

Shillong Smart City Limited
Shillong, Meghalaya

Bidding Document

for

**GRID CONNECTED ROOF TOP SOLAR
PHOTO-VOLTAIC SYSTEM AT VARIOUS
BUILDINGS IN SHILLONG, EAST KHASI HILLS
DISTRICT, MEGHALAYA UNDER SMART CITIES
MISSION**

Tender No.: SSCL/Tender/2020-21/MEG-SHI-012

Office of the Shillong Smart City Limited

House No. C/B-037, Top Floor,
Centre Nongrim Hills, Near JJ Cables, Shillong,
East Khasi Hills District, Meghalaya – 793003

DISCLAIMER

The information contained in this Request for Proposal document ("RFP") or subsequently provided to Bidders, whether orally or in documentary or any other form by or on behalf of the Shillong Smart City Limited or any of its employees or advisers, is provided to Bidders on the terms & conditions set out in this RFP such other terms conditionssubject to which such information is provided.

This RFP is not an agreement is neither an offer by the Shillong Smart City Limited, (hereafter it will be referred as "SSCL") to the prospective Bidders or any other person. The purpose of this RFP is to provide interested parties with information that may be useful to them in the formulation of their Proposals pursuant to this RFP.

This RFP includes statements, which reflects the intentions of the Shillong Smart City Limited in relation to the Selection of Bidder to Supply, Installation, testing, Commissioning and Operations of Grid Connected Roof Top Solar Photo-Voltic system for various buildings in Shillong, East Khasi Hills District, Meghalaya under Smart Cities Mission.

The Shillong Smart City Limited , its employees advisers make no representation or warranty shall have no liability to any person including any Bidder under any law, statute, rules or regulations or part, principles of restitution or unjust enrichment or otherwise for any loss, damages, cost or expense which may arise from or be incurred or suffered on account of anything and contained in this RFP or otherwise, including the accuracy, adequacy, correctness, reliability or completeness of the RFP any assessment, assumption, statement or information contained therein or deemed to form part of this RFP or arising in any way in this Selection Process.

The Shillong Smart City Limited also accepts no liability of any nature whether resulting from negligence or otherwise however caused arising from reliance of any Bidder upon the statements contained in this RFP.

The Shillong Smart City Limited may in its absolute discretion, but without being under any obligation to do so, update, amend or supplement the information, assessment or assumption contained in this RFP.

The issue of this RFP does not imply that the Shillong Smart City Limited is bound to award this work to any bidder/ bidders, as the case may be, for installation/ erection of Grid Connected Roof Top Solar Photo-Voltic system for various buildings in Shillong. Shillong Smart City Limited reserves the right to reject all or any of the Proposals without assigning any reasons whatsoever.

The Bidders shall bear all its costs associated with or relating to the preparation submissionof its Proposal including but not limited to preparation, copying, postage, delivery fees, expenses associated in connection with or relating to its Proposal. All such costs expenses will remain with the Bidders the Shillong Smart City Limited shall not be liable in any manner whatsoever for the same or for any other costs or other expenses incurred by a Bidder in preparation for submission of the Proposal, regardless of the conduct or outcome of the Selection Process.

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SECTION 1

CONTENT OF BIDDING DOCUMENTS

The set of bidding documents comprises the documents listed below and addenda issued in accordance with Clause 9:

1. SECTION 1:
 - Content of Bidding Documents
 - Notice inviting Bid
 - List of Important Dates
 - Document Checklist
2. SECTION 2: Instruction to Bidders
3. SECTION 3: Qualification Information
4. SECTION 4: GCC and SCC
5. SECTION 5: Scope of Work & Technical Specifications
6. SECTION 6: Drawings
7. SECTION 7: Forms of Bid
8. SECTION 8: Other Forms

NOTICE INVITING TENDER SHILLONG SMART CITY LIMITED

NIT: SSCL/Tender/2021-22/MEG-SHI-12

Dated: 07/07/2022

1. The Chief Executive Officer (CEO), Shillong Smart City Limited (SSCL) invites Bids for the following work:

Tender No.	Name of the Work	Approx. Estimated project Cost	Tender Fee (non-refundable)	Earnest Money Deposit	Period of Completion
SSCL/Tender/2021-22/MEG-SHI-12	Grid connected Roof Top Solar Photo-Voltaic system at various buildings in Shillong	Rs. 26.75 Crore (inclusive of GST)	Rs. 15,000 (Rupees Fifteen Thousand Only)	Rs. 53.50 Lakhs (Rupees Fifty-Three Lakhs Fifty Thousand Only)	Eight (08) Calendar Months for construction from the date of issue of Notice to Proceed and 5 (five) years of Operation and Comprehensive Maintenance Contract (CMC)

2. Bidding Documents can be downloaded from 07.07.2022 at 10:00 Hrs. to 28.07.2022 at 15:00 Hrs. from the following websites: <http://megurban.gov.in> or <http://meghalaya.gov.in/megportal/tender>.
3. Bidders are requested to submit the Tender Fee in the form of DD and Earnest Money Deposit (EMD) in the form of DD/FDR/BG in the favour of Chief Executive Officer, Shillong Smart City Limited (SSCL), Shillong.
4. The deadline of bid-submission (hard copy submission only) is 15:00 Hrs. on 28/07/2022.
5. For more details contact Chief Executive Officer, Shillong Smart City Limited (SSCL), House No. C/B-037, Top Floor, Centre Nongrim Hills, Near JJ Cables, Shillong, East Khasi Hills District, Meghalaya – 793003, Contact No. +91-9669827940 and through email at shillongsmartcitylimitedp12@gmail.com

Chief Executive Officer,
Shillong Smart City Limited

LIST OF IMPORTANT DATES

1	Name of Work:	Grid connected Roof Top Solar Photo-Voltaic system at various buildings in Shillong, East Khasi Hills District, Meghalaya under Smart Cities Mission
2	Tender Fee (Non-Refundable)	Rs. 15,000 (Rupees Fifteen Thousand only)
3	Tender Security Amount (EMD)	Rs. 53.50 Lakhs (Rupees Fifty-Three Lakhs Fifty Thousand Only)
4	Completion Period for construction	08 Months (Including Monsoon Period)
5	Date of Issue of Notice Inviting Bid	07/07/2022
6	Period and Site for downloading of Bidding Documents	From 07/07/2022 at 10.00 Hrs to 28/07/2022 at 15.00 hrs Website: http://http://megurban.gov.in http://meghalaya.gov.in/megportal/tender
7	Last date of seeking clarifications	15/07/2022 (up to 15.00 Hrs.)
8	Bid Clarification and Queries Addressed to	Shillongsmartcitylimitedp25@gmail.com
9	Pre-bid Conference	Date: 15/07/2022 Time: 16:00 Hrs Venue: Conference Hall, Office of the Shillong Smart City Limited House No. C/B-037, Top Floor, Centre Nongrim Hills, Near JJ Cables, Shillong, East Khasi Hills District, Meghalaya - 793003
10	Uploading replies to Pre-bid queries	19/07/2022
11	Deadline for Receiving Bids	Date: 28/07/2022 Time: 15.00 hrs
12	Time and Date for opening Technical Bid/Bids	Date: 28/07/2022 Time: 15.30 hrs
13	Date of opening of Financial Bid (of technically qualified bidders only)	To be notified
14	Place of opening of technical bids	Conference Hall, Office of the Shillong Smart City Limited House No. C/B-037, Top Floor, Centre Nongrim Hills, Near JJ Cables, Shillong, East Khasi Hills District, Meghalaya - 793003
15	Last Date of Bid Validity	180 days from the last date of submission of bid
16	Officer Inviting Bids	Chief Executive Officer (CEO), Shillong Smart City Limited (SSCL)

