and Conditions							Amount billed to consumer, excluding CFA	Rs. (x-y)	
							Total		
					Authorized Signature <hr style="border: 0; border-top: 1px solid black; width: 100%; margin-top: 10px;"/>				

Annexure J**Project Completion Report for Grid-Connected Rooftop**

Financial year * :			
Approval No. * :			
Proposal Title :			
Installed by agency :			
Sanction Order		Date	
Title of the Project* :		SPV Capacity (kWp)*:	
Category of the organization/ beneficiary*:		Name of the contact person* :	
Address of contact person* :			
State* :		District/City*:	
Mobile* :		Email*:	
Aadhaar Card Number (For Residential) Copy to be attached.		Latitude:	
		Longitude:	
Other info			
Electricity Distribution Company Name :		Sanction Load	
Electricity consumer account no. as per electricity bill :			

Technology Description & System Design / Specification			
(Compliance to BIS/ IEC Standards is mandatory – Attach Copies)			
1. Solar PV Module:			
Power of each PV Module / Nos.(Wp)* / Make			
Cumulative Capacity of Modules(kWp):			
Solar cell technology :		Tilt Angle of Modules:	
Module efficiency (in Percentage) :		Azimuth	
Indigenous or imported		RFID passed inside or outside:	
2. Inverters:			
Type of inverter :			
Power of each PCU/ Nos. of inverters (kVA)* / Make			
Capacity/Power of PCU/inverters (kVA) :		Type of Charge Controller / MPPT	

Inverter efficiency (Full load) : (in percentage)			
Grid connectivity level phase	Single Phase/ Three Phase	Grid connectivity level Voltage	230 V/ 415 V
3. Mounting Structures			
Type		Surface Finish	
Material		Wind Speed Tolerance	
4. Cables:			
DC Cable Make & Size		Length:	
AC Cable Make & Size (Inverter to ACDB)		Length:	
AC Cable Make & Size (ACDB to Electric Panel)		Length:	
Conductor	Multi strand high conductivity Copper	Insulation/sheath	PVC /XLPE Insulated
5. JUNCTION BOX & DISTRIBUTION BOARDS			
Type	weatherproof, dust & vermin proof	Nos.:	
Make			
6. EARTHING & LIGHTNING PROTECTION			
EQUIPMENT EARTHING			
AC (Nos.)		Earth Resistance	
DC (Nos.)		Earth Resistance	
LIGHTNING ARRESTORS (LA)			
Type			
LA (Nos.)		Earth Resistance	

(Signature of Vendor)
With Stamp

Annex: Copy of System test & Earth test reports (annexed)

Commissioning Test Report kW

Inverter Testing (DC) Side: Nos. of Inverter: Nos.

Inverter S. No.	Capacity	String 1: Voc	String 2: Voc	Remark

Inverter Testing (AC) Side – Single / Three Phase

Inverter S. No.	Capacity	R – Y/ P-N	Y – B	B – R	R – N	Y – N	B – N	Remark

ACDB & Meter Panel Testing – Single / Three Phase

	R – Y/ P-N	Y – B	B – R	R – N	Y – N	B – N	Remark
ACDB I/C (V)							
ACDB O/G (V)							
Meter Panel I/C							
Meter Panel O/G							

Earthing Pit Details: Nos. of Earth Pit: Nos.

	Earthing AC	Earthing DC	Earthing LA	Remark
Earth Test Value (Ohm)				

Sign
Site Engineer

Check List
Documents against Completion of Project

Name of Vendor: _____ Allocated Capacity: _____ kWp
Allocation letter No.: _____
Consent letter No.: _____
Name of Beneficiary: _____ Installed Capacity: _____ kW

S. No.	Documents	Yes / NO	Page No.
1.	Claim letter for CFA		
2.	Solar System Warrantee Certificate for 5 / 25 years		
3.	Copy of Inspection report		
4.	Copy of PR Test report		
5.	Copy of Completion report - Annexure J		
6.	Copy of Solar System (Electrical side) testing report		
7.	Copy of Joint Completion certificate (JCR)		
8.	Solar PV module & Solar Inverter Serial No.		
9.	Solar PV module & Solar Inverter test sheet		
10.	Solar PV module & Solar Inverter warranty certificates		
11.	Solar PV plant Insurance Cover		
12.	PV Syst report		
13.	Stadd Pro report (Certified by structure engineer)		
14.	Final BOM		
15.	As built drawing		
16.	Net Metering Installation report		
17.	Annexure – N (<u>INDEMNITY BOND</u>)		
18.	Copy of Invoice to consumer in case of CAPEX		

Signature

Annexure L

**INTIMATION TO DISCOM FOR IMPLEMENTATION OF GRID CONNECTED ROOFTOP SOLAR
PV PLANT UNDER SCHEME**

To,

Date:

_____ (Designated Officer, DISCOM)

1.	Name of DISCOM	
2	Name of the Consumer*	
Site Details*		
3	Address of the Rooftop Project Site:*	<div>H No:</div> <div>Street Name:</div> <div>Village Name:</div> <div>District Name:</div> <div>State:</div> <div>Pin Code:</div>
4	Phone / Mobile no. *	
5	Email Id:	
6	Electricity Consumer No. *	
7	Category (Please) *	<input checked="" type="radio"/> Residential
8	Installed Plant Capacity (kWp)*	
9	Connected load (kVA)*	
10	Voltage level at interconnection*	<input type="checkbox"/> 415 V <input type="checkbox"/> 11 kV <input type="checkbox"/> above 11 kV
11	Nearest Transformer Details	Location: Capacity:
12	Details of Inverter with Anti-Islanding Protection* Phase (Φ): (Please) Galvanic Isolation (Please)	<div>Make: Capacity:</div> <div><input checked="" type="radio"/> Single phase <input type="checkbox"/> 3-Phase</div> <div><input checked="" type="radio"/> Inside Inverter <input type="checkbox"/> Outside Inverter</div>
14	Both AC and DC components of the SPV power plants Earthed*: <input type="checkbox"/>	
15	CEIG Inspection required*	<input type="checkbox"/> Yes <input type="checkbox"/> No
16	If, Yes, Inspection date * (Attach copy of CEIG Certificate)	
18	Bank Account details	<div>Account No.</div> <div>Bank Branch</div>
19	Date of Grid Synchronization* (Date of net meter installation)	

*to be provided mandatorily

It is certified that the information furnished above is true to the best of my knowledge.

Consumer /Authorised Signatory

(CFA Claim Letter on Company letter Head)

Ref No.....

Date:

To,

[Name and Address of *BYPL/BRPL/TPDDL*]

Sub: Claim Letter for release of CFA for Solar Power Plant of kWp capacity installed at

Ref:

1. *BYPL/BRPL/TPDDL* Allocation letter No.
2. *BYPL/BRPL/TPDDL* Sanction/Consent letter No.....

Dear Sir,

This is in reference to *DISCOM* allocation and consent letter, We, (Name of Company) has successfully commissioned the kWp capacity rooftop solar plant installed at (Name, CA No. & Address Site).

As per the sanction order, (Name of Company) is entitled to CFA of Rs....., post successful installation, commissioning and inspection of the rooftop Solar Power Plant. Therefore, kindly release the CFA of Rs. (Rs. In words) at the earliest.

Thanks, and regards,

(Signature)

Signed and Stamp

(On non-judicial stamp paper of appropriate value)

INDEMNITY BOND

This Indemnity bond is made this _____ day _____ by M/s _____ having its registered office at _____ (herein after called as vendor which expression shall include its successors and permitted assigns) in favour of [*Name and Address of BYPL/BRPL/TPDDL*], (hereinafter called *DISCOM* which expression shall include its successor and assigns).

Whereas *DISCOM* has sanctioned to the vendor following Solar projects vide its sanctions letters in terms of which *DISCOM* is required to release CFA to the vendor for erection, operation and maintenance of Solar Power Plant:

S. No.	Name & Address of Consumers	CA No.	Capacity of Plant

And whereas by virtue of clause No..... of the said contract, the vendor is required to establish an Insurance Cover for third party liability, however same has not been established and therefore, executing an Indemnity bond in favour of *DISCOM* for the purpose of performance of the contract (hereinafter called the CFA)

Now, therefore, this indemnity bond witnesses this as follows:

1. The contractor undertakes to keep *DISCOM* harmless against any past, future unforeseen loss or damage due to any event/act occurred up to the period of commissioning that may be caused due to non-establishment of Insurance Cover under the contract against which the CFA has been released by *DISCOM*.
2. This indemnity bond is irrevocable. The vendor to execute the project in part / full as per the terms and conditions of the contract, shall be deemed to be a breach of contract and the vendor shall forthwith return the CFA with interest @ 18% upon demand from *DISCOM* without demur, reservation or protest and without reference to any arbitrator / tribunal or any other authority whatsoever.
3. Now, the condition of this bond is that if the contractor shall duly and punctually comply with the terms and conditions of this bond to the satisfaction of *DISCOM*, then the above bond shall be void, but otherwise, it shall remain in full force and virtue.

In witness where of the vendor has here-unto set its hand through its authorized representative under the common seal of the company, the day, month and year first above mentioned.

Witness I

Authorized Representative

Signature

Name

For and on behalf of M/s

Signature

Name

Address

Address

Witness II

Authorized Representative

Signature

Name

Address

(Bond should be duly notarized)

Note: **Indemnity Bonds are to be executed by the authorized persons and (i) In case of contracting Company under common seal of the Company or (ii) having the power of attorney issued under common seal of the company with authority to execute Indemnity Bonds, (iii) In case, (ii) the original Power of Attorney if it is specifically for our contract or a Photostat copy of the Power of Attorney if it is a General Power of Attorney and such documents should be attached to Indemnity Bond.*

Joint Inspection Report

It is to certify that a Grid Connected Solar PV Power Plant has been installed with following details:

1. Name of the beneficiary: _____
2. Address of installation with pin code: _____
3. Electricity consumer number: _____
4. Solar PV module capacity (DC): _____ kWp
5. Inverter capacity (AC) (Nominal output power): _____ kW
6. Date of installation: _____
7. Date of commissioning (after installation of net-meter): _____
8. Date of Joint inspection: _____
9. Metering arrangement: _____ (Net meter/Gross meter/Net billing)

The above system is as per BIS/MNRE specifications and has been checked for its performance on _____ and it is working satisfactorily.

	DISCOM	EMPANELLED AGENCY	CONSUMER
Name	_____	_____	_____
Designation	_____	_____	
Date	_____	_____	_____
Sign	_____	_____	_____
Seal	_____	_____	

Cost Format

It is to certify that the RTS system has been purchased with following details:

1. Total project cost ₹ _____
2. CFA amount ₹ _____
3. Amount paid by beneficiary ₹ _____

	Vendor	CONSUMER
Name	_____	_____
Designation	_____	_____
Date	_____	_____
Sign	_____	_____
Seal	_____	

Model CAPEX and RESCO Agreements

To be attached separately.

DASHBOARD COMPONENTS**SITE LIST**

Column	Description
Site Name	Consumer Name or CA no. where solar rooftop PV plant is installed
Address, Zip code	Location and Division details
Peak Power	Displays the peak power from solar array

DASHBOARD

Column	Description
Site Selection Menu	Typically, a list of all the solar plants installed in the licensed area
Overview Bar	Displays the current power generated in AC from inverter/s, Energy today and Monthly total energy
Site Summary	Display the relevant details of the plant
Power & Energy	Displays the power and energy graphs which shows the power and energy over a period of time and enables the download of the graphs in all major formats, such as xls, png and jpg
Weather	Displays the local weather conditions, like minimum and maximum temperature, clouds conditions
Solar Radiation (Irradiation)	Displays the daily or monthly peak sun hours from NASA, IMD or MNRE database

PLANT DETAILS

Column	Description
Plant Capacity	Installed Capacity (in kWp)
Module details	Make and electrical Specification
Module Serial No.	RFID
Last Measured	10-15 mins reading (data fetching frequency)
Current (Amp)	Module output current/Inverter input current
Voltage (V)	Module output voltage/Inverter AC voltage
V DC	Inverter DC voltage
Energy (Wh)	Inverter energy

Annexure R**Check list for offline documents:**

S. No.	Documents Details	Attached, (Yes/ No)
1.	Covering letter as per Format-1 .	
2.	General Particulars as per Format-2 .	
3.	Original copy of the Bid Bond as per Format -3 in the form of a Bank Guarantee. Check list as per Format-5 or in case of exemption copy of valid MSME/NSIC/ DIC/ DIPP registration.	
4.	Bankers cheque for an amount as per Bid Information Sheet, drawn in favour of BYPL against payment of tender processing fee.	
5.	Original Power of Attorney supplemented with Board resolutions for (as per Format-6), if applicable.	
6.	Financial eligibility criterion (as per Format -7).	
7.	Certificate for certificate of relationship of Parent Company or Affiliate with the Bidding Company (as per Format -8), if required.	
8.	Undertaking from the Financially Evaluated Entity or its Parent Company/ Ultimate Parent Company (as per Format -9), if required.	
9.	Share Holding certificate (Format -11).	
10.	Self-Declaration, Annexure-G for PART- A, B, C & D	
11.	The Passphrase to decrypt the relevant Bid-Part in a sealed envelope before the start date and time of the Tender Opening Event (TOE).	

Annexure S**Check list for online documents:**

S. No.	Documents Details	Attached, (Yes/ No)
1.	Certificate of incorporation and Updated Memorandum of Association (MoA).	
2.	Scanned copy of DIPP/MSME/NSIC registration certificate.	
3.	Declaration on bidder's letterhead for Non blacklisting from any Government Department/ PSU/ SEB's.	
4.	PAN registration. GST registration.	
5.	For meeting technical eligibility criterion: Scanned copy of the Commissioning certificate and Work order/ Contract/ Agreement/ from the Client/ Owner.	
6.	For meeting financial eligibility criterion: scanned copy Balance showing Annual Turnover or Net worth.	
7.	Acceptance of RFP terms and conditions including amendments & clarification on letter head of the bidder.	

Reference Bidders' Declaration Format associated with Implementation of ALMM Order

(on the letter head of the bidder)

Declaration

To Whomsoever this may concern

Reference: (RFP no. and description)

1. We hereby declare that we are fully aware of the binding provisions of the ALMM order and the Lists thereunder, while quoting the rate in the tender no. _____ dated _____ floated by BYPL.
2. We understand that the List – I (Solar PV Modules) of ALMM Order, Annexure – I of the O M, issued by MNRE on 10th March 2021 will be updated by MNRE from time to time. We also understand that the Modules to be procured for this project, shall be from the List – I of the ALMM order applicable on the date of invoicing of such modules.
3. We further understand and accept that we shall be liable for penal action, including but not limited to blacklisting and invocation of Performance Bank Guarantee, if we are found not complying with the provisions of ALMM Order, including those mentioned above.

Name:

Designation:

Organization:

Date:

(Signature and Stamp)

Annexure U

Standard Operating Procedure (SOP) for Installation and Metering Connection of Grid Connected Solar Rooftop PV Systems by DISCOMs (DERC timelines shall apply)

ACTIVITY	RESPONSIBILITY	TIMELINE (Max Working Days)
Submission of Application	CONSUMER	<i>Zero Date</i>
Acknowledgment of Application by DISCOM	DISCOM	<i>02</i>
Site Verification / Technical Feasibility & issuance of Letter of Approval (LOA) / Termination	DISCOM	<i>15</i>
In-Principle Approval for CFA	DISCOM	10
Execution of Metering Agreement	DISCOM & CONSUMER	15-20
Submit Work Completion Report / Certificate	CONSUMER & Empanelled Vendor	90-180 (from LOA) (depending upon capacity)
Inspection by CEIG (if applicable)	CEIG	15 -20
Issuance of Safety Certificate	CEIG (if applicable)	5-10
Intimation to Install Meter	CONSUMER	7-10
Inspection by DISCOM, Installation of Meter [2] and Commissioning of the System	DISCOM [3]	15 – 20 (after CEIG approval)
Release of CFA	DISCOM	05-10
Billing Process	DISCOM	30 (After synchronization with Grid)

Format for Bid Security Declaration

(To be submitted separately for each Project Group)

(To be stamped on non – judicial stamp paper as per the stamp act of the state where the document is made)

Ref: _____

Declaration No.: (Insert Name of Project Group)

Date: _____

Subject: Declaration of bid security requirement.