Note: If the date of submission of tenders happens to be a public holiday for the Employer, Tenders will be received and opened on the next working day at the same venue and time. Bidders are requested to check the website for regular updates

DOCUMENT CHECKLIST

SN	DOCUMENTS
1	Tender Fee in the form of DD
2	Earnest Money Deposit (EMD)/ Bid Security
3	Power of Attorney (PoA) and MoU between the members of Joint Venture or Consortium or Association (if applicable)
4	<p>Affidavit certifying the following:</p> <ul style="list-style-type: none"> • That the information furnished with the bid documents is correct in all respects and authorise SSCL to verify, if necessary; • That the Bidder has not been convicted by a court of law for criminal activities • That the Bidder does not have in employment the following persons: <ul style="list-style-type: none"> ○ The near relation (defined as first blood relations, and their spouses, of the bidder or the bidder's spouse) of persons listed in the Appendix 'to ITB; and ○ Without Government permission, any person who retired as gazetted officer within the last two years of the rank and from the departments listed in the Appendix to ITB.
5	Registration Certificate (s) with Government (Central Government or State Government or Urban Local Body, etc. as specified in the Bidding Document)
6	<p>Documents on legal status of the Bidder such as:</p> <ul style="list-style-type: none"> • In case of Companies: Memorandum of Association (MoA) and Articles of Association (AoA), Certificate of incorporation/ registration, etc; • In case of Partnership Firms: Partnership Deed for firms registered under Indian Partnership Act, 1932 or Limited Liability Partnership Act, 2008, Certificate of Registration, etc.; • In case of Proprietorship Firms: GST Registration Certificate, MSME Registration Certificate (if applicable) and Income Tax Returns for last 3 financial years (i.e., 2019-20, 2020-21 and 2021-22 corresponding to AY 2020-21, 2021-22 and 2022-23 respectively).
7	PAN Card
8	GST Registration Certificate
9	<p>All pages of following documents signed, sealed, and enclosed with Technical Bid:</p> <ol style="list-style-type: none"> i. Notice Inviting Tender ii. Bid Document iii. Latest Corrigendum iv. Pre-bid Minutes v. Addendum (if any)
10	<p>Information in prescribed format as under:</p> <ul style="list-style-type: none"> • Tech Form 1: Letter of Technical Bid • Tech Form 2: Bidders Information Sheet • Tech Form 2A: JV Agreement (or Consortium/ Association, as applicable) • Tech Form 2B: Power of Attorney • Tech Form 3A: Financial Capacity • Tech Form 3B: Average Annual Turnover from Solar Projects (including O&M) • Tech Form 4A: Availability of Financial Resources

SN	DOCUMENTS
	<ul style="list-style-type: none"> • Tech Form 4B: Evidence of access to or availability of credit facilities • Tech Form 4C: Solvency Certificate from Bank • Tech Form 5: Current Contract Commitments / Works in Hand • Tech Form 6: Bidding Capacity Information & Declaration • Tech Form 7: General Construction Experience • Tech Form 7A: Similar Work Experience • Tech Form 8A: Site Organization • Tech Form 8B: Method Statement • Tech Form 8C: Mobilization Schedule • Tech Form 8D: Work Plan and Construction Schedule • Tech Form 8E: Equipment • Tech Form 8F: Resume of Proposed Personnel • Tech Form 9: Pending Litigations • Tech Form 10: Format for Declaration by the bidder for not being Blacklisted / Debarred • Tech Form 11: Integrity Pact • Tech Form 12: Certificate from the Bidders regarding compliance of orders from Department of Expenditure, Ministry of Finance, Government of India with respect to Procurement from a Bidder of a Country which shares a Land Border with India • Fin Form 1: Letter of Financial Bid (to be submitted in Financial Bid Envelope)
11	Duly numbered, signed and sealed Technical & Financial bids (including all drawings, BOQ, Bidding document, Technical Specifications, Corrigenda/Addenda, etc.) all pages.

SECTION 2

Instructions to Bidders (ITB)

Clause	A. General	Clause	D. Submission of Bids
1	Scope of Bid	20	Deadline for Submission of Bids
2	Source of Funds	21	Late Bids
3	Eligible Bidders	22	Modification & withdrawal of tenders
4	Qualification of the Bidder	E. Bid Opening	
5	One Bid per Bidder	23	Bid Opening
6	Cost of Bidding	24	Process to be Confidential
7	Site Visit	25	Clarification of Bids and Contracting the Employer
B. Bidding Documents and Evaluation		26	Examination of bids and Determination of Responsiveness
8	Content of Bidding Documents	27	Correction of Errors
9	Clarification of Bidding Documents	28	Evaluation and Comparison of Bids
10	Amendment of Bidding Documents	29	Price Preference
C. Preparation of Bids		F. Award of Contract	
11	Language of Bid	30	Award Criteria
12	Documents Comprising the Bid	31	Employer's Right to accept any Bid and to Reject any or all Bids
13	Bid Prices	32	Notification of Award
14	Currencies of Bid and Document	33	Performance Security
15	Bid Validity	34	Advances
16	Bid Security/ Earnest Money	35	Corrupt or Fraudulent Practices
17	Alternative Proposals by Bidders		
18	Format and Signing of Bid		
19	Sealing and Marking of Bids		

Instructions to Bidders (ITB)

A. GENERAL

1. Scope of Bid

- 1.1. The Government of India has announced creation of 100 Smart cities to drive economic growth and improve the quality of life of people by enabling local development and harnessing technology as a means to create smart outcomes for citizens. Shillong is one of the selected cities for the smart city initiative under Ministry of Housing and Urban Affairs (MoHUA), Government of India. Shillong Smart City Limited (SSCL) has been set up as a Special Purpose Vehicle (SPV) to implement the 'Smart Cities Mission' in Shillong city. As part of the said Mission, SSCL ("Employer") invites bids for carrying out "*Grid connected Roof top Solar Photo-Voltic system for various buildings in Shillong, East Khasi Hills District, Meghalaya*" as described in these documents and referred to as "**The Works**". The name and identification number of the works is provided in the Appendix to ITB. The bidders are required to submit bids for all the works detailed in the table given in the Notice Inviting Tender.
- 1.2. The successful Bidder will be expected to complete the Works by the Intended Completion Date specified in the *Part I General Conditions of Contract*.
- 1.3. Throughout these documents, the terms "**Bid**" and "**Tender**" and their derivatives (bidder/tenderer, bid/tender, bidding/tendering, etc.) are synonymous.
- 1.4. Throughout these documents, the terms "**Engineer**" and "**Engineer in Charge**" and their derivatives are synonymous.

2. Source of Funds

- 2.1. The **Shillong Smart City Ltd.** has decided to undertake the work.
- 2.2. The funding will be as per the **Smart City Mission Guidelines**.

3. Eligible Bidders

- 3.1. A Bidder may be a private Entity, government-owned Entity or, where permitted in the Bidding Document, any combination of them with a formal intent to enter into an agreement or under an existing agreement in the form of a Joint Venture [JV], Consortium or Association.
- 3.2. This Invitation for Bids is open to all eligible bidders as defined in the Appendix to ITB.
- 3.3. Bidders shall not be under a declaration of ineligibility for corrupt and fraudulent practices by the Central Government, the State Government or any Public Sector Undertaking, Autonomous Body, Authority, Agency by whatever name called under the Central Government, any State Government, Union Territory or Urban Local Body.
- 3.4. Any bidder who has been convicted by a court of law for criminal activities including but not limited to organized crime or gangster activities or Mafia or Goonda or Anti-social activity in the last 7 years (till the date of NIT) is not eligible to bid. If it is established that any bidder has been convicted by a court of law, his bid shall be automatically cancelled. A self-certified affidavit is to be submitted by bidder.
- 3.5. The bidder must have solvency of **minimum 15%** of the Estimated Project Cost. A solvency certificate, duly certified by the Banker of any nationalized bank or scheduled commercial bank is to be submitted by the bidder. The certificate should not be more than 06 months old prior to the date of submission of tender or should have validity as on last date of submission of tender.
- 3.6. Any bidder from a country which shares a land border with India will be eligible to bid in this tender only if the following conditions are met¹:

¹ Provisions of this Clause will be applicable throughout this Bidding Document and will override anything mentioned in other parts of this Bidding Document that is at a deviation or in contradiction of this Clause (i.e. in other applicable provisions such as relating to Joint Venture/Consortium/Association, sub-contracting, etc.).

- I. Any Bidder from a country which shares a land border with India will be eligible to bid in this tender only if the bidder is registered with the Competent Authority as defined in Order (Public Procurement No. 1) bearing reference No. 6/18/2019-PPD dated 23rd July 2020 of the Public Procurement Division, Department of Expenditure, Ministry of Finance, Govt. of India. The said Order as amended from time to time or any other Order by Govt. of India in this regard till the last day of month previous to the one in which proposals/applications are invited will have to be complied with by the Bidder.
- II. **"Bidder"** (including the term 'tenderer' or 'service provider' in certain contexts) means any person or firm or company, including any member of a consortium or joint venture (that is an association of several persons, or firms or companies), every artificial juridical person not falling in any of the descriptions of bidders stated hereinbefore, including any agency branch or office controlled by such person, participating in a procurement process.
- III. "Bidder from a country which shares a land border with India" for the purpose of this Order means:
 - a. An entity incorporated, established, or registered in such a country; or
 - b. A subsidiary of an entity incorporated, established, or registered in such a country; or
 - c. An entity substantially controlled through entities incorporated, established, or registered in such a country; or
 - d. An entity whose beneficial owner is situated in such a country; or
 - e. An Indian (or other) agent of such an entity; or
 - f. A natural person who is a citizen of such a country; or
 - g. A consortium or joint venture where any member of the consortium or joint venture falls under any of the above
- IV. The beneficial owner for the purpose of (iii) above will be as under:
 - a. In case of a company or Limited Liability Partnership, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has a controlling ownership interest or who exercises control through other means.

Explanation-

- i. "Controlling ownership interest" means ownership of or entitlement to more than twenty-five per cent. of shares or capital or profits of the company.
 - ii. "Control" shall include the right to appoint majority of the directors or to control the management or policy decisions including by virtue of their shareholding or management rights or shareholders agreements or voting agreements,
- b. In case of a partnership firm, the beneficial owner is the natural person(s) who, whether acting alone or together, or through one or more juridical person, has ownership of entitlement to more than fifteen percent of capital or profits of the partnership,
 - c. In case of an unincorporated association or body of individuals, the beneficial owner is the natural person(s), who, whether acting alone or together, or through one or more juridical person, has ownership of or entitlement to more than fifteen percent of the property or capital or profits of such association or body of individuals.
 - d. Where no natural person is identified under (1) or (2) or (3) above, the beneficial owner is the relevant natural person who holds the position of senior managing official,
 - e. In case of a trust, the identification of beneficial owner(s) shall include identification of the author of the trust, the trustee, the beneficiaries with fifteen percent or more interest in the trust and any other natural person exercising ultimate effective control over the trust through a chain of control or ownership.

- f. An Agent is a person employed to do any act for another, or to represent another in dealings with third person.
- g. The bidder shall be required to submit a Certificate as per TECH FORM – 12

4. Qualification of the Bidder

- 4.1. All bidders shall provide in Section 3, Forms of Bid and Qualification information, a preliminary description of the proposed work method and schedule, including drawings and charts, as necessary.
- 4.2. All bidders shall include the following information and documents with their bids in Section 3, Qualification Information unless otherwise stated in the Appendix to ITB:
 - a. Copies of original documents defining the constitution (MoA, AoA and Certificate of Incorporation/Registration for companies registered under the Companies Act, 1956 or Companies Act, 2013; Partnership Deed for firms registered under Indian Partnership Act, 1932 or Limited Liability Partnership Act, 2008.) or legal status, place of registration, and principal place of business; written power of attorney of the signatory of the Bid to commit the Bid.
 - b. Total monetary value of similar works performed for each of the last seven years.
 - c. Experience in works of a similar nature i.e., Supply, Installation, Testing and Commissioning of Grid Connected Solar Power Project under CAPEX/ PPP model in last 7 years, and details of works completed (with supporting proof as specified in the Bidding Document) or contractually committed with certificates from the concerned officer of the rank of Executive Engineer or equivalent;
 - d. Evidence of ownership of major items of construction equipment named in Clause 4.4.3 (a) of ITB or evidence of arrangement of possessing them on hire/lease/buying as defined therein.
 - e. Details of the technical personnel proposed to be employed for the Contract having the qualifications defined in Clause 4.4.3 (b) of ITB for the construction.
 - f. Reports on the financial standing of the Bidder, such as profit and loss statements and auditor's reports for the past seven years.
 - g. An undertaking that the bidder will be able to invest a minimum amount of up to the percentage (defined in the Appendix to ITB) of the contract price of works, during the implementation of the works,
 - h. Evidence of access to line(s) of credit and availability of other financial resources/ facilities (10 percent of the contract value) certified by banker (the certificate being not more than 3 months old).
 - i. Authority for the Employer to seek references from the Bidder's bankers,
 - j. Information regarding any litigation or arbitration during the last seven years in which the Bidder is involved, the parties concerned, the disputed amount, and the matter,
 - k. Bidders shall provide a declaration stating that they become ineligible if they are found corrupt and fraudulent for their malpractices as defined by Government in accordance with Clause 3.3 ITB.
 - l. The proposed methodology and program of construction, backed with equipment and material planning and deployment, duly supported with broad calculations and Quality Management Plan proposed to be adopted, justifying their capability of execution and completion of the work as per technical specifications and within the stipulated period of completion.
- 4.3. **Bids from Single Bidder or Joint Venture (JV) or Consortium or Association**
 - 4.3.1. In case of Bids from Joint Venture (JV) or Consortium or Association:
 - a. All members shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms. However, the prime responsibility and accountability will rest on the lead partner.

- b. The JV or Consortium or Association shall authorize (through Power of Attorney as per format prescribed at TECH FORM – 2B) the lead partner to conduct all business for and on behalf of any and all the members of the JV or Consortium or Association during the bidding process and, in the event the JV or Consortium or Association is awarded the Contract, during contract execution. The maximum number of members in a JV or Consortium or Association shall be 2 (Two), (i.e., the lead partner plus one member) and the share of the lead member in the JV or Consortium or Association shall not be less than 50%.
- (i) All members of the JV or Consortium or Association put together should satisfy the conditions ITB 4.4.1(a) and 4.4.1(b) as specified under ITB. However, the lead partner shall meet the 100% qualification criteria of either “Technical Qualification” or “Financial Qualification”. The other partner shall accordingly meet the qualification criteria for the remaining works.
 - (ii) In case the lead partner meets the qualification criteria for both “Technical Qualification” or “Financial Qualification”, even then the other partner shall meet not less than 25% of either both “Technical Qualification” or “Financial Qualification”.
 - (iii) No other combination apart from the above is allowed.
- c. All members of Joint Venture (JV) or Consortium or Association shall enter into a Joint Venture Agreement/ Consortium Agreement/ Association Agreement as per format prescribed at TECH FORM – 2A: JV AGREEMENT.
- d. All payments will be made to the lead partner only.
- e. Bidders are encouraged to include Micro, Small and Medium Enterprises (MSMEs) in the delivery of the project. The Bidders are required to submit a MSME inclusion plan in their proposal.
- f. The members of the JV or Consortium or Association shall comply with the requirements stipulated at Clause 3.6 of the ITB.