We, _____(insert name of the Bidder) hereby provide this undertaking to BYPL, in respect to our response to RfP vide RfP No. _____dated_____. We undertake that we will abide by the provisions of the RfP for the activities pertaining to submission of response to RfP, during the bid validity period. We undertake not to withdraw or modify our bid during the bid validity period, in line with provisions of the RfP. In case we withdraw or modify our response to the RfS during the bid validity period, or violate other provisions of the RfP which make the bid non-responsive under Clause 4.2 of the RfP, we, _____(insert name of the bidder) including our Parent, Ultimate Parent, and our Affiliates shall be suspended/debarred from participating in upcoming tenders issued by any department of Government of NCT of *Delhi* for a period of 5 years from the date of default as notified by *BYPL/BRPL/TPDDL*.

(Name and Signature of the Authorized Signatory)

**Undertaking/Self- Declaration for domestic content requirement fulfilment
(On a plain Paper)**

This is to certify that M/S.....[Company Name] has installedKW
[Capacity] Grid Connected Rooftop Solar PV Power Plant for.....
[Consumer Name] at [Address] under sanction
number.....dated.....[sanction date] issued
by.....[DISCOM Name].

It is hereby undertaken that the PV modules installed for the above-mentioned project are domestically
manufactured using domestic manufactured solar cells. The details of installed PV Modules are follows:

1. PV Module Capacity:
2. Number of PV Modules:
3. Sr No of PV Module
4. PV Module Make:
5. Purchase Order Number:
6. Purchase Order Date:
7. Cell manufacturer's name
8. Cell GST invoice No

The above undertaking is based on the certificate issued by PV Module manufacturer/supplier while
supplying the above-mentioned order.

I,on behalf of M/S.....[Company Name] further declare that the
information given above is true and correct and nothing has been concealed therein. If anything is found
incorrect at any stage then the due Central Financial Assistance (CFA) that I have not charged from the
consumer can be withheld and appropriate criminal action may be taken against me and my company, as
per law, for wrong declaration. Supporting documents and proof of the above information will be provided
as and when requested by MNRE/state DISCOM.

(Signature With official Seal)

For M/S.....
Name.....
Designation.....
Phone.....
Email.....

Rooftop Structure Drawing

Attached separately

Agreement between Vendor and beneficiary for additional cost

This agreement is signed between two parties i.e., M/s (Name of Vendor) registered at address, who is an empanelled vendor in the tender floated by BYPL for implementation of grid connected rooftop solar (GCRTS) PV projects in the operational area of name of *BYPL/BRPL/TPDDL*, hereby referred to in as the 'Vendor' or 'first party' AND (Name of Consumer, residing at.....) , hereby referred to in as the 'customer' or 'second party'.

Both the parties mentioned above, by mutual consent, are entering into an agreement for installation of grid connected rooftop solar project under Phase-II of grid connected rooftop solar programme of MNRE, being implemented by *BYPL/BRPL/TPDDL* in the operational area of Delhi. The second party has satisfied itself that the first party is an empanelled vendor in the tender floated by BYPL and rooftop solar project ofkW capacity will be installed by first party at the residence of second party, under the tender floated by BYPL.

Both the parties referred above, do hereby declare that they are aware of the fact that the L-1 price discovered in the tender floated by BYPL is Rs. /kW. However, the second party has agreed to pay additional cost to the first party for desired customization in the project which is in the form of (mention the customizations). Due to these customizations, the per KW cost of the rooftop project comes out to be (Rs.).

The first party hereby declares that the invoice raised to the second party for amount mentioned above, is on actual basis after taking into account the cost of any customization and no other extra/hidden charges are being charged to the second party. The second party hereby declares that they are aware of the provisions of the scheme and do hereby consent to pay the additional cost of customization to the first party for the desired customizations. MNRE and the DISCOM shall not be, in any case, be held responsible for any dispute arising out of this agreement/financial transaction.

This agreement is entered intoday of the month ofin year.....

For First Party
(Name of the Delhi DISCOMs)

For Second Party
(Name of Consumer)

**ENGINEERING, PROCUREMENT & CONSTRUCTION(EPC)
AGREEMENT BETWEEN CONTRACTORS* AND ROOFTOP
BENEFICIARY FOR DESIGN, MANUFACTURE, SUPPLY,
ERECTION, TESTING AND COMMISSIONING INCLUDING
WARRANTY, OPERATION & MAINTENANCE OF GRID
CONNECTED ROOF-TOP SOLAR PHOTOVOLTAIC AND SMALL
SOLAR POWER PLANTS IN CAPEX MODEL**

(* This document may suitably be modified as mutually agreed between the Power Producer and Power Purchaser. However, elements of Plant performance and liabilities as at Clause 14 will be binding)

ENGINEERING, PROCUREMENT & CONSTRUCTION AGREEMENT

This Engineering, Procurement & Construction Agreement (hereinafter referred to as the "**Agreement**") is entered into on this _____(date), at____(Location) **BY** and **BETWEEN** a company incorporated under the Companies Act, 1956/2013 and having its registered office_____(hereinafter referred to as the "**CONTRACTOR**" which expression shall where the context so admits be deemed to include its executors, administrators, representatives and permitted assigns) of the ONE PART; **AND** _____ legal owner of the premises (address of the customer who he/she intend to get installed the GCRT solar PV system, say **Rooftop Beneficiary**), (hereinafter referred to as the "**CUSTOMER/BENEFICIARY**" which expression shall where the context so admits be deemed to include its heirs, executors, administrators, representatives and permitted assigns) of the OTHER PART; The expressions "**CONTRACTOR**" and "**CUSTOMER/BENEFICIARY**", wherever the context so permits or requires shall collectively be referred to as "**Parties**" and individually as the "**Party**".

WHEREAS:

- A. CONTRACTOR is a fully integrated solar solutions provider that offers comprehensive solar solutions to governments, corporate houses, villages, industries, and other consumers.
- B. CUSTOMER/BENEFICIARY is a <Rooftop beneficiary>
- C. CONTRACTOR has been notified as successful bidder by (<**DISCOM**>) vide its Letter of Allocation dated _____for design, manufacture, supply, erection, testing and commissioning including warranty, operation and maintenance for a period of _____years of roof-top Solar PV System and has been awarded _____kW capacity in _____
- D. CONTRACTOR and CUSTOMER/BENEFICIARY enter into this Agreement for engineering, procurement & construction of a roof-top Solar PV Power System.

NOW, this Agreement witnesseth as follows:

1. PURPOSE & SCOPE OF THE AGREEMENT

- 1.1 The purpose of this Agreement includes design, manufacture, supply, erection, testing and commissioning including warranty, operation & maintenance for a period of 5 years of a _____KW proof-top Solar PV Power System (hereinafter referred to as the “**Solar Power System**”) for the CUSTOMER/BENEFICIARY, (hereinafter cumulatively referred to as the “**Works**”), for which the CUSTOMER/BENEFICIARY has handed over the premises, which is with a clear title and is encumbrance free, to the CONTRACTOR, along with required approvals from concerned authorities, and the CUSTOMER/BENEFICIARY’s entering into this Agreement is proof enough of its consent to start work thereon.
- 1.2 The technical specifications (hereinafter referred to as the “**Technical Specifications**”) that need to be adhered to by the CONTRACTOR in implementing the roof-top Solar PV Plant for the CUSTOMER/BENEFICIARY shall be in accordance with the ones issued by <DISCOM> vide RfS /Tender No. _____dated_____and the performance parameters (hereinafter referred to as the “**Performance Parameters**”) that shall govern the Scope of Duty of the CONTRACTOR regarding the Works for the CUSTOMER/BENEFICIARY are mentioned in detail in **Schedule 1** to this Agreement.
- 1.3 All the pedestals meant for mounting the modules must be casted on the lintel by removing the tiles and other loose material in the area where the pedestals are to be casted. The surface of the lintel should be thoroughly cleaned and an adhesive should be applied on the lintel surface before casting the pedestals in order to have strong bonding with the lintel. After casting of the pedestals the water proofing material should be applied

surrounding the pedestals in order to avoid any water seepage during rainfall.

- 1.4 Contractor shall ensure that SPV modules, parts of MS structures, other hardware like nuts, bolts and grouting hardware etc., are not loosely scattered over the terrace of a building. These items must be securely stored in an enclosed room where they cannot be affected by winds or such loose materials must be tied properly. Further, Successful bidder shall ensure that rooftop Solar PV system should be designed and installed in such a way that its performance should not be affected due to the problem of water logging at site etc.

- 1.5 The design, engineering, manufacture, supply, installation, testing and performance of the equipment shall be in accordance with latest appropriate

IEC/Indian Standards as detailed in the relevant MNRE's scheme. Where appropriate Indian Standards and Codes are not available, other suitable standards and codes as approved by the MNRE shall be used.

- 1.6 Any supplies which have not been specifically mentioned in this Contract but which are necessary for the design, engineering, manufacture, supply & performance or completeness of the project shall be provided by the Bidder without any extra cost and within the time schedule for efficient and smooth operation and maintenance of the SPV plant.

2. EFFECTIVE DATE

The Agreement will enter into effect from the date of its execution (the “**Effective Date**”) for all contractual obligations under this Agreement.

3. NON DISCLOSURE & CONFIDENTIALITY

Any information (whether oral, written, visual or otherwise, hard or soft copy) may be provided by either Parties, provided the same is reduced in writing immediately and marked and identified as confidential information) disclosed or made known by the Parties to each other, shall be considered “**Confidential Information**” unless otherwise specified. Both the Parties commit to a strict maintenance of confidentiality, of any information shared by either of the Parties. Any confidential information shared as a result of this Agreement shall remain in force until that particular Confidential Information falls into the public domain through no act or omission on part of the Parties or for a period of two (2) years from the last disclosure, whichever is later.

4. COMPLETION PERIOD

The completion period of the project shall _____ from receipt of the sanction letter from <DISCOM>

5. PAYMENT TERMS

- 5.1 In consideration of the completion of Works, the CUSTOMER/BENEFICIARY shall pay to CONTRACTOR the Contract Price in Indian Rupee (INR). The “**Price**” shall mean the total of the Price for completion of Works including the price for operation and maintenance of the Solar Power System, as mentioned in detail in **Schedule 2** to this Agreement. (Payment Schedule and terms may be mutually agreed between the Solar Developer and the Rooftop Beneficiary)

- 5.2 For any extra work beyond CONTRACTOR's scope, the same is payable additionally by the CUSTOMER/BENEFICIARY
- 5.3 In case of any statutory variations in the rate of applicable taxes and duties or imposition of new taxes & duties, including, but not limited to anti-dumping duties, during the tenure of the Agreement, which will impact the Contract Price, the same shall be borne by the CUSTOMER/BENEFICIARY.

6. WARRANTIES

- 6.1 In case of CUSTOMER/BENEFICIARY being a company, it warrants to the CONTRACTOR as follows:
- (A) it is a company duly incorporated under the laws of India, and it has all corporate powers and has applicable governmental approvals, if any, required to own the Site and to carry on its business as now conducted and is duly qualified to do business in the jurisdiction where it operates.
 - (B) It has the full legal right, capacity, and authority to enter into this Agreement and this Agreement constitutes a legal, valid and binding obligation on it; and,
 - (C) It has the corporate power and authority to execute and deliver the terms and provisions of this Agreement and has taken all necessary corporate action to authorize the execution and delivery by it of this Agreement and the transactions contemplated hereby.
- 6.2 The CONTRACTOR hereby warrants to the CUSTOMER/BENEFICIARY that the Scope of Work as executed by the CONTRACTOR shall be of good workmanship for a period of 5 years from Acceptance. During the period of

5 years from the date of completion of work ("**Warranty Period**") the CONTRACTOR shall rectify any part of the Works done found defective due to faulty materials and workmanship, for reasons solely attributable to the CONTRACTOR.

- 6.3 The CONTRACTOR will obtain manufacturers' warranties on the PV modules, inverters, as well as other components of the Power System for which manufacturer's warranties are available, in the name of the CUSTOMER/BENEFICIARY. Up until Acceptance, the CONTRACTOR will exercise any rights under the manufacturers' warranties on behalf of the CUSTOMER/BENEFICIARY.

7. FORCE MAJEURE

- 7.1 Force majeure shall mean any cause, existing or future, which is beyond the reasonable control of any of the parties including acts of God, storm, fire, floods, explosion, epidemics, quarantine, earthquake, strike, riot, lock out, embargo, interference by civil or military authorities, acts, regulations or orders of any governmental authority in their sovereign capacity, acts of war (declared or undeclared) including any acts of terrorism.
- 7.2 None of the parties shall be liable for the failure to perform any obligation in terms of this Agreement if and to such extent such failure is caused by a Force Majeure, provided that none of such acts of Force Majeure will relieve the CUSTOMER/BENEFICIARY from meeting its payment obligations.
- 7.3 The party prevented to fulfill its obligations (hereinafter referred to as "**the Affected Party**") by Force Majeure shall notify the other party through written means including fax/email/ post within one week after occurrence and cessation of such Force Majeure and it shall be established by the Affected Party that the Force Majeure had delayed performance of the Affected Party's obligations and services and was beyond the reasonable

control of the Affected Party and not due to the default or negligence of the Affected Party.

7.4 The periods for performance of this Agreement as agreed upon shall be extended by the periods of delay caused by such Force Majeure, as long as the period of Force Majeure does not last longer than three months.

7.5 If a Force Majeure continues for more than three months and the parties are not able to reach an agreement on the continuation of the Agreement within a further term of one month, the fulfillment of the Agreement shall automatically be deemed impossible and shall stand suspended / terminated.

7.6 Upon such suspension/termination, the CONTRACTOR shall be entitled to be paid the following amount:

- a) the amounts payable for the work completed until the date of suspension,
- b) the cost of materials which have been delivered to CUSTOMER/BENEFICIARY, or of which CONTRACTOR is liable to accept delivery: this material shall become the property of CUSTOMER/BENEFICIARY when paid for by it, and CONTRACTOR shall place the same at CUSTOMER/BENEFICIARY's disposal,
- c) Any other cost or liability, including unamortized cost of materials, which in the circumstances was reasonably incurred by CONTRACTOR in the expectation of completion of the Works,
- d) demobilization costs of CONTRACTOR personnel and equipment,
- e) all other costs incurred by CONTRACTOR on account of cancellation of order on such other suppliers.

8. INSURANCE

- 8.1 CONTRACTOR shall at its expense take out and maintain in effect, or cause to be taken out and maintained in effect, during the performance of the Agreement, the appropriate insurances set forth the sums equivalent to the contract price.
- 8.2 CONTRACTOR shall at its expense take out and maintain in effect or cause to be taken out and maintained in effect, during the construction period, the appropriate insurances for transportation of goods and materials

9. SITE ACCESS

- 9.1 The CUSTOMER/BENEFICIARY shall ensure the accuracy of all information and/or data to be supplied by the CUSTOMER/BENEFICIARY and shall be responsible for acquiring and providing legal and physical possession of the Site and access thereto, for preparation and maintenance of proper access roads to, and provide the right of way for, the Site, and for providing possession of and access to all other areas reasonably required for the proper execution of the Agreement, including all requisite rights of way, on or before the Effective Date.
- 9.2 The CUSTOMER/BENEFICIARY is under an obligation to provide access to Site at all times to the CONTRACTOR and to DISCOM officials, for the entire life of the Power System.
- 9.3 The progress of Works will be monitored by <DISCOM> and the Power System will be inspected for quality at any time during commissioning or after the completion of the Power System either by officer(s) from <DISCOM> or a team comprising of officers from <DISCOM>.

10. CUSTOMER/BENEFICIARY OBLIGATIONS

10.1 The CUSTOMER/BENEFICIARY must not interrupt the Works, and/or shall abstain from any act or omission of which it can reasonably be expected that it may delay the Works or make the Works more difficult and or expensive for CONTRACTOR. In addition to this, the CUSTOMER/BENEFICIARY alone shall be responsible, at his cost and expenses, for:

- a) Necessary statutory declaration forms, certificates, way bills, etc. on timely basis as may be required by the CONTRACTOR for movement of the goods to the Site and for claiming the tax or duty benefits on the imported, inter-state and local supplies and the services provided under this Agreement in line with policies in vogue.
- b) The CUSTOMER/BENEFICIARY & CONTRACTOR shall obtain in a timely and expeditious manner No Objection certificate from the DISCOM

11. SITE ADDRESS

The Site address where Works need to be performed to construct the Power System is: _____

12. PROVISION OF DATA

The CONTRACTOR shall be under an obligation to provide all data pertaining to Works and Power System for 5 years to <DISCOM>, *INTER ALIA*, about PV array energy production, solar irradiance, wind speed, temperature, etc. The customer/beneficiary as such will allow the CONTRACTOR to install a data logging system for power system monitoring.

12.1 The parameters of Works, and/or Power System shall be measured by

using solar monitoring system to maintain and to study the performance of Power System.

- 12.2 For access to real-time data, the CUSTOMER/BENEFICIARY agrees to provide <DISCOM>with the right to install any additional online monitoring equipment(s) on the Power System.

13. INDEMNITY

Both Parties shall fully Indemnify and hold harmless both parties and its affiliates, associates, directors and employees from and against, any and all losses, costs, damages, injuries, liabilities, claims and causes of action, including without limitation arising out of or resulting from claims by third Parties, acts, omissions or breach of any of the both parties affiliates, suppliers, employees, agents or contractors in the performance of both parties obligations under this Agreement or otherwise arising out of the Power System or its usage

- 14. Plant Performance and Solar Power Developer's Liability:** Solar Power Plant must be installed, commissioned and maintained to produce satisfactory power. If performance of the solar plant goes below to the norms given in RfS, it will be treated as Developer's default.

To take care of any such default, 5% of the rooftop owner/ beneficiary's payment liabilities to the developer will be treated as Performance Security through a suitable mechanism as agreed between the contractor and rooftop beneficiary. Such a mechanism can be Payment of 5% amount at the end of five years from date of commissioning, or Maintenance of Performance Bank Guarantee in form of Bank Guarantee, FDR etc.

The same must be confirmed to DISCOM at the time of claim of subsidy. .

The performance security is 1% per year and in case the plant performance

as per the terms and condition of the RfS is not achieved then performance security for that year will be forfeited by consumer at the end of the fifth year. Before invoking the performance guarantee by customer on nonperformance, customer shall take prior approval from the DISCOMs with intimation to the vendor.

15. NOTICES

Any notice through facsimile/e-mail/post and other communication provided for in this Agreement shall be in writing and sent to the address mentioned on the first page of the agreement

16. DISPUTE RESOLUTION

If any dispute of any kind whatsoever arises between Customer and Contractor in connection with or arising out of the contract including without prejudice to the generality of the foregoing, any question regarding the existence, validity or termination, the parties shall seek to resolve any such dispute or difference by mutual consent. .

If the parties fail to resolve, such a dispute or difference by mutual consent, within 45 days of its arising, then the dispute shall be referred by either party by giving notice to the other party in writing of its intention to refer to arbitration as hereafter provided regarding matter under dispute. No arbitration proceedings will commence unless such notice is given. Any dispute, in respect of which a notice of intention to commence arbitration has been given in accordance with Sub Clause either 15.1 or 15.2, shall be finally settled by arbitration.

16.1 In case the contractor is a Public Sector Enterprise or a government

department. In case the Contractor is a Public Sector Enterprise or a Government Department, the dispute shall be referred for resolution in Permanent Machinery for Arbitration (PMA) of the Department of Public Enterprise, Government of India. Such dispute or difference shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary / Additional Secretary, when so authorized by the Law Secretary, whose decision shall bind the Parties finally and conclusive. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

16.2 In all other cases

In all other cases, any dispute submitted by a party to arbitration shall be heard by an arbitration panel composed of three arbitrators, in accordance with the provisions set forth below.

The Customer and the Contractor shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the two arbitrators do not succeed in appointing a third arbitrator within Thirty (30) days after the later of the two arbitrators has been appointed, the third arbitrator shall, at the

request of either party, be appointed by the Appointing Authority for third arbitrator which shall be the President, Institution of Engineers.

If one party fails to appoint its arbitrator within thirty (30) days after the other party has named its arbitrator, the party which has named an arbitrator may request the Appointing Authority to appoint the second arbitrator.

If for any reason an arbitrator is unable to perform its function for a period of 45 days or more, the mandate of the Arbitrator shall terminate in accordance with the provisions of applicable laws as mentioned in Clause 16 (Governing Law) and a substitute shall be appointed in the same manner as the original arbitrator. Arbitration proceedings shall be conducted with The Arbitration and Conciliation Act, 1996. The venue of arbitration shall be New Delhi.

The decision of a majority of the arbitrators (or of the third arbitrator chairing the arbitration panel, if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction as decree of the court. The parties thereby waive any objections to or claims of immunity from such enforcement. The arbitrator(s) shall give reasoned award. Notwithstanding any reference to the arbitration herein, the parties shall continue to perform their respective obligations under the agreement unless they otherwise agree.

Cost of arbitration shall be equally shared between the Contractor and Customer.

17. GOVERNING LAW

All questions concerning the construction, validity and interpretation of this Agreement will be governed by the laws of India, and the courts at New Delhi, India shall have exclusive jurisdiction with respect to any Dispute that occurs according to, or in relation to, the Agreement.

18. SEVERABILITY

If any provision of this Agreement is deemed or held by a court of competent jurisdiction, to be contrary to law or otherwise unenforceable, the provisions of this Agreement shall be enforced to the extent legally permissible and unenforceability of any of the provisions of this Agreement shall not affect the remaining provisions of this Agreement, which shall remain in full force and effect.

19. LIMITATION OF LIABILITY

- 19.1 Subject to Clause 13 of this Agreement, but notwithstanding anything contained anywhere else in this Agreement, in no event shall a Party be liable, whether in contract, tort or otherwise, to the other Party for special, indirect or consequential loss or damages (such as, not exclusively, loss of production, loss of reputation, loss of income, loss of profit), except in case of fraud, willful default or reckless misconduct by the defaulting Party.
- 18.2 The maximum aggregate liability of the CONTRACTOR to the CUSTOMER/BENEFICIARY, arising out of or in connection with this Agreement or any breach, non-performance or performance of any provisions hereof, after Acceptance, and till up to the period of operation and maintenance, cannot amount to more than 5% (five per cent) of the Price for the Power System.

19. BINDING AGREEMENT

- 19.1 This Agreement, along with its Schedules, in and of itself is an enforceable binding contract and constitutes the entire agreement between the Parties with respect to the subject matter hereof to the exclusion of all other understandings and assurances, either written or

oral. The clauses contained in this Agreement shall not be construed as creating a partnership or joint venture, agency or employment relationship among the Parties. The relationship between the Parties under this Agreement is as principal-to-principal basis.

IN WITNESS WHEREOF the authorized signatories of the Parties hereto have signed this Agreement on the day, month and year first above written:

FOR AND ON BEHALF OF < Name of Contractor>		FOR AND ON BEHALF OF <Name of Customer/ beneficiary, i.e. Rooftop _____ beneficiary _____	
_____ AUTHORISED SIGNATORY		_____ AUTHORISED SIGNATORY (Of Beneficiary)	
NAME: DESIGNATION : _____ WITNESS NAME:		NAME: DESIGNATION : _____ WITNESS NAME:	

SCHEDULE 1: PERFORMANCE PARAMETERS

Project-

Site Location- (Latitude & Longitude)

Total Rooftop Area (m

Total Usable Rooftop Area for solar installation (m) Type of Roof & Tilt

Radiation data reference:

Energy Simulation: Power

evacuation: Energy in

Thousand kWp

End of year	Global Horizontal (kWh/m2/year)	Global Inclined (kWh/m2/year)	Net Energy at Metering point ((kWh/kWp/year))	PR (%) at the metering point
1				
2				
3				
4				
5				

SCHEDULE 2: PAYMENT TERMS

Price including shall remain fixed and will not be subject to revision during the Agreement duration subject to the conditions mentioned within this Agreement.

PRICE

Total project capacity is _____kWp. Subsidy amount to _____kWp which is of price Rs _____Wp.

Capacity (kWp)	Total	Subsidy	Total Payable

TERMS

___% advance payment on signing of agreement & submission of Proforma Invoice

___on Pro-rata basis upon submission of running bills/invoices for various services

___upon completion of installation & commissioning

___on final acceptance

TAXES:

The pricing given is inclusive of all taxes

This Power Purchase Agreement (PPA) is executed onth **MONTH**, 2020 at New Delhi between **NAME OF REPRESENTATIVE** Authorized representatives of purchaser **NAME OF SOCIETY** registered under the Delhi Cooperative Societies Registration Act, 1972 having its office at **ADDRESS** (hereinafter referred to as "Purchaser") AND **Name of the Developer** a company incorporated under the Companies Act, 1956 having its registered office at **ADDRESS OF THE FIRM** (hereinafter referred to as "Power Producer" which expression shall, unless repugnant to the meaning or context hereof, be deemed to include its successors and assigns). The Purchaser and Power Producer are each individually referred to as a "Party" and

collectively as the "Parties".

WHEREAS:

- A The Power Producer has been notified as successful bidder by [Insert the name of Respective DISCOM] for "Design, Manufacture, Supply, Erection, Testing and Commissioning including Warranty, Operation & Maintenance of 12 MW Rooftop Solar PV System at (building name)" (Project) and as per competitive bidding under RFS No _____.
- B The Power Producer is engaged in the business of design, supply, erection, testing, commissioning, operating and maintenance of solar power plants, including grid connected rooftop power projects.
- C The Power Producer has agreed to install and operate a solar photovoltaic power plant of approx. _____ kWp capacity at the Premises after due inspection of the Premises as defined hereinafter and supply the entire Solar Power of the Project to Purchaser on the terms and conditions contained in this Agreement.
- D The Purchaser has agreed to purchase the entire Solar Power of the Project on the terms and conditions contained in this Agreement.

NOW THEREFORE in consideration of the mutual promises, conditions and covenants set forth herein, the Parties hereby agree as below:

1. Definitions and Interpretation

1.1. Definitions

In addition to other capitalized terms specifically defined elsewhere in the Agreement or unless the context otherwise requires the following words and phrases shall be defined as follows:

- a) "Actual Monthly Production" means the amount of energy recorded by the Main Metering System during each calendar month of the Term, pursuant to Section 5.2;
- b) "Affiliate" means with respect to any specified Person, any other Person, directly or indirectly controlling, controlled by or under common control with such specified Person)
- c) "Agreement" means this Power Purchase Agreement executed hereof, including the schedules, amendments, modifications and supplements made in writing by the Parties from time to time.
- d) "Applicable Law" means, with respect to any Person, any constitutional provision, law, statute, rule, regulation, ordinance, treaty, order, decree, judgment, decision, certificate, holding, injunction, registration, license, franchise, permit, authorization, guideline, Governmental Approval, consent or requirement or any Governmental Authority in India having jurisdiction over such Person or its property, enforceable by law or in equity, including the interpretation and administration thereof such

Governmental Authority.

- e) "Assignment" has the meaning set forth in Section 14.1;
- f) "Business Day" means any day other than Sunday or any other day on which banks in National Capital Territory of Delhi are required or authorized by Applicable Law to be closed for business;
- g) "Commercial Operation Date" has the meaning set forth in Section 4.3(b)
- h) "Consents, Clearances and Permits" shall mean all authorization, licenses, approvals, registrations, permits, waivers, privileges, acknowledgements, agreements or concessions required to be obtained from or provided by any concerned authority for the purpose of setting up of the generation facilities and /or supply of power:
- i) "Deemed Generation" has the meaning set forth in Section 5.3(c)
- j) "Delivery Point" shall be the single point, at a location mutually agreed by the Parties, in line with applicable regulation/ rules where Solar Power is delivered by the Power Producer from the System to the Purchaser.
- k) "Dispute" has the meaning set forth in Section 17.7(b);
- l) "Disruption Period" has the meaning set forth in Section 5.3(c)
- m) "Distribution Utility" means the local electric distribution owner and operator providing electric distribution and interconnection services to Purchaser at the Premises;
- n) "Due Date" has the meaning set forth in Section 7.4;
- o) "Effective Date" has the meaning set forth in Section 2;
- p) "Estimated Remaining Payments" means as of any date, the estimated remaining Solar Power Payments to be made through the end of the applicable Term, as reasonably determined by the Power Producer in accordance with Section 7.1;
- q) "Expiration Date" means the date on which the Agreement terminates by reason of expiration of the Term.
- r) "Force Majeure Event" has the meaning set forth in Section 11.1
- s) "Governmental Approval" means any approval, consent, franchise, permit, certificate, resolution, concession, license or authorization issued by or on behalf of any applicable Governmental Authority for the purpose of setting up of the Project and / or for sale and purchase of Solar Power of the Project pursuant to the Agreement.
- t) "Governmental Authority" means any central, state, regional, district, town, city or municipal government, whether domestic or foreign, or any department, agency, bureau, or other administrative, regulatory or judicial body of any such government.
- u) "Indemnified Persons" means the Purchaser Indemnified Parties or the Power Producer-indemnified Parties, as the context requires.
- v) "Insolvency Event" means with respect to a Party, that either Such party has (A) applied for or consented to the appointment of or the taking of possession by a receiver, custodian, trustee, administrator, liquidator or the likes of itself or of all or a substantial part of its assets or business; (B) been unable to pay its debts as such- debts become due; (C) made a general assignment for the benefit of its creditors, (D) commenced a voluntary proceeding under any insolvency or bankruptcy law; (E) filed a petition seeking to take advantage of any other law relating to the bankruptcy,

- insolvency, reorganization, winding up or composition or readjustment of debts; or (F) taken any corporate or other action for the purpose of effecting any of the foregoing; or It is clarified that a dissolution or liquidation will not be an Insolvency Event if such dissolution or liquidation is for the purpose of a merger, consolidation or reorganization, and the resulting company retains credit worthiness similar to the dissolved or liquidated entity and expressly assumes all obligations of the dissolved and liquidated entity under this Agreement and is in a position to the perform them.
- w) "Installation Work" means the construction and installation of the System and the Start-up, testing and acceptance (but not the operation and maintenance) thereof; all performed by or for the Power Producer at the Premises.
 - x) "Invoice Date" has the meaning set forth in Section 7.2.
 - y) "Losses" means all losses, liabilities, claims, demands, suits, causes of action, judgments, awards, damages, cleanup and remedial obligations, interest, fines, fees, penalties, costs and expenses (including all attorneys' fees and other costs and expenses incurred in defending any such claims or other matters or in asserting or enforcing and indemnity' obligation)
 - z) "Main Metering System" means all meter(s) and metering devices owned by the Power Producer and installed at the Delivery point for measuring and recorded the delivery and receipt of energy.
 - (aa) "Metering Date" means the first Business day of each calendar month subsequent to the month in which the Solar Power is generated by the Power Producer. The billable units shall be equal to the difference between the meter reading on the Metering Date and the meter reading on the previous month's Metering Date.
 - (bb) "Party" or Parties" has the meaning set forth in the preamble to this Agreement.
 - (cc) "Performance Ratio" (PR) means the ratio of plant output versus installed plant capacity at any instance with respect to the radiation measured. $PR = (\text{Measured output in kW} / \text{Installed plant capacity in kW} \times 1000 \text{ W/m}_2 / \text{Measured radiation intensity in W/m}_2)$.
 - (dd) "Person" means an individual, partnership, corporation, Limited Liability Company, business trust, Joint Stock Company, trust, unincorporated association, joint venture, firm, or other entity, or a Governmental Authority.
 - (ee) "Power Producer Default" has the meaning set forth in Section 12.1(a). (ff) "Power Producer Indemnified" has the meaning set forth in Section 16.2.
 - (gg) "Premises" means the premises described in Schedule 1 to this Agreement. For the avoidance of doubt, the Premises include, the entirety of any and underlying real property located at the address described in Schedule 1 to this Agreement.
 - (hh) "Purchase Date" means the date on which title to the System transfers to the Purchaser pursuant to the Purchaser exercising its purchase option under Section 3.2.
 - (ii) "Purchase Price" means the fee payable by Power Producer to the Power Producer under the circumstances described in Section 3.2
 - (jj) "Purchaser Default" has the meaning set forth in Section 12.2(a).
 - (kk) "Purchaser Indemnified Parties" has the meaning set forth in Section 16.1
 - (ll) "Representative" has the meaning set forth in Section 15.1.