4.4. Qualifications:

4.4.1. To qualify for award of the Contract, each bidder should have:

Technical Qualification:

- a. Experience of having successfully completed² at least one similar³ works of minimum 30% of the proposed capacity (4.00 MWp) during last 7 years ending last day of month before the one in which applications are invited.

Note: *In case the similar completed works of the bidders happen to be completed in a JV or Consortium or Association, then the extent of works proportionate to the participation of the bidder in that JV or Consortium or Association will be considered.*

Financial Qualification:

- b. Average **annual financial turnover** from construction works should be **at least 30%** of the estimated cost during last 3 financial years (2019-20, 2020-21, 2021-2022) ended on **31st March** of the previous financial year to be supported by certificate by Chartered Accountant

² Only those works will be considered as “completed”, for which either Completion Certificate has been issued by the concerned Competent Authority clearly indicating completion of similar works till last day of month previous to the one in which applications are invited or 90% of the works are completed till last day of month previous to the one in which applications are invited, provided proof of receipt of payment and a certificate from the concerned employer to this effect is produced.

³ “Similar works” will mean implementation / construction of Solar PV generation plant under CAPEX / PPP model in last 7 years including supply, civil works, erection, testing, commissioning, operation and maintenance.

and Audited Annual Accounts for the said period. In case, Audited report of immediate FY2021-22 is not available, a certified copy by Chartered Accountant of unaudited account statement is to be submitted.

- c. The Net Worth⁴ of the Bidder should be positive ending on **31st March** of the previous financial year. Certificate to this effect issued by registered statutory Chartered Accountant should be submitted along with the bid.
- 4.4.2. Each bidder must produce:
- a. Certificate of incorporation / registration, PAN Card, GST registration certificate of the firm,
 - b. Latest ESI, EPF and Group insurance registration certificates.
 - c. Details required as per Form in Section 7 – Forms of Bid and Section 3 – Qualification Information.
 - d. An affidavit that the information furnished with the bid documents is correct in all respects; and
 - e. Such other certificates as defined in the Appendix to ITB. Failure to produce the certificates shall make the bid non-responsive.
- 4.4.3. Each bidder must demonstrate:
- a. Availability for construction work, of the owned, key equipment/machinery for construction of works and laboratory equipment required for to perform mandatory tests as specified in the Appendix to ITB.
 - b. Availability for construction work of technical personnel as stated in the Appendix to ITB.
 - c. Credit facilities, net of other contractual commitments and exclusive of any advance payments which may be made under the Contract, of not less than the amount specified in the Appendix to ITB.
- 4.4.4. The bidder must not have in his employment:
- a. The near relation (defined as first blood relations, and their spouses, of the bidder or the bidder's spouse) of persons listed in Appendix to ITB.
 - b. Without Government permission, any person who retired as gazetted officer within the last two years of the rank and from the departments listed in the Appendix to ITB.
- 4.5. Experience of works undertaken as sub-Contractor shall not be considered in determining the bidder's compliance with the qualifying criteria.
- 4.6. Bidders (JV put together) who meet the minimum qualification criteria will be qualified only if their available bid capacity for construction work is equal to or more than the total bid value. The available bid capacity will be calculated as under:

$$\text{Assessed Available Bid capacity} = (A * N * M - B)$$

Where,

A = Maximum value of civil engineering works executed in any one year during the last seven years (updated to the price level of the last year at the rate of 5 percent a year) taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the works for which bids are invited (period up to 6 months to be taken as half-year and more than 6 months as one year). **M** is as specified in Appendix to ITB.

⁴ Net worth is the difference between total assets and liabilities.

B = Value, at the current price level, of existing commitments and on-going works to be completed during the period of completion of the works for which bids are invited.

Note:

- i. The statements showing the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Engineer in charge, not below the rank of an Executive Engineer or equivalent.
- ii. In the case of a JV or Consortium or Association, the above formula will be applied to each member to the extent of the proposed participation in the JV or Consortium or Association. If the proposed % participation is not mentioned, then equal participation will be assumed.

Example for calculation of bid capacity in case of JV or Consortium or Association

Suppose there are 'P' and 'Q' members of the JV or Consortium or Association with their participation as 70% and 30% respectively and available bid capacity of these members as per above formula individually works out 'X' and 'Y' respectively, then Bid Capacity of the JV or Consortium or Association shall be as under:

$$\text{Bid Capacity of the JV or Consortium or Association} = 0.7X + 0.3Y$$

- 4.7. Even though the bidders meet the above qualifying criteria, they are subject to be disqualified if they have:
- a. Made misleading or false representations in the forms, statements, affidavits, and attachments submitted in proof of the qualification requirements; and/or
 - b. Record of poor performance such as abandoning the works, not properly completing the contract, inordinate delays in completion or financial failures etc.
 - c. Participated in the previous bidding for the same work and had quoted unreasonably high or low bid prices and could not furnish rational justification for it to the Employer.

5. One Bid per Bidder

- 5.1. Each bidder, either as a single applicant or as partner of any JV or Consortium or Association, shall submit only one bid for the work. A Bidder who submits more than one Bid will cause the bids with the Bidder's participation to be disqualified.

6. Cost of Bidding

- 6.1. The Bidder shall bear all costs associated with the preparation and submission of the Bid, and the Employer will, in no case, be responsible or liable for those costs.

7. Site Visits

- 7.1. The Bidder, at own cost, responsibility and risk, is encouraged to visit, examine and familiarize himself with the Site of Works and its surroundings including source of construction materials and obtain all information that may be necessary for preparing the Bid and entering into a contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense. The bidder may contact the person as given in the Appendix to ITB.

B. BIDDING DOCUMENTS

8. Content of Bidding Documents

- 8.1. The set of bidding documents comprises the documents listed below, and addenda issued in accordance with Clause 10 of ITB.

- i. Notice Inviting Tender
 - ii. Instructions to Bidders
 - iii. Qualification Information
 - iv. Conditions of Contract (Part I General Conditions of Contract, and Contract Data; Part II Special Conditions of Contract)
 - v. Scope of Work and Technical Specifications
 - vi. Drawings
 - vii. Forms of Bid
 - viii. Form for Letter of Acceptance
 - ix. Form for Agreement
 - x. Form for Issue of Notice to Proceed with the Work
 - xi. Form for Performance Bank Guarantee.
 - xii. Form for EMD Bank Guarantee
- 8.2. Bid document can be downloaded from the website(s) mentioned under “List of Important Dates”.
- 8.3. The Bidder shall be deemed to have carefully examined the Instructions, conditions of contract, contract data, forms, and drawings in the Bid Document. If bidder has any doubts/clarifications as to the meaning of any portion of the Conditions or the specifications he shall, before the last date for Submission of Pre-Bid Queries, set forth the particulars thereof and submit them to the Employer in writing in order that such doubt may be removed or clarifications are provided. Failure to comply with the requirements of Bid Documents shall be at the bidder’s own risk. Pursuant to Clause 26 of the ITB, bids, which are not substantially responsive to the requirements of the Bid Documents, shall be liable for rejection.