- (mm) "Scheduled Complete Date" has the meaning set forth in Section 4.1(g)
- (nn) "Selectee" means, a new company (i) proposed by the Lenders read with Schedule III hereof and approved by the Purchaser (ii) or proposed by the Purchaser in accordance with Schedule III hereof and approved by the Lenders, for substituting the Power Producer for the residual period of the Agreement by amendment of the Agreement or by execution of a fresh power purchase agreement in accordance with the terms and conditions contained in the said Schedule.
- (oo) "Solar Power" means the supply of electrical energy output from the System.
- (pp) "Solar Power Payment" has the meaning set forth in Section 7.1.
- (qq) "System" includes the integrated assembly of photovoltaic panels, mounting, assemblies, inverters, converters, metering, lighting fixtures, transformers, ballasts, disconnects, combiners, switches, wiring devices and wiring, and all other material comprising the Installation Work.
- (rr) "System Operations" means the Power Producer's operation; maintenance and repair of the System performed in accordance the requirement therein.
- (ss) "Tariff" means the price per kWh set forth in Schedule II hereto. (tt) "Term" has the meaning set forth in Section 3.1:

1.2. Interpretation

- 1.2.1. Unless otherwise stated, all references made, in this Agreement to "Sections", "Clauses" and "Schedules" shall refer respectively to Sections, clauses and Schedules of this Agreement. The Schedules to this Agreement form an integral part of this Agreement and shall have effect as though they were expressly set out in the body of this Agreement.
- 1.2.2. In the Agreement, unless the context otherwise requires (i) words imparting singular connotation shall include plural and vice versa: (ii) the words "include", "includes", and "including" mean include, includes and including "without limitation" and (iii) the words "hereof", "hereto", "herein" and "hereunder" and words of similar import refer to the Agreement as a whole and not to any particular provision of the Agreement.

2. Effective Date

This Agreement shall be effective on the day that falls one Business Day after the date of signing of this Agreement.

3. Terms and Termination

3.1. Term

The term of the Agreement shall commence on the Effective Date and shall continue for twenty-five (25) years from the Commercial Operations Date (the "Term"), unless and until terminated earlier pursuant to the provisions of the Agreement. After the Term, the ownership of the System shall be transferred to the Purchaser free of cost.

3.2. Purchase Option/ Purchase Obligation

So long as a Purchaser default shall not have occurred and be continuing, Purchaser has the option to purchase the System by paying the Power Producer the Purchase price as per Schedule III to this Agreement. To exercise its purchase option, the Purchaser shall not less than Ninety (90) days prior to the proposed Purchase Date, provide written notice to the Power Producer of Purchaser's intent to exercise its option to purchase the System on such purchase date: In the event Purchaser confirms its intention to exercise the purchase option in writing to the Power Producer, (i) Purchaser shall pay the applicable purchase price to the Power Producer on the Purchase Date, and such payment shall be made in accordance with any written instructions delivered to Purchaser by the Power Producer for payments under the Agreement, and (ii) the Parties shall promptly execute all documents necessary to (A) cause title to the System to pass to Purchaser on the Purchase Date, free and clear of all liens and (B) assign all vendor warranties for the System to Purchaser. Upon execution of the documents and payment of the applicable purchase price in each case as described in the preceding sentence, the agreement shall terminate automatically, and the Purchaser shall become the owner of the System. Upon such termination, the Power Producer shall offer its operations and maintenance ("O&M") services to the Purchaser and the Parties may enter into an O&M agreement in this regard. The terms and conditions of the O&M agreement will be negotiated in good faith between the Parties.

3.3. Conditions of the Agreement prior to installation

In the event that any of the following events or circumstances occur prior to the Commercial Operation Date, the Power Producer may terminate the Agreement, in which case neither Party shall have any liability to the other except for any such liabilities that may have accrued prior to such termination.

3.3.1.1. There has been a material adverse change in the rights of Purchaser to occupy the Premises or the Power Producer to install the System at the Premises.

3.3.1.2. The Power Producer has determined that there are easements, Capacity Cost Recovery (CCRs) or other liens or encumbrances that would materially impair or prevent the installation, operation, maintenance or removal of the System. If any dispute arises before commercial operation date, the same shall be resolved under clause, 17.7(c)

4. Construction, Installation, Testing and Commissioning of the System.

4.1. Installation Work

- a) The Power Producer will cause the Project to be designed, manufactured, supplied, engineered, erected, tested and commissioned, operated, maintained and constructed substantially in accordance with RFS No _____ and the sanction letter issued by [Insert the name of Respective DISCOM]. The Power Producer shall provide to the Purchaser a bill of materials listing the major equipment constituting the System. Such bill of materials shall be provided within 30 days of the Commercial Operation Date.
- b) The Power Producer shall have access as reasonably permitted by the Purchaser to perform the Installation Work at the Premises in a manner that minimizes inconvenience to and interference with the use of the Premises to the extent commercially practical.
- c) It is agreed between the Parties that the Power Producer shall commission the System with a capacity of approx. _____ kWp (approx.), Power Producer may construct a System of smaller size if it receives only part approval of government subsidies or for any other material commercial reason, as mutually agreed between the Parties in writing, In the event a System of smaller capacity is eventually agreed to be installed, the clauses pertaining to Purchase Price as set out under this Agreement shall be adjusted proportionately as per mutual agreement between the Parties in writing.
- d) The Power Producer shall provide and lay the dedicated electrical cables for transmission of Solar Power from the System up to the Delivery Point. Transmission or distribution of Solar Power beyond this point will be the responsibility of the Purchaser. The Delivery Point shall be where the Main Metering System is located.
- e) Unless otherwise agreed between the Parties, the Power Producer shall not do (a) chipping of rooftop; or (b) water proofing of roof to be disturbed ;(c) Carryout any other modification of the Premises without the written consent of the Purchaser.
- f) The Power Producer shall maintain general cleanliness of area around the Project during construction and operation period of the Project. In case any damages are caused to the equipment / facilities owned by the Purchaser due to the Power Producer, the same shall be made good rectified by the Power Producer at their cost.
- g) The Power Producer shall, within fifteen (15) working days of the Effective Date, submit to the Purchaser shop drawings of the Project for approval ("Shop Drawings"). The drawings will have to be approved from the Power Purchaser within 3 working days from the submission of the drawings. If the Purchaser has any objection/'recommendation in the Shop Drawings, he shall communicate the same to Power Producer within a period of ten (10) working days of the date of submission of the Shop Drawings. Any delay will extend the Effective Date and such approval shall not be unreasonably withheld. Subject to any punch-list items which shall be agreed by the. Purchaser as not being material to completion of the Project, the Power Producer agrees that it shall achieve the completion of the Project/ Commissioning of the Project within the scheduled completion period from the Effective Date ("Scheduled Completion Date"). Purchaser shall ensure that sufficient load is

available at the Delivery Point to ensure synchronization and drawl of power from System.

- h) If the Power Producer is unable to commence supply of Solar Power to the Purchaser by the Scheduled Completion Date, other than for the reasons specified in Article 11 and
- i) 12.2 (Force Majeure or Purchaser Default), the Power Producer or its contractor shall pay to [Insert the name of Respective DISCOM] genuine pre-estimated liquidated damages for the delay in such commencement of supply of Solar Power as per the clause of the RFS as per respective RFS document to this Agreement.
- j) The Purchaser shall ensure that all arrangements and infrastructure for receiving Solar Power beyond the Delivery Point are ready on or prior to the Commercial Operation Date and is maintained in such state in accordance with applicable laws through the Term of the Agreement.
- k) Power Producer shall fulfill all obligations undertaken by it under this Agreement.

4.2. Approvals and Permits

Each of the Parties shall assist the other Party in obtaining all necessary Government Approvals, third party approvals and permits including but not limited to those listed in Schedule V hereto and any waivers, approvals or releases required pursuant to any applicable CCR.

4.3. System Acceptance Testing

- a) The Power Producer shall give 10 days' advance notice to conduct the testing of the Project and shall conduct testing of the Project in the presence of Purchaser's designated representative.
- b) To establish the system is capable of generating Electrical energy (full rated KWP) for five continuous hours, the Performance ratio (i.e. PR) of solar power plant at the time of testing should be at least equal to or more than 75%, corresponding to actual solar irradiation and environmental conditions prevailing at that time, using such instrument and meters as have been installed for such purposes, then the Power producer shall send a written notice to the Purchaser to that effect, and the date of successful conducting such tests and injection of power at delivery point shall be the "Commercial Operation Date"

5. System Operations

5.1. The Power Producer as Owner and Operator

The System will be legally and beneficially owned by the Power Producer and will be operated and maintained and, as necessary, repaired by the Power Producer at its sole cost and expense. Replacement of spare parts if any shall be responsibility of Power Producer for the complete period of Agreement. If any repair or maintenance costs incurred by the Power Producer as a result of Purchaser's breach of its

obligations, shall be reimbursed in full by Purchaser.

Power Producer shall not be responsible for any work done by others on any part of the System/Project authorized by the Purchaser and not authorized in advance by the Power Producer in writing. Power Producer shall not be responsible for any loss, damage, cost or expense arising out of or resulting from improper operation or maintenance of the System by Purchaser or anyone instructed to do such work by Purchaser. In the event of a problem with the System, as a result of the Purchaser actions for which Power Producer is not responsible as provided in this Agreement, Purchaser may choose and pay Power Producer for diagnosing and correcting the problem at Power Producer or Power Producer's contractor's standard rates.

5.2. Metering

- a) The Power producer shall install the Main Metering System with due certification for the measurement of electrical energy produced by the System.
- b) The meter will be read by Power Producer's personnel on the Metering date. The authorized representative of the Purchaser shall be present at the time of meter reading. Both the Parties shall sign a joint meter reading report. However, in case the Joint meter reading report is not signed in the first three business days of any month due to non-availability of the Purchaser's authorized representative, the report signed by the Power Producer shall be considered as Joint Meter Reading Report. The Parties agree that such Joint meter reading Report shall be final and binding on the Parties.
- c) The Main Metering System at the Delivery Point and any additional meters required by Applicable Law shall be tested, maintained and owned by the Power Producer.
- d) The Power Producer shall connect the Solar output to the existing system of the Purchaser as per the requirements and guidelines of the state DISCOM.
- e) The Purchaser may, at its own discretion, install a check meter, at its cost, to verify the measurements of the Main Metering System.
- f) The title to the Solar Power supplied by the Power Producer shall pass to the Purchaser at the Delivery Point.
- g) Power Producer shall be responsible for transformer etc. "if required" & metering as per respective clause of RFS (reference to be quoted).

5.3. System Disruptions

- a) Availability of premises: Purchaser will provide full access of the site to Power Producer for installation, operation and maintenance of solar power plant during the period of Agreement. Power Producer will also provide restricted access of the Premises to Power Producer for operation and maintenance of solar power plant. Purchaser will not provide/construct any structure within its Premises or around its premises which shades the solar panels effecting the generation of the energy during the Agreement period.
- b) Roof Repair and other System Disruptions In the event that (a) the Purchaser repairs the Premises' roof for any reason not directly related to damage, if any, caused by

the System, and such repair required the partial or complete temporary disassembly or movement of the System, or (b) any actor omission of Purchaser or Purchaser's employees, Affiliates, agents or subcontractors (collectively, a "**Purchaser Act**") result in a disruption or outage in System production, and such events attributable to Purchaser (except Force majeure, then, in either case) Purchaser shall (i) pay the Power Producer for all work required by the Power Producer to disassemble or move the System and re- assemble the system after completion of the repair work and (ii) continue to make all payments for the Solar Power during such period of System disruption (the "**Disruption Period**"). For the purpose of calculating Solar Power Payments and lost revenue for such Disruption Period, Solar Power shall be deemed to have been produced at the average rate. Over the preceding 12 (Twelve) months, or, if the disruption occurs within the first 12 months of operation, the average over such period of operation (deemed generation). Power producer shall inform about the disruption or outage in System production, for reasons attributable to purchaser in 'writing with date and time of such occurrences, and Purchaser's liability shall start from the date of intimation for above of disruption or outage in system production, on account of Purchaser.

6. Delivery of Solar Power

6.1. Purchaser Requirement:

Purchaser agrees to purchase one hundred percent (100%) of the Solar Power generated by the System and made available by the Power Producer to Purchaser at the Delivery Point during each relevant month of the Term. In the event that the Purchaser is unable to off take 100% of the electricity generated, when it is generated, then Deemed Generation will apply only in case following conditions:

- a) In the event Power Producer is generating power more than the available load, and the Purchaser is not able to export or record the excess units generated due to faults in the equipment's of the Purchaser e.g., Net meter Cables, Equipment's etc., which may stop the feeding /record of the Solar Power generated.
- b) In the event that the Purchaser fails to ensure adequate space for solar equipment to ensure that other structures do not partially or wholly shade any part of the Solar Power Plant and if such shading occurs, the Power Producer may apply for Deemed Generation furnishing the calculation for loss in generation due to such shading supported by the relevant data, which shall be approved by Purchaser within one month of submission failing which the Power Producer shall claim provisional deemed generation till the issue is finally settled.

6.2. Estimated Annual Production

The annual estimate of Solar Power with respect to the System for any given year as determined pursuant to this Section shall be the "Estimated Annual Production". The Estimated Annual Production for each year of the Initial Term is set forth in Schedule IV hereof.

6.3. Suspension of Delivery

Power Producer shall be entitled to suspend delivery of electricity from the System to the Delivery Point for the purpose of maintaining and repairing the System upon giving one week's advance written notice to the Purchaser except in the case of emergency repairs. Such suspension of Service shall not constitute a breach of this Agreement provided that the Power Producer shall use commercially reasonable efforts to minimize any interruption in service to the Purchaser. However, any preventive maintenance shall be done only during the period when plant is not generating.

7. Tariff, Payments and Payment Security Mechanism

7.1. Consideration Purchaser shall pay to the Power Producer a monthly payment (the "Solar Power Payment") for the Solar Power generated by the System as per the Metering clause 5.2 (b) above during each calendar month of the Term equal to the actual Monthly Production as recorded in Joint Meter Reading Report for the System for the relevant month multiplied by the Tariff irrespective of (i) whether any or all units of Solar Power has been drawn, consumed or utilized by Purchaser and / or (ii) whether any Solar Power has been injected, whether inadvertently or otherwise, into the grid of the Distribution Utility. The Power Producer will bill the Purchaser for each kWh metered as above at the Delivery Point, at the Tariff prevailing at that point of time. As Detailed in Schedule-II, the Tariff will be equal to Rs. [REDACTED]/kWh levelized tariff as per [Insert the name of Respective DISCOM] allocations. The 'year' Considered shall be the financial year which April 1st to 31st March of every year as per [Insert the name of Respective DISCOM] Schedule II provides a detailed year on year tariff schedule.

7.2. Invoice

The Power Producer shall invoice Purchaser on the first day of each month (each, an "Invoice Date") commencing on the first Invoice Date to occur after the Commercial Operation Date, for the Solar Power Payment in respect of the immediately preceding month. The last invoice shall include production only through the Expiration Date of this Agreement.

7.3. The invoice to the purchaser shall include.

- a) The Solar Power calculations for the relevant billing period.
- b) Supporting data, documents and calculations in accordance with this Agreement.

7.4. Time of payment

Purchaser shall pay all amounts due hereunder within 30 days after the date of the receipt of the invoice via email or post ("Due Date").

7.5. Method of Payment

Purchaser shall make all payments under the Agreement by cheque / demand draft/electronic funds transfer only in immediately available funds to the account

designated by the Power Producer from time to time. All payments made hereunder shall be non-refundable, subject to the applicable tax deduction at source, and be made free and clear of any other tax, levy, assessment; duties or other charges and not subject to reduction, set-off, or adjustment of any kind. Further, if any taxes and duties are leviable currently or in future, such taxes and duties shall be paid by the Purchaser over and above the solar electricity tariff mentioned in this agreement. Such taxes and duties could include, but not restricted to Electricity Duty, Tax on Sale of Electricity (TOSE). If the Purchaser deducts any tax at source, the Purchaser will issue a tax credit certificates as per law.

7.6. Late Payment Surcharge/ Early Payment Discount

In case payment of any invoice is delayed by the Purchaser beyond its Due Date, a late payment surcharge shall be payable by Purchaser to the Power Producer at the rate of 1.25% per month ("**Late Payment Surcharge**") calculated on the amount of outstanding payment, calculated on a day to day basis for each day of the delay, compounded on monthly rates. Late Payment Surcharge shall be claimed by the Power Producer, through its subsequent invoice.

7.7. Disputed Payments

In the event that the Purchaser disputes an invoice, it shall give notice of such a dispute within 15 days of receiving the invoice setting out details of the disputed amount. The Purchaser shall pay by the Due Date 100% of any undisputed amount and in case the invoice is disputed, the Purchaser shall pay an amount based on average consumption of last three consecutive undisputed invoices. Amount so recovered shall be subject to final adjustment on resolution of the dispute. Thereafter, the Parties shall discuss and try to resolve the disputed amount within a week of receipt of such notice of dispute. If the Parties resolve the dispute, an appropriate adjustment shall be made in the next invoice. If the dispute has not been resolved by the date of the next invoice the dispute shall be referred to a committee of one member from each of Purchaser and Power Producer, If the dispute is still-not resolved by the next following invoice it shall be referred to Arbitration as provided in the present Agreement.

7.8. VOID

7.9. Additional Payment Security Mechanism: Solar Power Producer and consumers can mutually agree on other payment security mechanism, e.g., (in respect of its monthly bills, three-month Letter of Credit, opened and maintained which may be drawn upon by the Solar Power Producer.

Not later than one month before commissioning, including the extension granted, if any, Purchaser through a scheduled bank open a Letter of Credit in favor of the Power Producer, to be made operative from a date prior to the due date of its first

monthly bill under this PPA. The LC shall have a term of 1 year and shall renewed annually, for an amount:

- a) For first operational year, Total installed capacity X 4 X 90 X PPA Rate
- b) For subsequent years, equal to three hundred percent (300%) of the average of the monthly billing of the previous operational year Provided that the power producer shall not draw upon such LC to the end of 30th day from the due date of the relevant monthly bill and shall not make more than onedrawl in a month Provided further that if at any time, such Letter of Credit amounts to falls short of the amount specified above, the Purchaser shall restore such shortfall within15 business day If the Power Producer draws from the Letter of Credit, the amount corresponding to the drawn amount shall be deposited in the designated bank Procurer shall cause the schedule bank issuing the LC to intimate the Power Producer, in writing regarding establishing of such irrevocable Letter of Credit. If the purchaser fails to pay a monthly bill or part thereof within and including the 30th day from the due date, then, the power producer may draw upon the LC. The Purchaser will adjust remaining balance in the next billing cycle.)

7.10.Change in Law:

- a) For the Purpose of this section 7.10, the term "Change in Law" shall mean the occurrence of any of the following events after the Effective date, resulting into any additional recurring / non- recurring expenditure by the Power Producer or any income to the Power Producer. The enactment, coming into effect, adoption, promulgation, amendment, modification or repeal (without re-enactment or consolidation) in India, of any Law, including rules and regulations framed pursuant to such Law: or
 - (I) A change in the interpretation of any Law by any Governmental Authority having

- the legal power to interpret or apply such Law, or any competent court; or
 - (II) The imposition of a requirement, for obtaining any Government Approvals which was not required earlier; or
 - (III) a change in the terms and conditions prescribed for obtaining any Government Approvals or the inclusion of any new terms or conditions for Obtaining such Government Approvals; or
 - (IV) any introduction of any tax made applicable for supply of power by the Power Producer as per the terms of this Agreement. Any benefit due to change in tax on the sale of solar energy shall be passed on to Purchaser.
 - (V) Any benefit arising due to change in above para (i) to (iv) shall be passed on to the Purchaser. But not include any change in any withholding tax on income or dividends distributed to the shareholders of the Power Producer.
- b) Application and Principles for computing impact of Change in Law: While determining the consequence of Change in Law under this Article 7.10, the Parties shall have due regard to the Principle that the purpose of compensating the Party affected by such change in Law, is to restore through monthly bill payment, to the extent contemplated in this Article 7.10, the affected Party to the same economic position as if such Change in Law has not occurred and such impact shall be mutually decided in writing.
- c) Solar Power Payment Adjustment Payment on account of Change in Law Subject to provisions mentioned above, the adjustment in Solar Power Payment shall be effective from:
- (I) The date of adoption, promulgation, amendment, re-enactment or repeal of the Law or Change in Law; or
 - (II) The date of order/ judgment of the competent court; of tribunal or Governmental Authority, if the Change in Law is on account of a change in interpretation of Law 7.10

8. General Covenants

8.1. Power Producer's Covenants

The Power Producer covenants and agrees to the following:

- a) **Notice of Damage or Emergency:** The Power Producer shall (a) promptly notify Purchaser if it becomes aware of any damage to or loss of the use of the System or that could reasonably be expected to adversely affect the System, (b) immediately notify Purchaser once it becomes aware of any event or circumstance that poses an imminent risk to human health, the environment, the System or the Premises.
- b) **System Condition:** The Power Producer shall take all actions reasonably necessary to ensure that the System is capable of providing Solar Power at a commercially reasonable continuous rate: Subject to there being no Purchaser Default, the Power

Producer 'shall provide 24x 7 offsite / offsite monitoring and maintenance of the System throughout the period of this agreement at no additional cost.

- c) The System shall meet minimum guaranteed generation with Performance Ratio (PR) at the time of commissioning and related Capacity Utilization Factor (CUF) as per the daily normalized irradiance levels of the location during the O&M period. PR shall be minimum of 75% at the time of inspection for initial Project acceptance.
- d) **Governmental Approvals:** While providing the Installation work, solar Power and System Operations, the Power Producer shall obtain and maintain and secure all Governmental Approval required to be obtained and maintained and secured by the Power Producer and to enable the Power Producer to perform such obligations
- e) The interconnection of the rooftop solar system with the network of the distribution licensee shall be made as per the technical standards for connectivity of distributed generated resources regulation's as may be notified by the competent authority. The interconnection of the roof top solar system shall be as per the contracted load and / or respective voltage level applicable to the Purchaser as per the provisions of the guidelines issued by the competent authority.
- f) **Health and Safety:** The Power Producer shall take all necessary and reasonable safety precautions with respect to providing the installation Work, Solar Power, and System Operations that shall comply with all Applicable Law pertaining to the health and safety of persons and real and personal property.

8.2. Power Producer's Representatives

During the subsistence of this Agreement, the Power Producer undertakes to respond to all questions, concerns and complaints of the Purchaser regarding the System in a prompt and efficient manner. The Power Producer designates the following individual as its representative pertaining to performance of this Agreement till the Commercial Operation Date:

Name:

Telephone:

Email:

The Power Purchaser designates the following individuals as its representative and primary point of contact pertaining to performance of this Agreement following the Commercial Operation Date till termination:

Name:

Telephone:

Email:

8.3. Purchaser's Covenants

Purchaser covenants and agrees to the following:

- a) **Notice of Damage or Emergency:** Purchaser shall (a) promptly notify the Power Producer if it becomes aware of any damage to or loss of the use of the System or that could reasonably be expected to adversely affect the System;
- b) immediately notify the- Power Producer once it becomes aware of any event or circumstance that poses an imminent risk to human health, the environment, the System or the Premises.
- c) **Liens:** Purchaser shall not directly or indirectly cause, create, incur, assume or suffer to exist any Liens on or with respect to the System or any interest therein. If Purchaser breaches its obligations under this Clause, it shall immediately notify the Power Producer in writing, and shall promptly causesuch Lien to be discharged and released of record without any cost to the Power Producer, and shallindemnify the Power Producer against all costs and expenses (including reasonable attorneys fees and court costs) incurred in discharging and releasing such Lien.
- d) **Consents and Approvals:** Purchaser shall ensure that any authorizations required of Purchaser under this Agreement, including those required for installation of System at the Premises and to drawl consume Solar Power are provided in a timely manner. The Purchaser shall cooperate with the Power Producer to obtain such approvals, permits, rebates or other 'financial incentives.
- e) **Access to Premises Grant of License:** Purchaser hereby grants to the Power Producer a license co- terminus with the Term, containing all the rights necessary for the Power Producer to use portions of the Premises for the installation, operation and maintenance of the System pursuant to the termsof this Agreement, including ingress and egress rights to the Premises for the Power Producer and its employees and authorized representatives and access to electrical panels and conduits to interconnect or disconnect the system with the Premises electrical wiring with the consent and approval of the Purchaser's authorized representative identified by the Purchaser. Photo IDs will beprovided by the Power Producer. Power Purchaser will assist in availing permissions to the site.
- f) **Security:** The building which has enhanced security of Solar Power System Purchaser will keep the premises locked. Inspite of these measures, if any damages to the System takes place due to theft or vandalism then the same shall be claimed or reimbursed through insurances by Power producer. In case of theft and vandalism acts, the Purchaser will assist the Power Producer in procedures of filing FIRs, insurance claims and any other related activities.
- g) Whenever, the damages to the System occurs (except due to negligence of Power Producer) then the same shall be jointly assessed by both the Parties and a severity level will be decided, which willfurther decide the duration offered to the Power Producer to correct the damage, and the Power Producer shall he paid the amount on the basis of 'Deemed generation' for such a period.
- h) Power Producer shall be entitled to any insurance proceeds received for damages in this clause. Purchaser will not conduct activities on, in or about the Premises that have a reasonable likelihood of causing damage, impairment or otherwise adversely

affecting the System. If System is damaged due to any such activity or through any other agency contracted by the Purchaser directly or indirectly, such damage will be borne by the Purchaser.

- i) Regardless of whether Purchaser is owner of the Premises or leases the Premises from a landlord, Purchaser hereby covenants that (a) the Power Producer shall have access to the Premises and System during the Term of this Agreement, and (b) neither Purchaser nor Purchaser's landlord will interfere or handle any of the Power Producer's equipment or the System without written authorization from the Power Producer.
- j) **Temporary storage space during installation:** Purchaser shall provide sufficient space at the Premises for the temporary storage and staging of tools, materials and equipment and for the parking of construction crew vehicles and temporary Construction, trailers and facilities reasonably necessary during the Installation Work, System Operations and access for rigging and material handling.
- k) **Sunlight Easements:** Purchaser will take all reasonable actions as necessary to prevent other building, structures or flora from overshadowing or otherwise blocking access of 'sunlight to the System, including but not limited to-such actions as may be reasonably necessary to obtain a solar access easement for such purpose.
- l) **Evacuation:** Purchaser shall off take 100% of the Solar Power generated from the Delivery Point, and pay all invoices raised by the Power Producer under this Agreement by the ' Due Date and pay interest on delayed payments, if any, as per this Agreement.
- m) **Water** - Power Purchaser at zero cost shall arrange Raw Water at a given point as per the requirements of the Power Producer, for periodic cleaning of the solar panels (liters - twice a month).
- n) **Auxiliary Power:** The Purchaser shall provide sufficient auxiliary power to the Power Producer for the maintenance and operation of its system, if available and possible, at the rate Purchaser is paying to the DISCOM.
- o) **Relocation:** If one or more of the Solar Power Plant panels needs to be temporarily moved or its generation suspended, for any other reason requested by the Power Purchaser, the Power Purchaser will be responsible for pre-agreed costs on actuals only, arising from moving, disassembling and re-installing/ commissioning the Solar Power Plant, as agreed between the Parties. The Power Producer will be responsible for providing detailed documentary proof of the actual pre-agreed costs borne for such relocation/ disassembling. Within 30 days of these

satisfactory documents being provided by the Power Producer, the Purchaser shall reimburse these pre-agreed expenses in full, and delayed payment beyond the date mentioned above will attract Late Payment charges as described in Clause 7.6. During any interruption in generation during such relocation, the Purchaser will continue to be billed as per Deemed Generation, during the period of interruption, for the affected Solar Power Plant(s).

9. Representations & Warranties

9.1. Representations and Warranties Relating to Agreement Validity In addition to any other representations and warranties contained in the Agreement, each Party represent and warrants to the other that:

- a) It is duly organized and validly existing and in good standing in the jurisdiction of its incorporation.
- b) It has the full right and authority to enter into, execute, deliver, and perform its obligations under the Agreement.
- c) It has taken all requisite corporate or other action to approve the execution, delivery, and performance of the Agreement.
- d) The Agreement constitutes its legal, valid and binding obligation enforceable against such Party in accordance with its terms.
- e) There is not litigation, action, proceeding or investigation pending or, to the best of its knowledge, threatened before any court or other Governmental Authority by, against, affecting or involving any of its business or assets that could reasonably be expected to adversely affect its ability to carry out the transactions contemplated herein; and
- f) Its execution and performance of the Agreement and the transactions contemplated hereby do not constitute a breach of any term or provision of, or a default under (I) any contract or agreement to which it or any of its Affiliates is a party or by which it or any of its Affiliates or its or their property is bound, (ii) its organizational documents, or (iii)
- g) any Applicable Laws.

10. Taxes and Governmental Fees

10.1. Purchaser obligations

Purchaser shall pay for any taxes, fees or charges imposed or authorized by any Governmental Authority in future (as on date no such taxes/ fees/ charges are being levied) on sale of the Solar Power to Purchaser pursuant to clause 7. The Power Producer shall notify Purchaser in writing with a detailed statement of such amounts, which shall be invoiced by the Power Producer in the monthly bills and payable by Purchaser. Purchaser shall timely report, make filings for, and pay any and all sales, use, income or other taxes, and any other amounts assessed against it due to its purchase of the Solar Power. This Section 10.1 excludes taxes specified in Section 10.2.

10.2. Power Producer Obligations

The Power Producer shall be responsible for all income taxes and any and all franchise fees or similar fees assessed against it due to its ownership of the System. The Power Producer shall not be obligated for any taxes payable by or assessed against Purchaser based on or related to Purchaser's overall income or revenues.

11. Force Majeure

11.1. Definition

"**Force Majeure Event**" means any act or event that prevents the affected Party from performing its obligation in accordance with the Agreement, if such act or event is beyond the reasonable control of the affected Party and such Party had been unable to overcome such act or event with the exercise of due diligence (including the expenditure of reasonable sums). Subject to the foregoing conditions, "Force Majeure Event" shall include without limitation the following acts or events: (i) natural phenomena, such as storms, hurricanes, floods, lightning, volcanic eruptions and earthquakes; (ii) explosions or fires arising from lighting or other causes unrelated to the acts or omissions of the Party seeking to be excused from performance; (iii) acts of war or public disorders, civil disturbances, riots, insurrection, sabotage, epidemic, terrorist acts, or rebellion. A Force Majeure Event shall not be based on the economic hardship of either Party. In case of any damage because of force majeure event, the System shall be repaired/ commissioned at its own cost by the Power Producer.

11.2. Excused Performance:

Except as otherwise specifically provided in the Agreement, neither Party shall be considered in breach of the Agreement or liable for any delay or failure to comply with the Agreement, if and to the extent that such delay or failure is attributable to the occurrence of a Force Majeure Event; provided that the Party claiming relief under this Section 11 shall immediately (i) notify the other Party in writing of the existence of the Force Majeure Event, (ii) exercise all reasonable efforts necessary to minimize delay caused by such Force Majeure Event, (iii) notify the other Party in writing of the cessation or termination of said Force Majeure Event and (iv) provided, however, that Purchaser shall not be excused from making any payments and paying any unpaid amounts due in respect of Solar Power delivered to Purchaser prior to the Force Majeure Event performance interruption.

11.3. Termination as a Consequence of Force Majeure Event

If a Force Majeure Event shall have occurred that has affected the Power Producer's performance of its obligations hereunder and that has continued for a continuous period of one hundred eighty (180) days, then Purchaser shall be entitled to terminate the Agreement and if such Force Majeure Event continues for further ninety (90) days period, the Agreement shall automatically terminate. Upon such termination for a Force Majeure Event, neither Party shall have any liability to the other (other than any

such liabilities that have accrued prior to such termination).

12. Default

12.1. Power Producer Defaults and Power Purchaser Remedies

- a) Power Producer Defaults: The following events shall be defaults with respect to the Power Producer (each, a "**Power Producer Default**").
 - (I) An Insolvency Event shall have occurred with respect to the Power Producer;
 - (II) Failure to achieve Commissioning of the System within the period as per RFS document; and
 - (III) The Power Producer breaches any material term of the Agreement and (A) if such breach can be cured within sixty (60) days after Purchaser's written notice of such breach and the Power Producer fails to cure the same; or (B) the Power Producer fails to commence and pursue a cure within such sixty (60) days period if a longer cure period is needed.
- b) **Purchaser's Remedies:**
 - (I) If a Power Producer Default described in Section 12.1 (a) has occurred and is continuing, in addition to other remedies expressly provided herein, and subject to Section 13, Purchaser shall have a right to deliver a notice of its intention to terminate this Agreement ("Purchaser Preliminary Default Notice"), which shall specify in reasonable detail, the circumstances giving rise to the issue of such notice.
 - (II) Upon the occurrence and continuation of Power Producer Default and the failure by the Power Producer to cure such default within the applicable cure period specified in this Article; the Purchaser shall be at liberty avail the services of any other firm / successful bidder. Following the issue of Purchaser Preliminary Default Notice, it shall be the responsibility of the Parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant Power Producer's Default having regard to all the circumstances: If the Power Producer Default is not cured within a period of sixty
 - (III) (60) days of the issue of Purchaser Preliminary Default Notice or any other such period mutually agreed upon by the Parties, the Purchaser shall have the right to terminate this Agreement by issuing a Purchaser Termination Notice.
 - (IV) Upon the delivery of the Purchaser Termination Notice, this Agreement shall stand terminated. The Power Producer shall have the liability to make payment within sixty (60) days from the date of Purchaser Termination Notice towards compensation to Purchaser equivalent to the difference between the Tariff and the grid rate notified by the relevant Government Authority for that point in time multiplied by the estimated Solar Power generated for a period of two years following the termination, considered on normative capacity utilization factor.