9. Pre-bid meeting & Clarification

9.1. Bidders Queries

- 9.1.1. Any clarification regarding the RFP document and any other item related to this project can be submitted to the Employer as per the submission mode and timelines mentioned in the Fact Sheet. The pre-bid queries should be submitted in excel sheet format, along with name and details of the organization submitting the queries.
- 9.1.2. Employer shall not be responsible for ensuring that the bidders' queries have been received by them. Any requests for clarifications post the indicated date and time shall not be entertained by the Employer.
- 9.1.3. Bidders must submit their queries as per the format specified at FORMAT A:

9.2. Responses to Pre-Bid Queries and Issue of Corrigendum

- 9.2.1. Employer will organize a pre-bid conference and will respond to any request for clarification or modification of the bidding documents. Authority shall formally respond to the pre-bid queries after the pre-bid conference. No further clarifications shall be entertained after the date and time of submission of queries.
- 9.2.2. Employer shall endeavour to provide timely response to all queries. However, Authority makes no representation or warranty as to the completeness or accuracy of any response made in good faith. Authority does not undertake to answer all the queries that have been posed by the bidders.
- 9.2.3. Any modifications of the RFP Documents, which may become necessary as a result of the Pre-Bid Conference, shall be made by the Employer exclusively through a corrigendum. Any such corrigendum shall be deemed to be incorporated into this RFP. However, in case of any such amendment, the bid submission date may be extended at the discretion of Authority.
- 9.2.4. Any corrigendum/notification issued by the Employer, subsequent to issue of RFP, shall only be available/hosted on the website URL mentioned in the fact sheet. Any such corrigendum shall be deemed to be incorporated into this RFP.
- 9.2.5. Non-attendance at the pre-bid meeting will not be a cause for disqualification of a bidder.

10. Amendment of Bidding Documents

- 10.1. Before the deadline for submission of bids, the Employer may modify the bidding documents by issuing corrigenda/addenda.
- 10.2. Any corrigendum or addendum thus issued shall be part of the bidding documents. The same shall be uploaded on the websites/web portals specified in the Bidding Document and no other communication will be made by the Employer to any bidder.
- 10.3. To give prospective bidders reasonable time in which to take an addendum into account in preparing their bids, the Employer shall extend, as necessary, the deadline for submission of bids, in accordance with **Clause 20 of ITB**.

C. PREPARATION OF BIDS

11. Language of Bid

- 11.1. All documents relating to the Bid shall be in the language specified in the APPENDIX TO INSTRUCTIONS TO BIDDERS (ITB).

12. Documents Comprising the Bid

- 12.1. The Bid submitted by the Bidder shall be in two separate parts:

Part I This shall be named Technical Bid to be placed in a sealed envelope as per procedure specified in Clause 19 and shall comprise of:

- i. The Demand Draft for the Tender Fee placed in a separate cover, marked "**Tender Fee**",
- ii. DD/BG/FDR for the Earnest Money in a separate cover marked "Earnest Money";
- iii. Authorized Address and contact details of the bidder having the following information: Address of communication: Telephone No.(s): Office telephone no.: Mobile No.: Facsimile (Fax) No.: Electronic Mail Identification (E-mail ID).
- iv. Qualification information, supporting documents, affidavit and undertaking as specified in **Clause 4 of ITB**.
- v. Undertaking that the bid shall remain valid for the period specified in clause **15 of ITB**.
- vi. Any other information/documents required to be completed and submitted by bidders, as specified in the APPENDIX TO INSTRUCTIONS TO BIDDERS (ITB)
- vii. An affidavit affirming that information that has been furnished by the bidder in the bidding document is correct to the best of his knowledge and belief.
- viii. Power of Attorney by the firm in favour of the authorised signatory for submitting the bid; In case of JV or Consortium or Association, Power of Attorney by the JV firm in favour of the lead partner authorising the lead partner for submitting the bid.
- ix. MoU for JV or Consortium or Agreement, if applicable, as per the prescribed format.
- x. The Technical Bid shall not include any financial information.

Part II. It shall be named Financial Bid to be placed in a sealed envelope as per procedure specified in Clause 19 and shall comprise of:

- i. Form of Bid as specified in Section 7.
- 12.2. Each part shall be separately sealed and marked in accordance with Sealing and Marking instructions in clause 19 of ITB.
- 12.3. The following documents, which are not submitted with the bid, will be deemed to be part of the bid.

SECTION	PARTICULARS
1.	Notice inviting Tender
2.	Instruction to the Bidders
3.	General Conditions of Contract and Special Conditions of Contract
4.	Contract Data
5.	Scope of Work and Technical Specifications
6.	Drawings

13. Bid Prices

- 13.1. The bidder shall submit the Price bid as per the FIN FORM – 1: LETTER OF FINANCIAL BID, Section 7, towards total Price Bid including cost towards A) "Implementation of Solar PV systems" (Supply, Installation, Testing and Commissioning of Grid Connected Solar Power Project including 5 (five) years of Operation and Comprehensive Maintenance Contract) and B) "Civil works" (as provided in 13.2 of ITB).
- 13.2. The bidder shall quote their price as per schedule of items of work. The bid price rates shall be firm and binding and shall not be subject to any variation except for statutory variation of taxes and duties during the contract completion period. The price shall be inclusive of all taxes, duties and levies including GST and 5 years CMC as on the opening date of tender. The price shall also include designing, manufacturing, inspection, supply, transport, insurance, handling etc.

All applicable charges for taking necessary clearance such as commercial tax, road permit etc. wherever required are also deemed to be included in the bid price.

- 13.3. The bid price quoted by the bidder shall be fixed for the duration of the Contract and shall not be subject to adjustment on any account.

14. Currencies of Bid

- 14.1. The prices shall be quoted by the bidder entirely in Indian Rupees (INR).

15. Bid Validity

- 15.1. Bids shall remain valid for a period of **180 days (one hundred and eighty days)** after the deadline date for bid submission specified in **Clause 20 of ITB**. A bid valid for a shorter period shall be rejected by the Employer as non-responsive.
- 15.2. In exceptional circumstances, prior to expiry of the original time limit, the Employer may request that the bidders may extend the period of validity for a specified additional period. The request and the bidders' responses shall be made in writing. A bidder may refuse the request. A bidder agreeing to the request will not be required or permitted to modify his bid but will be required to extend the validity of his bid for a period of the extension, and in compliance with **Clause 16 of ITB** in all respects.

16. Bid Security / Earnest Money Deposit

- 16.1. The Bidder shall furnish, as part of the Bid, Earnest Money of the amount specified in the Appendix to ITB.
- 16.2. The Earnest Money shall, at the Bidder's option, be in the form of DD/FDR/BG of a nationalized bank or scheduled commercial bank, in favour of the name given in the Appendix to ITB. The DD/FDR/BG shall be valid for 180 days from the last date of receipt of bids. The BG for EMD should be in the format prescribed at FORMAT G: EARENST MONEY DEPOSIT/ BID SECURITY BANK GUARANTEE FORMAT. Other forms of Earnest Money acceptable to the Employer are stated in the Appendix to ITB.
- 16.3. Any bid not accompanied by an acceptable Earnest Money, unless exempted in terms given in the Appendix to ITB, shall be rejected by the Employer as non-responsive.
- 16.4. The Earnest Money of unsuccessful bidders will be returned within 28 days of the end of the Bid validity period specified in Clause 15.1 of ITB.
- 16.5. The Earnest Money of the successful Bidder will be discharged when the successful Bidder has signed the Agreement and furnished the required Performance Security.
- 16.6. The Earnest Money may be forfeited:
- a. if the Bidder withdraws the Bid after bid opening (technical bid) during the period of Bid validity;
 - b. in the case of a successful Bidder, if the Bidder fails within the specified time limit to
 - i. sign the Agreement; and/or
 - ii. Furnish the required Performance Security.

- 16.7. **Bid Security/ Earnest Money exemption:** Micro and Small Enterprises (MSEs) as defined in MSE Procurement Policy issued by Department of Micro, Small and Medium Enterprises (MSME) or are registered with the Central Purchase Organisation or the concerned Ministry or Department shall be exempted from the submission of bid security. The bidder is required to submit documentary evidence indicating its registration(s) with relevant Ministry or Department in this regard.

17. Alternative Proposals by Bidders

- 17.1. Bidders shall submit offers that comply with the requirements of the bidding documents, including the Bill of Quantities and the basic technical design as indicated in the drawings and specifications. Alternative proposals will be **rejected as non-responsive**.