- (V) if the Power Producer fails to remove the System from the Premises within one month from the date of termination, the Purchaser shall be entitled to dispose of the System in any manner it deems fit.
- (VI) The Power Purchaser may exercise any other remedy it may have at law or equity or under the Agreement.

12.2. Power Purchaser Defaults and Power Producer's Remedies

- a) Purchaser Default: The following events shall be defaults with respect to Purchaser (each, a "Purchaser Default")
 - (I) An Insolvency Event shall have occurred with respect to Purchaser.
 - (II) Purchaser breaches any material term of the Agreement if (A) such breach can be cured within sixty (60) days after the Power Producer's notice of such breach and Purchaser fails to so Cure, or (B) Purchaser fails to commence and pursue said cure within such sixty (60) day period if a longer cure period is needed; and
 - (III) Purchaser fails to pay the Power Producer any undisputed amount or, if the amount is disputed, an amount based on average consumption of last three consecutive undisputed invoices to the Power Producer under Section 7.7 of this Agreement within sixty (60) days from the receipt of notice from the Power Producer of such past due amount.
- Power Producer's Remedies:** If a Purchaser Default described in Sections 12.2 (a) has occurred and is continuing, in addition to other remedies expressly provided herein, and subject to Section 13, the Power Producer shall be entitled to terminate this Agreement by serving a fifteen (15) days' notice and upon such termination, (A) the Power Producer shall be entitled to receive from Purchaser the Purchase Price. The Purchase Price payable shall be the Purchase Price Specified in Schedule III that falls on such date. Upon the payment of the Purchase Price, the Power Producer shall cause the title of the System to transfer to the Purchaser and (b) the Power Producer may exercise any other remedy it may have at law or equity or under the Agreement.

13. Limitations of Liability

- 13.1.** Except as expressly provided herein, neither Party shall be liable to the other Party or its Indemnified Persons for any special, punitive, exemplary, indirect, or consequential damages, losses or damages for lost revenue or lost profits, whether foreseeable or not, arising out of, or in connection with the Agreement.
- 13.2.** Subject to the provisions of the Agreement, the Power Producer shall be solely responsible for the manner in which its obligations under this Agreement are to be performed. All employees and representatives of the Power Producer, or contractors engaged by the Power producer in connection

with Power Producer and shall not be deemed to be employees, representatives, contractors of the Purchaser Nothing contained in the Agreement or in any agreement or contract executed by the Power Producer shall be construed to create any contractual relationship between any such employees, representatives or contractors and the Purchaser.

13.3. Notwithstanding any liability, or obligation that may arise under this Agreement, any loss, damage, liability, payment, obligation or expense which is insured or not or for which the Purchaser can claim compensation under any insurance policy, shall not be charged to or payable by the Purchaser

14. Assignment & Novation

14.1. Assignment:

Notwithstanding anything contained herein, the Power Producer has the right to assign all or any of its rights under this Agreement (including rights over any assets hereunder), to any third party including, though not restricted to any lender, equipment lessor or other party ("Assignment"), with the consent of the Power Purchaser. The Power Purchaser shall not unreasonably withhold such consent. In the event of such assignment, the Purchaser will be able to hold the Power Producer as well as the party to whom the benefits under this contract are assigned, to be jointly and severally responsible for performing the obligations under this contract. Further, in the event of assignment, the Purchaser agrees to make the payments due to the Power Producer under this agreement, directly to the assignee, upon receipt of such notice by the Power Producer. If the Power Producer were to sell the Solar Power Plant, then the new buyer(s) would need to abide by this Agreement. Further, the Power Producer reserves the right to assign whole or part of the assets to lenders/leasing companies. Purchaser may assign its rights under this Agreement, without the prior consent of Power Producer, to an Affiliate or any successor in interest to Purchaser, whether by way of merger, reorganization or sale of assets (including any sale of a line of business). This Agreement shall insure to the benefit of and be binding upon Purchaser and its successors or assigns. However, any such actions as intended by the Power Producer under Article 14.1 and Article 14.2 shall be binding on Power Purchaser, if there are zero material inconsistencies present in the contract provisions during the time of assignment/ novation, else, it shall be construed as default in contract and appropriate actions shall be taken as deemed fit.

14.2. Novation:

The Parties agree and acknowledge that the Power Producer may intend to novate the Agreement to a party, and has the right to transfer any or all of its rights and obligations under this Agreement to a party or any other third party ("New Party"), with the consent of the Power Purchaser. The Power Purchaser shall not unreasonably withhold such consent. Upon Novation, the New Party shall automatically and without any further action be entitled to all the same rights and assume the same obligations, under this Agreement, as if it were originally a party to

this Agreement. Further, the Purchaser hereby agrees and undertakes that, promptly upon receiving a request from the Power Producer, the Purchaser shall execute such further writings, deeds and/or agreements and take all such further actions as may be necessary for effecting or implementing the transfer of any or all of the Power Producer's rights and/or obligations under this Agreement to the New Party. If the parties agree to do Novation, then separate Novation agreement shall be executed.

14.3. Notices

Unless otherwise provided in the Agreement, all notices and communications concerning the Agreement shall be in writing and addressed to the Parties at the addresses set forth below:

Power Producer's address and contact details:

Name of Company:

Address

Telepho

ne:

Email:

Purchasers address and contact details:

Name:

Address :

Telephone:

Email:

14.4. Notice

Unless otherwise provided herein, any notice provided for in the Agreement shall be hand delivered, sent by registered post, or by courier delivery, or transmitted by facsimile and shall be deemed delivered to the addressee or its office when received at the address for notice specified above when hand delivered or sent toy courier delivered or sent by courier delivery, upon posting if sent by registered post and upon confirmation of sending when sent by facsimile on the next Business Day.

15. Confidentiality

15.1. Confidentiality obligation

- a) If the Power Producer provides confidential information, including business plans, strategies, financial information, proprietary, patented, licensed, copy righted or trademarked information, and / or technical information regarding the , design, operation and maintenance of the System ("Confidential Information") to Purchaser or, if in the course of performing under the Agreement or negotiating the Agreement Purchaser learns Confidential Information regarding the facilities or plans of the

Power Producer, Purchaser shall (a) protect the Confidential information from disclosure to third parties with the same degree of care accorded its own confidential and proprietary information, and (b) refrain from using such Confidential Information, except in the negotiation and performance of the Agreement.

Notwithstanding the above, Purchaser may provide such Confidential Information to its officers, directors, manager, employees and Affiliates (collectively "Representatives"), in each case whose access is reasonably necessary for purposes of the Agreement. Each such recipient of confidential information shall be informed by Purchaser of its confidential nature and shall be directed to treat such information confidentially and shall agree to abide by these provisions. Purchaser shall be liable for any breach of this provision by any entity to whom it improperly discloses Confidential Information. All Confidential Information shall remain the property of the Power Producer and shall be returned to it after Purchaser's need for it has expired or upon the request of the Power Producer.

- b) If the Purchaser provides confidential information, including business plans, strategies, financial information, proprietary, patented, licensed, copy righted or trademarked information, ("Confidential Information") to the Power Producer or, if in the course of performing under the Agreement or negotiating the Agreement the Power Producer learns Confidential Information regarding the facilities Or plans of the Purchaser, the Power Producer shall (a) protect the Confidential Information from disclosure to third parties with the same degree of care accorded its own confidential and proprietary information, and (b) refrain from using such Confidential Information, except in the negotiation and performance of the Agreement. Notwithstanding the above, the Power Producer may provide such Confidential Information to its officers, directors, managers, employees and Affiliates (collectively, "Representatives"), in each case whose access is reasonably necessary for purposes of the Agreement. Each such recipient of Confidential Information shall be informed by the Power Producer of its confidential nature and shall be directed to treat such information confidentially and shall agree to abide by these provisions. The Power Producer shall be liable for any breach, of this provision by any entity to whom it improperly discloses Confidential Information. All Confidential Information shall remain the property of the Purchaser and shall be returned to it after the Power Produce's need for it has expired or upon the request of the Purchaser.

15.2. Permitted Disclosures

Notwithstanding any other provision contained herein, neither Party shall be required to hold confidential any information that;

- a) Becomes publicity available other than through the receiving Party.
- b) Is required to be disclosed under Applicable Law or pursuant to a validly issued notice or required filling, but a receiving Party subject to any such requirement shall promptly notify the disclosing Party of such requirement

- c) Is independently developed by the receiving Party's; or
- d) Becomes available to the receiving Party without restriction from a third party under no obligation of confidentiality.

16. Indemnity

16.1. Power Producer's Indemnity

Subject to Section 13, the Power Producer agrees that it shall indemnify and hold harmless Purchaser and its members, officers, employees, students, casual labourers, persons permitted to run any business or service, such as canteens, stores, photocopy units, banks, post office, courier service, hospital and to any lawful visitors (collectively, the "Purchaser Indemnified Parties") from and against any and all Losses incurred by the Purchaser Indemnified Parties to the extent arising from or out of the following any claim for or arising out of any injury to or death of any Person or Loss or damage to Property of any Person to the extent arising out of the Power Producer's negligence or willful misconduct. The Power Producer shall not, however, be required to reimburse or indemnify any Purchaser Indemnified Party for any loss to the extent such loss is due to the negligence or willful misconduct of any Purchaser indemnified Party.

16.2. Purchaser's Indemnity

Subject to Section 13, Purchaser agrees that it shall indemnify, defend and hold harmless the Power Producer, its permitted successors and assigns and the irrelative directors, officers, employees, contractors, sub-contractors, and agents (collectively, the "Power Producer indemnified Parties") from and against any and all losses incurred by the Power Producer Indemnified Parties to the extent arising from or out of any claim for or arising out of any injury to or death or any Person or loss or damage to property of any Person to the extent arising out of Purchaser's negligence or willful misconduct. Purchaser shall not, however, be required to reimburse or indemnify any Power Producer Indemnified Party for any Loss to the extent such Loss is due to the negligence or willful misconduct of any Power Producer Indemnified Party.

17. Miscellaneous

17.1. Amendments

This Agreement may only be amended, modified or, supplemented by an instrument in writing executed by duly authorized representatives of the Power Producer and Purchaser.

17.2. Goodwill and Publicity

Neither Party shall use any name, trade name, service mark or trademark of the other Party in any promotional or advertising material without the prior written consent of such other Party. The Parties shall coordinate and cooperate with each other when making public announcements related to the execution and existence of this

Agreement, and each Party shall have the right to promptly review, comment upon and approve any publicity materials, press releases and other public statements by the other Party that refer to, or that describe any aspect of, this Agreement; provided that no such publicity releases or other public statements (except for filings or other statements or releases as may be required by applicable law) shall be made by either Party without the prior written consent of the other Party. Without limiting the generality of the foregoing and whether or not the consent of the other Party is required or obtained, all public statements must accurately reflect the rights and obligations of the Parties under this Agreement.

17.3. Industry Standards

Except as otherwise set forth herein, for the purpose of the Agreement, the normal standards of performance within the solar photovoltaic power generation Industry in the relevant market shall be the measure of whether a Party's performance is reasonable and timely. Unless expressly defined herein, words having well-known technical or trade meanings shall be so construed.

17.4. Cumulative Remedies

Except as set forth to the contrary herein, any right or remedy of the Power Producer or Purchaser shall be cumulative and without prejudice to any other right or remedy.

17.5. No Waiver

The failure of the Power Producer or Purchaser to enforce any of the provisions of the Agreement, or the waiver thereof, shall not be construed as a general waiver or relinquishment on its part of any such provision in any other instance or of any other provision in any instance.

17.6. Survival

The obligations under Section 8:1 (d) (Power Producer Covenant), Sections 8.3(d),(e), (f) and (g) (Purchaser Covenants), Section 10 (Taxes and Governmental Fees), Section 13 (Limitation of Liability) Section 12.2 (Notices), Section 15 (Confidentiality), or pursuant to other provisions of this Agreement that, by their nature and context, are intended to survive. Termination of this Agreement shall survive the expiration or termination of this Agreement for any reason.

17.7. Governing Law & Jurisdiction

- a) This Agreement shall be governed by and construed in accordance with the laws of India. The Parties agree that the courts in Delhi shall have jurisdiction over any action or proceeding arising under the Agreement.
- b) In the event of any Dispute, difference of opinion or dispute or claim arising out of or relating to this Agreement or breach, termination or the invalidity thereof, shall firstly be attempted to be resolved by conciliation. Any Dispute that cannot be settled through

conciliation procedure shall be referred to arbitration in accordance with the procedure given below. The Parties agree to comply with the awards resulting from arbitration and waive their rights to any form of appeal in so far as such waiver can validly be made. Cost of conciliation shall be equally shared by both the parties.

c) Arbitration Procedure: Settlement of Dispute:

If any dispute of any kind whatsoever arises between Purchaser and Power Producer in connection with or arising out of the contract including without prejudice to the generality of the foregoing, any question regarding the existence, validity or termination, the parties shall seek to resolve any such dispute or difference by mutual consent.

If the parties fail to resolve, such a dispute or difference by mutual consent, within 45 days of its arising, then the dispute shall be referred by either party by giving notice to the other party in writing of its intention to refer to arbitration as hereafter provided regarding matter under dispute. No arbitration proceedings will commence unless such notice is given. Any dispute in respect of which a notice of intention to commence arbitration has been given in accordance with sub clause, shall be finally settled by arbitration.

In case the Contractor (Power Producer) is a Public-Sector Enterprise or a Government Department:

In case the Contractor is a Public-Sector Enterprise or a Government Department, the dispute shall be referred for resolution in Permanent Machinery for Arbitration (PMA) of the Department of Public Enterprise, Government of India. Such dispute or difference shall be referred by either party for Arbitration to the sole Arbitrator in the Department of Public Enterprises to be nominated by the Secretary to the Government of India in-charge of the Department of Public Enterprises. The award of the Arbitrator shall be binding upon the parties to the dispute, provided, however, any party aggrieved by such award may make a further reference for setting aside or revision of the award to the Law Secretary, Department of Legal Affairs, Ministry of Law & Justice, Government of India. Upon such reference the dispute shall be decided by the Law Secretary or the Special Secretary / Additional Secretary, when so authorized by the Law Secretary, whose decision shall bind the Parties finally and conclusive. The Parties to the dispute will share equally the cost of arbitration as intimated by the Arbitrator.

In All Other Cases

In all other cases, any dispute submitted by a party to arbitration shall be heard by an arbitration panel composed of three arbitrators, in accordance with the provisions set forth below.

The Purchaser and the Power Producer shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the two arbitrators do not succeed in appointing a third arbitrator within

Thirty (30) days after the later of the two arbitrators has been appointed, the third arbitrator shall, at the request of either party, be appointed by the Appointing Authority for third arbitrator which shall be the President, Institution of Engineers. If one party fails to appoint its arbitrator within thirty (30) days after the other party has named its arbitrator, the party which has named an arbitrator may request the Appointing Authority to appoint the second arbitrator. If for any reason an arbitrator is unable to perform its function, the mandate of the Arbitrator shall terminate in accordance with the provisions of applicable laws as mentioned in Clause (Governing Law) and a substitute shall be appointed in the same manner as the original arbitrator.

Arbitration proceedings shall be conducted with The Arbitration and Conciliation Act, 1996. The venue or arbitration shall be New Delhi. The decision of a majority of the arbitrators (or of the third arbitrator chairing the arbitration panel, if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction as decree of the court. The parties thereby waive any objections to or claims of immunity from such enforcement. The arbitrator(s) shall give reasoned award. Notwithstanding any reference to the arbitration herein, the parties shall continue to perform their respective obligations under the agreement unless they otherwise agree. **Cost of arbitration shall be equally shared between the Power Producer and Purchaser.**

17.8. Severability

If any term, covenant or condition in the Agreement shall, to any extent, be invalid or unenforceable in any respect under Applicable Law, the remainder of the Agreement shall not be affected thereby, and each term, covenant or condition of the Agreement shall be valid and enforceable to the fullest extent permitted by Applicable Law and if appropriate, such invalid or unenforceable provision shall be modified or replaced to give effect to the underlying intent of the Parties and to the intended economic benefits of the Parties.

17.9. Successors and Assigns

This Agreement and the rights and obligations under the Agreement shall be binding upon and shall inure to the benefit of the Power Producer and Purchaser and the irrelative successors and permitted assigns.

17.10. Counterparts

This Agreement may be executed in one or more counterparts, all of which taken together shall constitute one and the same instrument.

17.11. Independent Service Provider

This Agreement is on a principal-to-principal basis between the parties hereto. Nothing contained in this Agreement shall be construed or deemed to create any association, partnership or joint venture or employer employee relationship or

principal-agent relationship in any manner whatsoever between the Parties.

17.12. Non-Exclusive Agreement

This Agreement is on non-exclusive basis. The Purchaser is free to engage any other service provider's or may entrust services similar to those provided by the Power Producer under this Agreement to any other person/s, provided the Power Producer's rights under this Agreement are not affected in any manner.

17.13. Entire Agreement

This Agreement constitutes the entire agreement between the Parties hereto with respect of the subject matter of this Agreement and supersedes all prior agreements and undertakings; written or oral, with respect to the subject matter hereof except as otherwise expressly provided herein. The Schedules annexed to this Agreement also form a part of this Agreement.

17.14. Insurance

The Power Producer shall maintain at its own costs, throughout the tenure of this Agreement and any extensions thereof all mandatory insurance coverage for adequate amount including but not restricted to comprehensive general liability insurance including theft and vandalism, covering the System and accidental losses, bodily harm, injury, death of all individuals employed/ assigned by the Power Producer to perform the services required under this Agreement. Annual accounts reconciliation shall be conducted annually between the Power Producer and Purchaser.

IN WITNESS WHEREOF the Parties have caused the Agreement to be duly executed through their duly authorized representatives as of the date set forth above.

FOR & ON BEHALF OF			FOR & ON BEHALF OF	
Deptt./ Society			POWER PRODUC ER	
Signature			Signature	
Name			Name	
Designati on			Designati on	

WITNES SES			WITNES SES	
Signature			Signature	
Name			Name	
Designati on			Designati on	

WITNES SES			WITNES SES	
Signature			Signature	
Name			Name	
Designati on			Designati on	

SCHEDULE-I

Description of the Premises:

Premises Overview	
Segment	
Type of Roof	
Hours of Operation	
Security	

Capacity and Area Requirement

Capacity	
Module Area	
Number of Building	
Roofs	
Distribution	

SCHEDULE II

FEES

Following are the details of the tariff agreed between the parties.

Purchase shall pay power producer for solar power at the rate equal to INR /kWh which is the levelized tariff as per [Insert the name of Respective DISCOM] allocation.

Year wise tariff is as follows;

Year 1	
Year 2	
Year 3	
Year 4	
Year 5	
Year 6	
Year 7	
Year 8	
Year 9	
Year 10	
Year 11	
Year 12	
Year 13	
Year 14	
Year 15	
Year 16	
Year 17	
Year 18	
Year 19	
Year 20	
Year 21	
Year 22	
Year 23	
Year 24	
Year 25	

The fees and payment details are provided in detail under clause 7 of this agreement

SCHEDULE III

The following is the purchase value of the system over a period of 25 years. This may be applicable under the following conditions.

1. The Power Purchaser terminates the PPA before the 25 years PPA Tenure.
2. The Power Purchaser wishes to own the Project before the Tenure of the PPA.
3. The Solar Project is relocated or shifted owing to demolition of the Building, damage to the building, change of city plans or any other reason.

The Price reference taken for calculating the total cost of the system is as per RFS rates for the category of Part-X i.e. Rs. / kWp has used the CERC guidelines for arriving at the Project cost.

Year of Term (End of Year)	Calendar Year	Purchase Price in Crores (Rs)
1st year	2019	
2nd year	2020	
3rd year	2021	
4th year	2022	
5th year	2023	
6th year	2024	
7th year	2025	
8th year	2026	
9th year	2027	
10th year	2028	
11th year	2029	
12th year	2030	
13th year	2031	
14th year	2032	
15th year	2033	
16th year	2034	
17th year	2035	
18th year	2036	
19th year	2037	
20th year	2038	
21th year	2039	
22th year	2040	
23rd year	2041	
24th year	2042	
25th year	2043	
26th year	2044	

SCHEDULE IV

Project: _____ kWp (approx.) Grid Connected Rooftop Solar Power Plant

Location:

Design Criteria: As per shadow free area design

Expected Yearly Energy Generation Sheet

End of Year	Yearly Degradation 'MWh'(Modules & System)	Global incident in coll. Plane (Glob Inc) 'kWh/Sq.mtr' Yearly	Energy injected into grid (Grid)'MWh' Yearly 'A'
1	Degradation consider in PV system generation data		
2	1.00%		
3	1.00%		
4	1.00%		
5	1.00%		
6	1.00%		
7	1.00%		
8	1.00%		
9	1.00%		
10	1.00%		
11	1.00%		
12	1.00%		
13	1.00%		
14	1.00%		
15	1.00%		
16	1.00%		
17	1.00%		
18	1.00%		
19	1.00%		
20	1.00%		
21	1.00%		
22	1.00%		
23	1.00%		
24	1.00%		
25	1.00%		

SCHEDULE V

Government approvals:

1. To be obtained by the power producer:

All approvals including approvals/consents required under local regulations, building codes and approvals required from the distribution utility etc. relating to installation and operation of the system (including the government incentives/subsidies available for the project) and generation and supply of solar power from the Project.

2. To be obtained by Power Purchaser

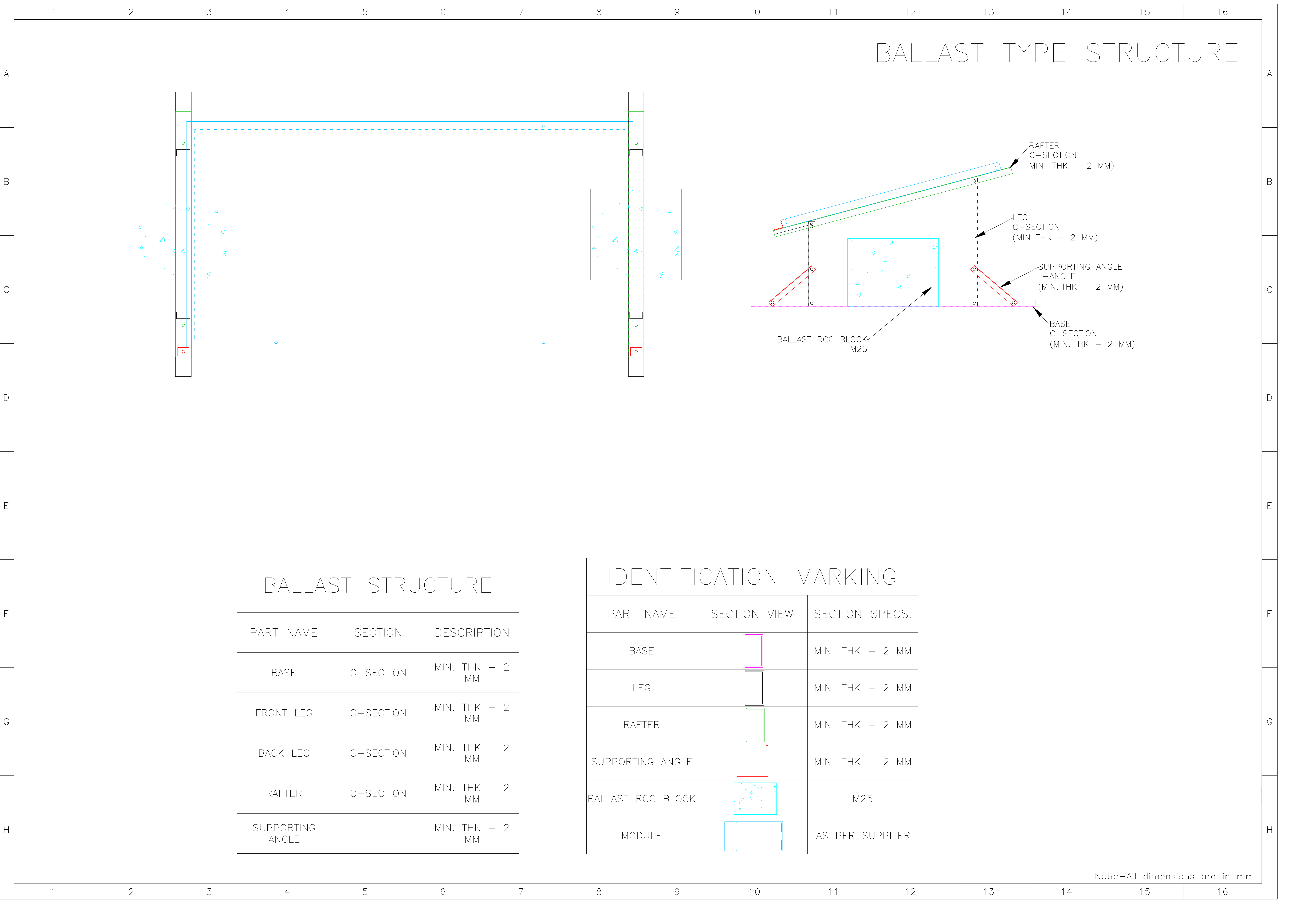
Any authorizations required of purchaser, including those required for installation of system at the premises. Permissions and coordination with DISCOM or any related organization for NET METERING. Power Purchaser will apply for net-metering and bear the cost of net meter only.

Purchase Price to _____ kWp system @Rs. /-Watt.

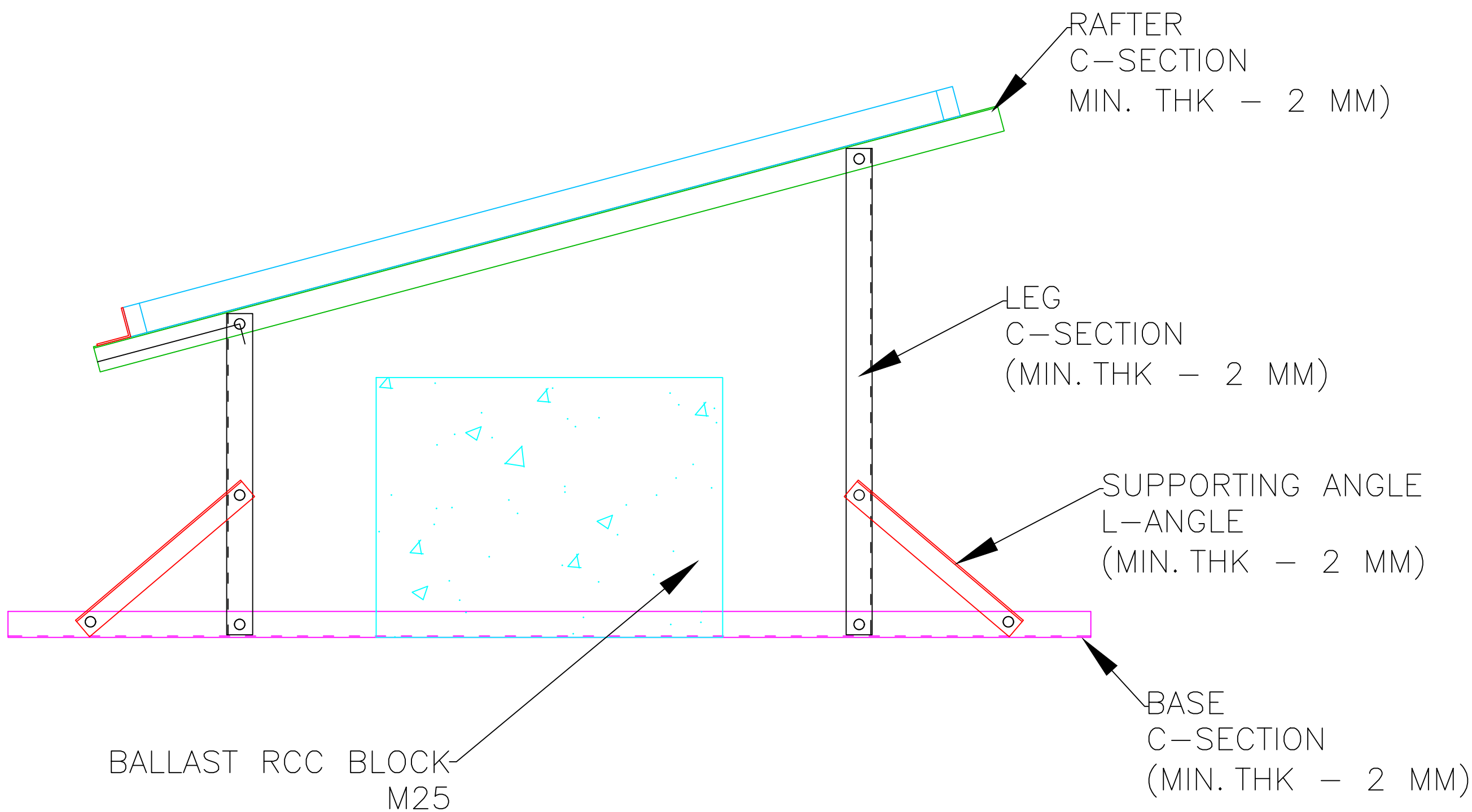
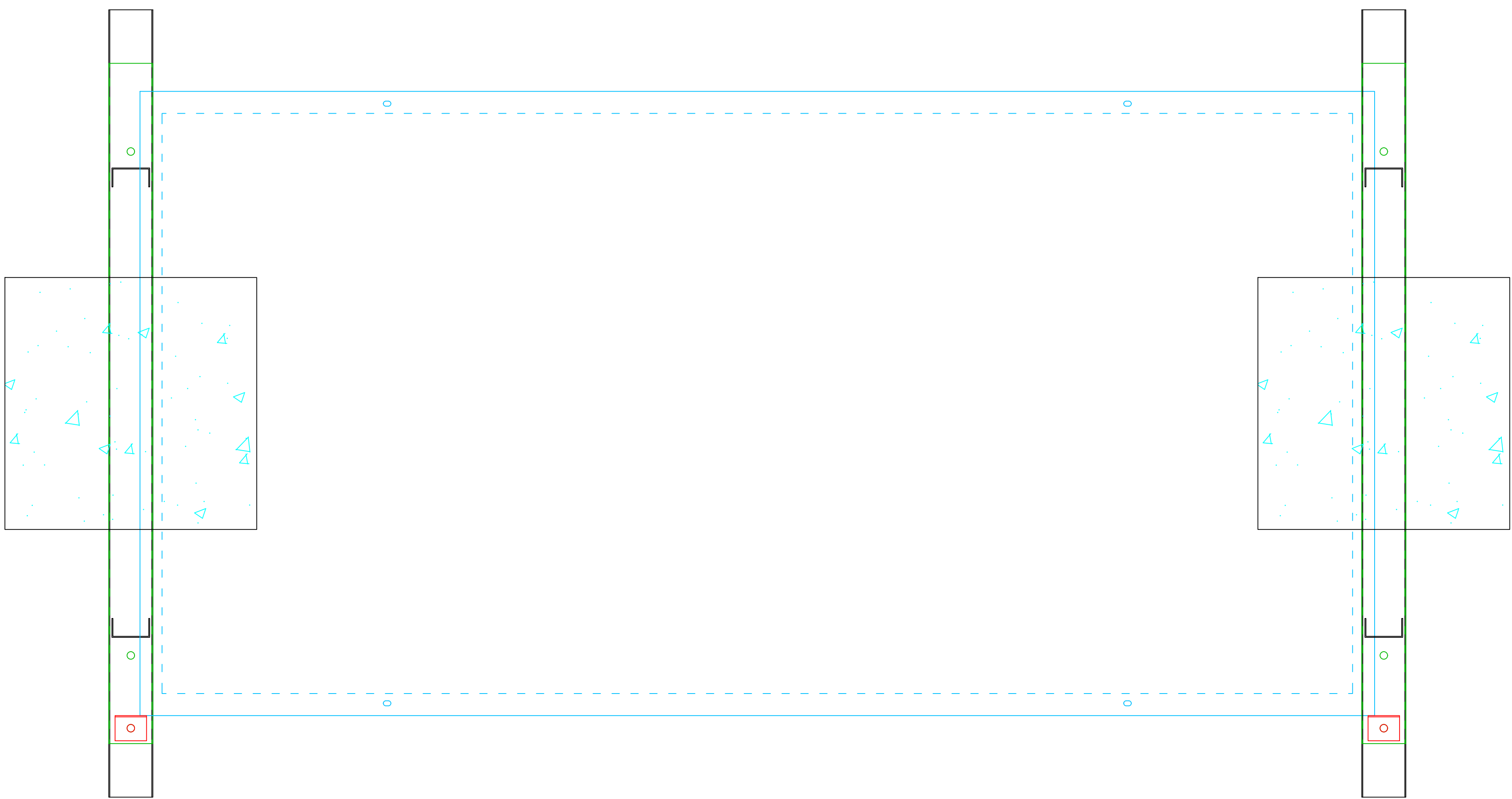
Year Salvage	Value (Rs.)
1st year	
2nd year	
3rd year	
4th year	
5th year	
6th year	
7th year	
8th year	
9th year	
10th year	
11th year	
12th year	
13th year	
14th year	
15th year	
16th year	
17th year	
18th year	
19th year	
20th year	
21th year	
22th year	
23rd year	
24th year	
25th year	
26th Year	