18. Format and Signing of Bid

- 18.1. All pages of the Technical and Financial Bid shall be duly signed and sealed by the Bidder or authorized signatory on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the Bidding Document and shall be attached to the Bid.
- 18.2. The bid shall contain no alterations or additions, except those to comply with instructions issued by the Employer, or as necessary to correct errors made by the bidder, in which case such corrections shall be initialled by the person signing the Tender.

19. Sealing and Marking of Bids

- 19.1. The bidder shall **number, sign and seal** every page of the Bid.
- 19.2. If every page is not signed and sealed, the Bids may be liable for rejection.
- 19.3. The **Original Bids** (Technical Bid and Financial Bid) shall be prepared in indelible ink. Any corrections must be initialled by the person or persons who have been duly authorized.
- 19.4. **Technical Bid**, including **original** and **one copy** shall be placed in a sealed envelope clearly marked "**Technical Bid**" and the **Original Financial Bid** in a sealed envelope clearly marked "**Financial Bid**" and **warning: "Do not open with the Technical Proposal."** **Technical (Original & One Copy)** and **Financial (Original)** envelopes shall be placed into an **outer envelope and sealed**. This outer envelope shall bear the title "**Technical and Financial Proposal**", sealed and clearly showing the name of the assignment and the address of the Bidder, so that it can be returned unopened in case of late or withdrawn bids.
- 19.5. In the event of any discrepancy between the original and the copy of Technical Proposal, the original shall prevail.
- 19.6. Any financial bid received in any other form apart from the above shall make the Bid liable for rejection.

D. SUBMISSION OF BIDS

20. Deadline for Submission of Bids

- 20.1. Bids consisting of **one (1) original plus one (1) copy of Technical Proposal** and **one (1) Original Financial Proposal** must be submitted in sealed envelope in the Tender Box maintained at the address and on or before the date and time as specified in the NIT.
- 20.2. The Envelope must indicate the **name and address of the Bidder** to enable the Bid to be returned unopened in case it is declared as received after the due date and time or otherwise unacceptable.
- 20.3. In the event of the specified date for the submission of bids being declared a holiday for the Employer, the Bids will be received up to the specified time on the next working day.
- 20.4. The Employer *may extend the deadline for submission of bids* by issuing an amendment in accordance with **Clause 10.3 of ITB**, in which case all rights and obligations of the Employer

and the bidders previously subject to the original deadline will then be subject to the new deadline.

21. Late Bids

- 21.1. The Bidders shall not be allowed to submit the Bids after the date & time of deadline for submission of Bids.

22. Withdrawal, Substitution and Modification of Tender

- 22.1. A Bidder may withdraw, substitute, or modify its Tender only before the last date of submission.
- 22.2. A written Withdrawal/Substitutions/Modifications etc. Notice duly signed by the Bidder or his authorized representative and shall include a copy of the authorization. The corresponding Withdrawal, Substitution or Modification of the Tender must accompany the respective written Notice.
- 22.3. All Notices must be received by the Employer prior to the deadline specified for submission of Tender in accordance with Clause 20 of the ITB.
- 22.4. No Withdrawal and/or Substitution and/or Modification are permitted after last date of submission.
- 22.5. Withdrawal, Substitution, or modification of a Tender between the deadline for submission of Tender and the expiration of the original period of Tender validity specified in Clause 15.1 above or as extended pursuant to Clause 15.2 may result in the forfeiture of the Earnest Money Deposit pursuant to Clause 16 of ITB and the suspension of the Bidder for a period of one (1) year in all projects by Shillong Smart City Limited.

E. BID OPENING AND EVALUATION

23. Bid Opening

- 23.1. The Employer will open the Technical Bids of all the Tenders received (*except those received late or withdrawn*), including modifications made pursuant to Clause 22, in the presence of the bidders or their representatives who choose to attend at the date, time and the place specified in respective Clause(s). In the event of the specified date of Tender opening being declared a holiday for the Employer, the Tenders will be opened at the appointed time and location on the next working day.
- 23.2. Bids which have been **“WITHDRAWN”** through notice of withdrawal (*pursuant to Clause 22 above*) shall be read out first.
- 23.3. The Bidder’s Names, the presence or absence of Tender Fee, Bid Security Declaration, the submission of qualification information and such other information as the Employer may consider appropriate will be announced by the Employer at the opening. Late and withdrawn Tenders will not be opened.
- 23.4. The Employer shall prepare minutes of the Tender opening, including the information disclosed to those present in accordance with Clause 23.3.
- 23.5. The Employer will evaluate and determine whether each tender
- meets the eligibility criteria defined in ITB Clause 3;
 - is accompanied by the required Tender Fee and Bid Security Declaration as per stipulations in ITB Clause 16; and
 - meets the minimum qualification criteria stipulated in ITB Clause 4. The Employer will draw out a list of qualified Tenderers.
- 23.6. Financial Bids shall be kept unopened until the time of opening of the Financial Bids. The date, time, and location of opening of the Financial Bids shall be intimated to the bidders who are found qualified. In the event of the specified date being declared a holiday for the Employer,

the bids will be opened at the appointed time and location on the next working day through they or their representative, may attend the meeting of opening of financial bids.

- 23.7. At the time of the opening of the **“Financial Bid”**, only those bids found responsive and technically qualified will be opened. The remaining bids will not be opened. The responsive bidders’ names, the Bid prices, the total amount of each bid, and such other details as the Employer may consider appropriate will be announced by the Employer at the time of bid opening. Any Bid price, which is not read out and recorded, will not be considered in Bid Evaluation.
- 23.8. The Employer shall prepare the minutes of the opening of the **Financial Bids**.

24. Process to be Confidential

- 24.1. Information relating to the examination, clarification, evaluation, and comparison of Tenders and recommendations for the award of a contract shall not be disclosed to bidders or any other persons not officially concerned with such process until the award to the successful bidder has been announced. Any effort by a bidder to influence the Employer's processing of Tenders or award decisions may result in the rejection of his Tender.

25. Clarification of Bids and Contacting the Employer

- 25.1. To assist in the examination and evaluation of Tenders, the Employer may, at his discretion, ask any bidder for clarification of his Technical Bid. The request for clarification and the response shall be in writing (letter/email). If a bidder does not provide clarifications of its Tender by the date and time set in the Employer's request for clarification, its Bid may be rejected by the Employer.
- 25.2. No Bidder shall contact the Employer on any matter relating to its bid from the time of the bid opening to the time the contract is awarded.
- 25.3. Any attempt by the bidder to influence the Employer's bid evaluation, bid comparison or contract award decision may result in the rejection of his bid.

26. Examination of Bids and Determination of Responsiveness

- 26.1. During the detailed evaluation of “Technical Bids”, the Employer will determine whether each
- Bid meets the eligibility criteria defined in Clauses 3 and 4,
 - Bid has been properly signed and sealed,
 - Bid is accompanied by the required Tender Fee and Bid Security Declaration; and
 - Bid is responsive to the requirements of the bidding documents.
- 26.2. During the detailed evaluation of the **“Financial Bids”**, the responsiveness of the bids will be further determined with respect to the remaining bid conditions, i.e., technical specifications, and drawings.
- 26.3. A responsive “Financial Bid” is one that conforms to all the terms, conditions, and specifications of the bidding documents, without material deviation or reservation. A material deviation or reservation is one
- which affects in any substantial way the scope, quality, or performance of the Works,
 - which limits in any substantial way, inconsistent with the bidding documents, the Employer's rights, or the Bidder's obligations under the Contract; or
 - whose rectification would affect unfairly the competitive position of other bidders presenting substantially responsive bids.
- 26.4. If a **“Financial Bid”** is not substantially responsive, it will be rejected by the Employer, and may not subsequently be made responsive by correction or withdrawal of the nonconforming deviation or reservation.

27. Correction of Errors

- 27.1. Tenders determined to be responsive will be checked by the Employer for any arithmetic errors. Errors will be corrected by the Employer as follows:
- a. If a discrepancy is found in the rates written in figures and words, the rates which correspond with the amount worked out by the Contractor shall unless otherwise proved be taken as correct.
 - b. If the amount of an item is not worked out by the Contractor or it does not correspond with the rates written either in figures or in words, then the rates quoted by the Contractor in words shall be taken as correct.
 - c. Where the rates quoted by the Contractor in figures and in words tally, but the amount is not worked out correctly, the rates quoted by the Contractor will unless otherwise proved be taken as correct and not the amount.
 - d. In event no rate has been quoted for any item(s), leaving space both in figure(s), word(s), and amount blank, it will be presumed that the Contractor has included the cost of this/these item(s) in other items and rate for such item(s) will be considered as zero and work will be required to be executed accordingly.
- 27.2. The amount stated in the Tender will be adjusted by the Employer in accordance with the above procedure for the correction of errors and, with the concurrence of the bidder, shall be considered as binding upon the bidder. If the bidder does not accept the corrected amount, the Tender will be rejected, and necessary action in accordance with Clause 22 of ITB may be taken by the Employer.

28. Evaluation and Comparison of Bids

- 28.1. The Employer will evaluate and compare only the bids determined to be responsive in accordance with Clause 26 of ITB. Evaluation will be carried out in accordance with the criteria as specified in the Appendix to ITB.
- 28.2. In evaluating the bids, the Employer will determine for each Bid the evaluated Bid price by adjusting the Bid price by making correction, if any, for errors pursuant to **Clause 27 of ITB**.
- 28.3. In case the Bid of the successful Bidder is "Abnormally Low Bid", i.e. a Bid in which the bid price, in combination with other elements of the Bid, appears so low that raises material concerns as to the capability of the bidder to perform the contract at the offered price, the Employer may in such cases seek written clarifications from the bidder, including detailed price analyses of its bid price in relation to scope, schedule, allocation of risks and responsibilities, and any other requirements of the bids document. If, after evaluating the price analyses, the Employer determines that the bidder has substantially failed to demonstrate its capability to deliver the contract at the offered price, the Employer may reject the bid.

29. Price Preference

- 29.1. There will be no price preference to any bidder.

F. AWARD OF CONTRACT

30. Award Criteria

- 30.1. Subject to Clause 32 of ITB, the Employer will award the Contract to the Bidder on following basis:
- 30.1.1. The bidder will be initially evaluated for Minimum Eligibility Criteria, which are mandatory to qualify. Bidders who do not qualify will be summarily rejected and will not be further evaluated. The bidder who qualifies **Minimum Eligibility Criteria** will be further evaluated for **Technical Scores (TS)**. The bidders who qualify the Minimum **Technical Score of 70** as per criteria

specified in Appendix to ITB will be finally qualified. The Financial Bids of technically qualified bidders will only be opened.

30.1.2. Method of selection and determination of successful financial bid as specified in Appendix to ITB.

31. Employer's Right to Accept any Bid and to Reject any or all Bids

31.1. Notwithstanding Clause 30 above, the Employer reserves the right to accept or reject any or all the Bids, and to cancel the bidding process and reject all bids, at any time prior to the award of Contract, without thereby incurring any liability to the affected Bidder or bidders or any obligation to inform the affected Bidder or bidders of the grounds for the Employer's action.

31.2. The employer reserves the right of accepting the bid for the whole work or for a distinct part of it.

32. Notification of Award and Signing of Agreement

32.1. The bidder whose Bid has been accepted will be notified of the award by the Employer prior to expiration of the Bid validity period by letter/email. This letter (hereinafter and in the **Part I General Conditions of Contract** called the "**Letter of Acceptance**") will state the sum that the Employer will pay to the Contractor in consideration of the execution, completion by the Contractor as prescribed by the Contract (hereinafter and in the Contract called the "**Contract Price**").

32.2. The notification of award will constitute the formation of the Contract, subject only to the furnishing of a performance security in accordance with the provisions of Clause 33.

32.3. The Agreement will incorporate all agreements between the Employer and the successful Bidder. It will be signed by the Employer and the successful Bidder after the performance security is furnished.

32.4. Upon the furnishing by the successful Bidder of the Performance Security, the Employer will promptly notify the other Bidders that their Bids have been unsuccessful.

33. Performance Security

33.1. Within **10 (ten) days** after receipt of the **Letter of Acceptance**, the successful Bidder shall deliver to the Employer a **Performance Security towards Construction of Works of three percent (03%)** of the Contract Price. The period of these Performance Security will be as specified in *Clause 43 and 46* of General Conditions of Contract.

33.2. The **Performance Security** shall be either in the form of a **Bank Guarantee, in favour of Chief Executive Officer, Shillong Smart City Limited payable at Shillong, Meghalaya**, from a Nationalized Bank or Scheduled Commercial Bank in the format prescribed at FORMAT F: PERFORMANCE BANK GUARANTEE FORMAT.

33.3. Failure of the successful Bidder to comply with the requirements of Clause 33.1 shall constitute sufficient grounds for cancellation of the award and suspension of the Bidder for a period of one (1) year in all projects by the Shillong Smart City Limited.

34. Advances

34.1. The Employer will provide mobilization advances and advance against security of equipment as provided in Clause 45 of *Part I of the General Conditions of Contract*.

35. Corrupt or Fraudulent Practices

35.1. The Employer requires the bidders/Contractors to strictly observe the laws against fraud and corruption in force in India, namely, *Prevention of Corruption Act, 1988*.

35.2. The Bidder shall furnish an Integrity Pact as per Tech Form 11.

APPENDIX TO INSTRUCTIONS TO BIDDERS (ITB)