ANNEXURE-I

NAME OF THE BENEFICIARY	
PRINCIPAL PLACE OF BUSINESS & ADDRESS	
NAME OF THE BANK	
BANK ADDRESS	
BANK ACCOUNT NO.	
TYPE OF BANK ACCOUNT - SB/CA/CC	
IFSC/NEFT/RTGS CODE	
MICR CODE	
PAN CARD NO.	
PHONE NO./FAX NO. WITH STD CODE	
EMAIL ID OF CONTACT PERSON	

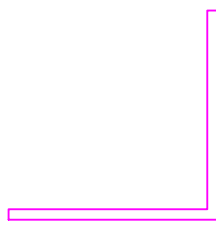
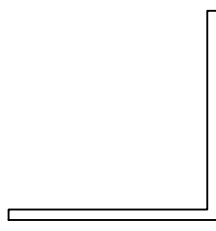
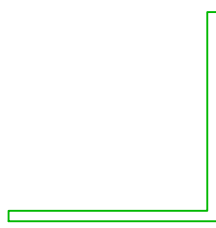

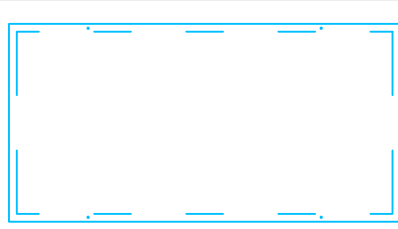


BALLAST TYPE STRUCTURE

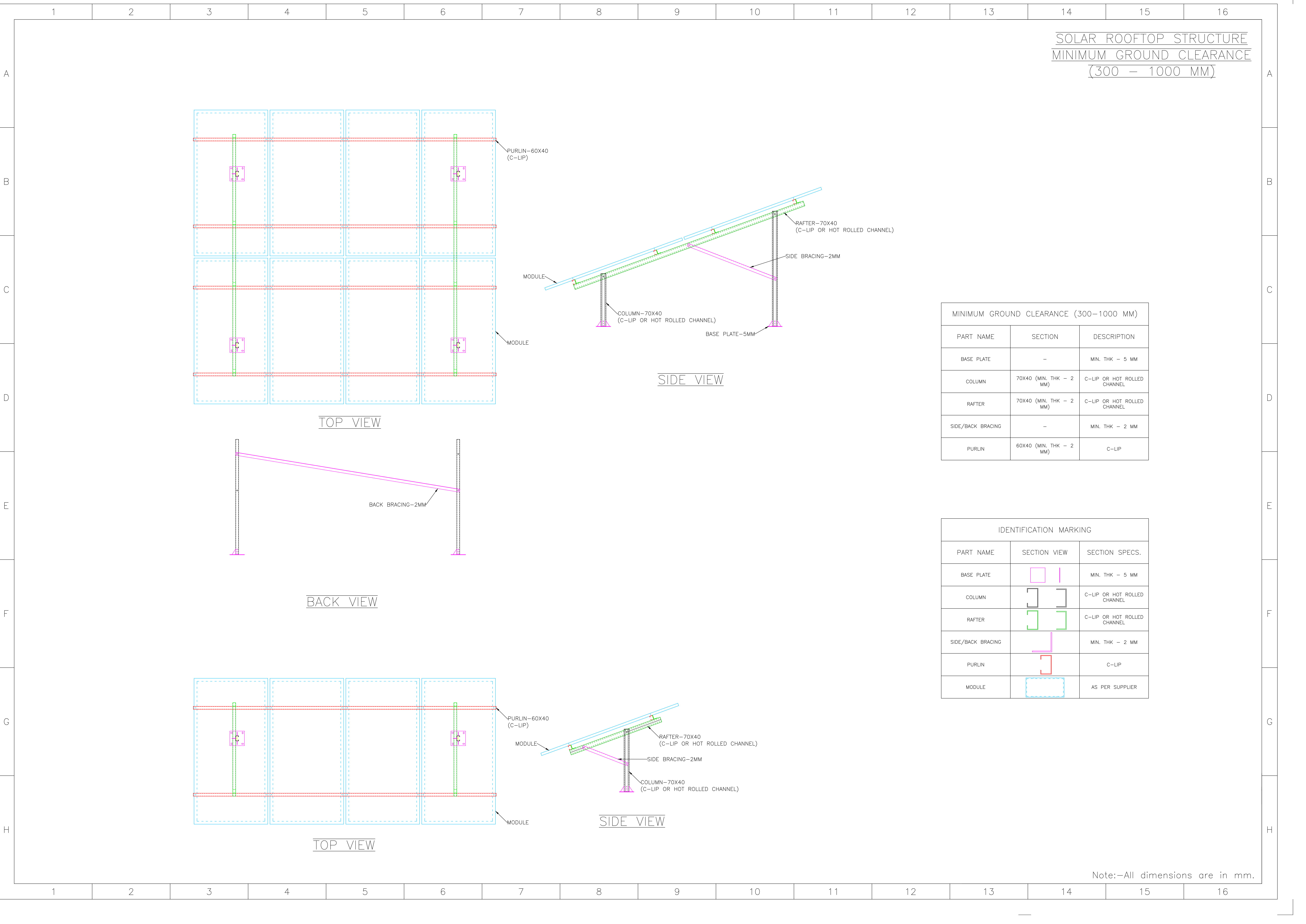


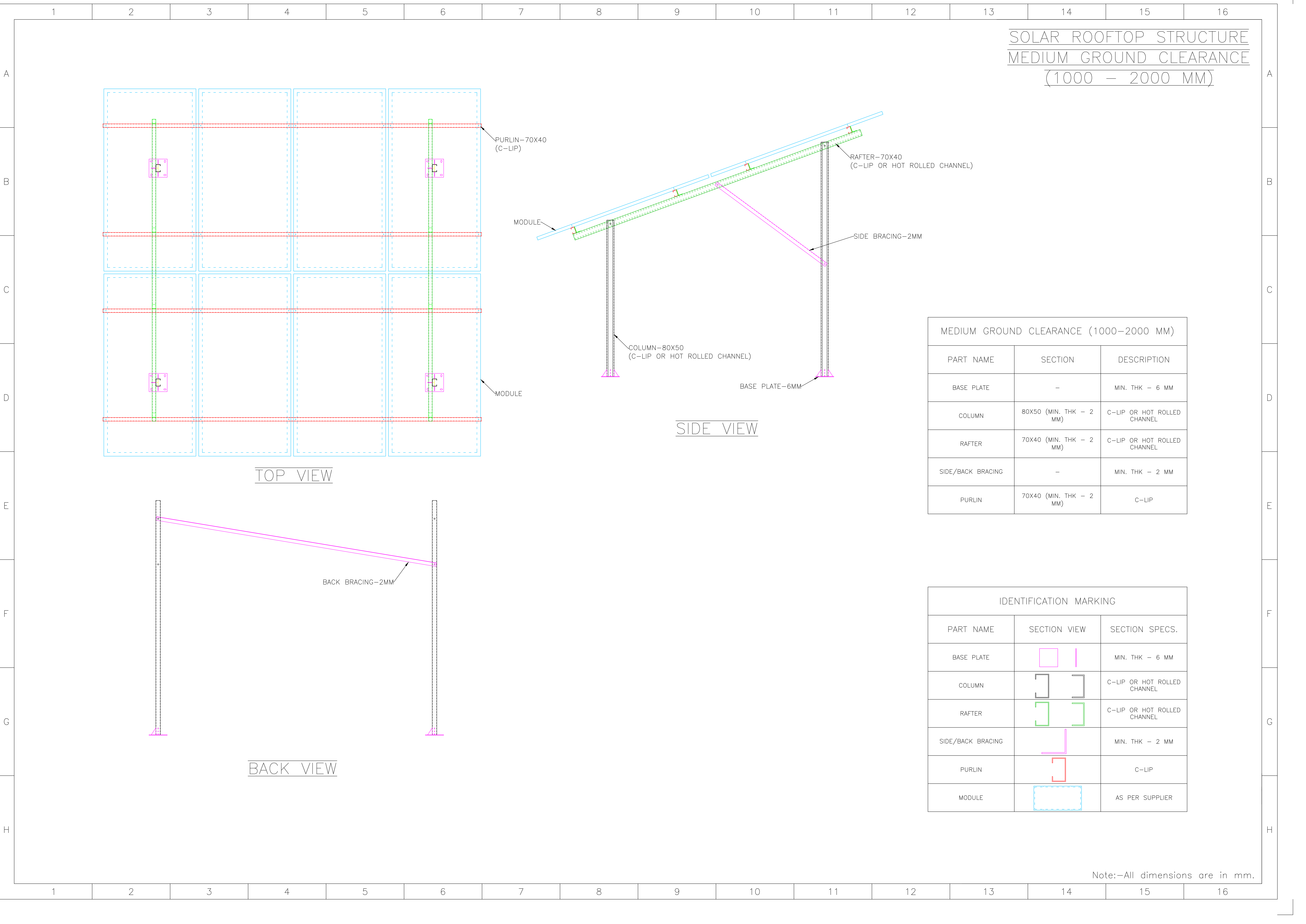
Note:-All dimensions are in mm.

TINSHED STRUCTURE		
PART NAME	SECTION	DESCRIPTION
BASE	L-SECTION	MIN. THK - 2 MM
FRONT LEG	L-SECTION	MIN. THK - 2 MM
BACK LEG	L-SECTION	MIN. THK - 2 MM
RAFTER	L-SECTION	MIN. THK - 2 MM
SUPPORTING ANGLE	L-SECTION	MIN. THK - 2 MM

IDENTIFICATION MARKING		
PART NAME	SECTION VIEW	SECTION SPECS.
BASE		MIN. THK - 2 MM
LEG		MIN. THK - 2 MM
RAFTER		MIN. THK - 2 MM
SUPPORTING ANGLE		MIN. THK - 2 MM
MODULE		AS PER SUPPLIER

Note:-All dimensions are in mm.



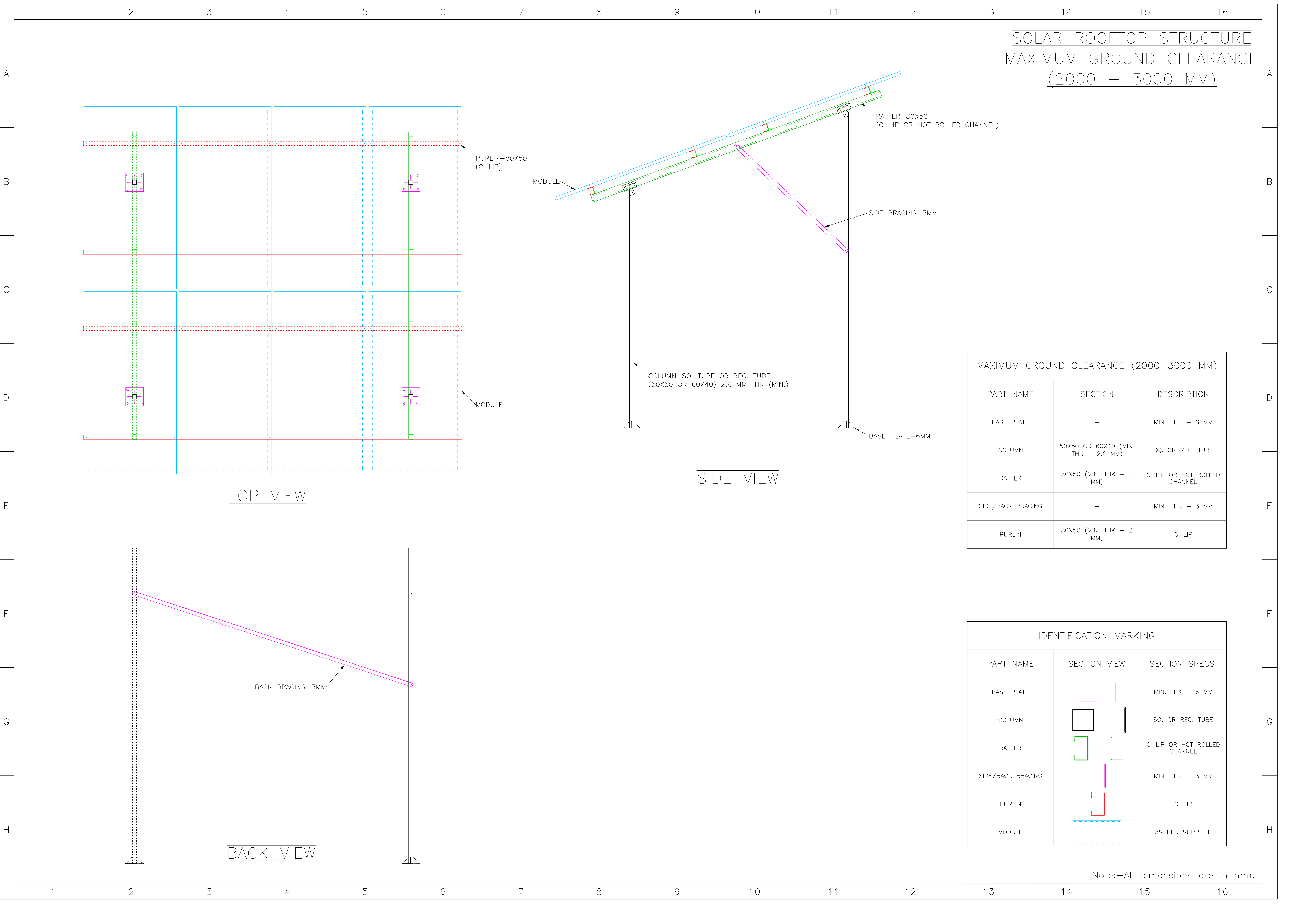


SOLAR ROOFTOP STRUCTURE
MEDIUM GROUND CLEARANCE
(1000 – 2000 MM)

MEDIUM GROUND CLEARANCE (1000–2000 MM)		
PART NAME	SECTION	DESCRIPTION
BASE PLATE	–	MIN. THK – 6 MM
COLUMN	80X50 (MIN. THK – 2 MM)	C-LIP OR HOT ROLLED CHANNEL
RAFTER	70X40 (MIN. THK – 2 MM)	C-LIP OR HOT ROLLED CHANNEL
SIDE/BACK BRACING	–	MIN. THK – 2 MM
PURLIN	70X40 (MIN. THK – 2 MM)	C-LIP

IDENTIFICATION MARKING		
PART NAME	SECTION VIEW	SECTION SPECS.
BASE PLATE		MIN. THK – 6 MM
COLUMN		C-LIP OR HOT ROLLED CHANNEL
RAFTER		C-LIP OR HOT ROLLED CHANNEL
SIDE/BACK BRACING		MIN. THK – 2 MM
PURLIN		C-LIP
MODULE		AS PER SUPPLIER

Note:–All dimensions are in mm.



SOLAR ROOFTOP STRUCTURE
MAXIMUM GROUND CLEARANCE
(2000 – 3000 MM)

MAXIMUM GROUND CLEARANCE (2000–3000 MM)		
PART NAME	SECTION	DESCRIPTION
BASE PLATE	–	MIN. THK – 6 MM
COLUMN	50X50 OR 60X40 (MIN. THK – 2.6 MM)	SQ. OR REC. TUBE
RAFTER	80X50 (MIN. THK – 2 MM)	C–LIP OR HOT ROLLED CHANNEL
SIDE/BACK BRACING	–	MIN. THK – 3 MM
PURLIN	80X50 (MIN. THK – 2 MM)	C–LIP

IDENTIFICATION MARKING		
PART NAME	SECTION VIEW	SECTION SPECS.
BASE PLATE		MIN. THK – 6 MM
COLUMN		SQ. OR REC. TUBE
RAFTER		C–LIP OR HOT ROLLED CHANNEL
SIDE/BACK BRACING		MIN. THK – 3 MM
PURLIN		C–LIP
MODULE		AS PER SUPPLIER

Note:–All dimensions are in mm.