Instructions to Bidders Clause Reference																																																											
(1.1)	Name of the work: Grid connected Roof Top Solar Photo-Voltaic system for various buildings in Shillong, East Khasi Hills District, Meghalaya Identification Number of the work: SSCL/Tender/2020-21/MEG-SHI-12																																																										
(3.2)	The eligible bidders are: <i>All bidders registered with Central/State Government Ministries/Departments/Organizations and meeting the eligibility criteria</i>																																																										
(4.2) (g)	The percentage is Ten																																																										
(4.4.2) (e)	Other certificates required with the bid are: None																																																										
(4.4.3) (a)	<p>A) The key equipment/machinery for construction of works shall be:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2" style="text-align: center;">SN</th> <th rowspan="2" style="text-align: center;">Name of the Equipment</th> <th rowspan="2" style="text-align: center;">Capacity</th> <th rowspan="2" style="text-align: center;">Unit</th> <th style="text-align: center;">Minimum Required (Evidence of Ownership to be furnished)</th> <th rowspan="2" style="text-align: center;">Total</th> </tr> <tr> <th style="text-align: center;">Owned / Leased/Hired</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Reinforcement cutting and Bending Machine</td> <td style="text-align: center;">As required</td> <td style="text-align: center;">Nos</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Welding Machine</td> <td style="text-align: center;">As required</td> <td style="text-align: center;">Nos</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Materials lifting equipment</td> <td style="text-align: center;">Rope pully/ Tower Crane</td> <td style="text-align: center;">Nos</td> <td style="text-align: center;">1</td> <td style="text-align: center;">1</td> </tr> <tr> <td style="text-align: center;">4</td> <td>Safety Equipment for personnel</td> <td style="text-align: center;">As per legal requirement</td> <td style="text-align: center;">Nos.</td> <td style="text-align: center;">As Required</td> <td></td> </tr> <tr> <td style="text-align: center;">5</td> <td>Trucks/ Tippers</td> <td style="text-align: center;">As required</td> <td style="text-align: center;">Nos</td> <td style="text-align: center;">2</td> <td style="text-align: center;">2</td> </tr> </tbody> </table> <p>B) Equipment for testing of materials & concrete at site laboratory (to be established at a location within the limit of Shillong Municipal Board)</p> <p>(Note: The number of laboratory equipment however as per requirement it can be increased)</p> <p>All necessary equipment for conducting all necessary tests shall be provided at the site laboratory by the contractor at his own cost. The following minimum laboratory equipment shall be set up at site office (land is to be arranged by the Contractor) laboratory:</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;">Sl. No.</th> <th style="text-align: center;">Name of the Laboratory Equipment</th> <th style="text-align: center;">Minimum numbers required</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>Insulation Resistance Tester</td> <td style="text-align: center;">01 No</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Digital Multi-meter</td> <td style="text-align: center;">02 No</td> </tr> <tr> <td style="text-align: center;">3</td> <td>Clamp Meter</td> <td style="text-align: center;">02 No</td> </tr> <tr> <td style="text-align: center;">4</td> <td>Solar Power & Thermal Tester</td> <td style="text-align: center;">01 No</td> </tr> <tr> <td style="text-align: center;">5</td> <td>Infrared camera</td> <td style="text-align: center;">01 No</td> </tr> <tr> <td style="text-align: center;">6</td> <td>Irradiance or Pyranometer</td> <td style="text-align: center;">02 Nos</td> </tr> </tbody> </table>	SN	Name of the Equipment	Capacity	Unit	Minimum Required (Evidence of Ownership to be furnished)	Total	Owned / Leased/Hired	1	Reinforcement cutting and Bending Machine	As required	Nos	1	1	2	Welding Machine	As required	Nos	1	1	3	Materials lifting equipment	Rope pully/ Tower Crane	Nos	1	1	4	Safety Equipment for personnel	As per legal requirement	Nos.	As Required		5	Trucks/ Tippers	As required	Nos	2	2	Sl. No.	Name of the Laboratory Equipment	Minimum numbers required	1	Insulation Resistance Tester	01 No	2	Digital Multi-meter	02 No	3	Clamp Meter	02 No	4	Solar Power & Thermal Tester	01 No	5	Infrared camera	01 No	6	Irradiance or Pyranometer	02 Nos
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	7	PV Fault Analyzer	01 Nos		
All relevant IS codes, CPWD manual, specifications, schedule of rates, etc in hard as well as soft copy shall be made available at site by the Contractor at his own cost.					
(4.4.3) (b)	SN	Position	Minimum Number of Staff	Minimum Qualification	Total Work Experience (years)
	1	Project Manager Cum Solar Expert	1	Graduate Degree with 10 years of experience or Post Graduate degree in Civil/ Electrical/ Environment Engineering with 7 years of experience after post-graduation.	10 or 7 as specified
	2	Electrical Engineer	1	Degree with 5 years of experience or Diploma in Electrical Engineering with 7 years of experience	5 or 7 as specified
	3	Civil Engineer	2	Degree with 7 years of experience or Diploma with 10 years of in Civil Engineering	7 or 10 as specified
As proof of employment of Technical Personnel, the Bidders would require to furnish an Affidavit on non-judicial Stamp Paper certifying employment of the above-mentioned personnel with the organization for the preceding one year ending on the last day of the month previous to the one in which bids are invited. The Bidders may add additional manpower as per requirement. CVs for the above positions will be evaluated as per criteria given in this Appendix to ITB.					
(4.4.3) (c)	The minimum amount of credit facilities net of other contractual commitments of the successful Bidder shall be 10% of the contract value.				
(4.4.4) (a)	The bidder must produce an affidavit stating that the near relations of the following departmental officers are not in his employment: Any staffs under SSCL, Urban Affairs Department (UAD) and all Authorities/Agencies under its jurisdiction or control, and the Project Management Consultants (PMC) for Shillong Smart City Limited				
(4.4.4) (b)	The bidder must produce an affidavit stating that no retired gazetted officer is in employment who retired within the last two years (starting from the date of submission of Bids) from the departments listed below: SSCL, UAD and all Authorities/Agencies under its jurisdiction or control, PWD, SMB and the PMC for Shillong Smart City Limited.				

	In case there is no such person in his employment, his affidavit should clearly state this fact.																		
(4.6)	M=2.5																		
(7.1)	The contact person is: Chief Executive Officer (CEO) Shillong Smart City Limited House No. C/B-037, Top Floor, Centre Nongrim Hills, Near JJ Cables, Shillong, East Khasi Hills District, Meghalaya - 793003																		
(11.1)	Language of the bid is: English																		
(12.1) Part I (vi)	The other documents required are: NONE																		
(13.1)	The bidder shall submit price bid in overall percentage rate, and not item wise on Bill of Quantities.																		
(16.1)	The amount of Earnest Money Deposit: Rs. 53.50 Lakhs (Rupees Fifty-Three Lakhs Fifty Thousand Only)																		
(30.1.1)	Technical Evaluation Criteria																		
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SN	Position	Marking criteria	
1.	Project Manager Cum Solar Expert	Total marks: 10 <i>Educational qualification: 3</i> <ul style="list-style-type: none"> • Post-graduation: 3 • Graduation: 2 <i>Professional experience: 5</i> <ul style="list-style-type: none"> • >15 years: 5 • >=10 years to 15 years: 4 • >=7 years to 9 years: 3 <i>Experience in Similar Geography (i.e., North East India J&K, Ladakh, Uttarakhand and Himachal Pradesh): 2</i> <ul style="list-style-type: none"> • Greater than 3 years: 2 • Less than 3 years: 1 	
2.	Electrical Engineer	Total marks: 5 <i>Educational qualification: 1.5</i> <ul style="list-style-type: none"> • Graduation: 1.5 • Diploma: 1.0 <i>Professional experience: 3.5</i> <ul style="list-style-type: none"> • >10 years: 3.5 • >7 years to 10 years: 2.5 • >=5 years to 7 years: 1.5 	
3.	Civil Engineer	Total marks: 5 <i>Educational qualification: 1.5</i> <ul style="list-style-type: none"> • Graduation: 1.5 • Diploma: 1.0 <i>Professional experience: 3.5</i> <ul style="list-style-type: none"> • >10 years: 3.5 • >7 years to 10 years: 2.5 • >=5 years to 7 years: 1.5 	
Average Annual Turnover from construction works of the Firm for Last 3 financial years ending on 31st March of the previous year a) >=100% of estimated cost and above: 20 marks b) 50% to 99.99% of estimated cost: 15 marks c) 30% to 49.99% of estimated cost: 10 marks			20
Total Marks			100
(30.1.2)	Method of selection shall be Least Cost Based Selection (LCS) . The bid with least cost quoted by the bidder in FIN FORM 1: LETTER OF FINANCIAL BID, Section 7 towards the Works (Including 5 years of Comprehensive Maintenance Contract) as described in Clause 1 of ITB shall be the winning bid. Note: In case the lowest amount amongst the financial bids between two or more bidders amounts to same, then the bidder with highest technical score as per clause 30.1.1 of ITB shall be the winning bidder.		

Signature of Employer / Authorized Signatory
Date:

SECTION 3

QUALIFICATION INFORMATION

The information to be filled in by bidders in the following pages will be used for evaluation as provided for in Clause 4 of the Instructions to Bidders. This information will not be incorporated in the Contract. Attach additional pages, as necessary.

- 1.1 Constitution or legal status of Tenderer, Place of Registration, Principal place of business and other details in the format provided as Bidder information sheet at **Tech Form 2**.
- 1.2 **Financial reports** for the last three years: balance sheets, profit and loss statements, auditors' reports, etc. duly certified by registered statutory Chartered Accountant shall be submitted. In addition, the summarized financial information in the format provided at **Tech Form 3A**. Also, **Tech Form 3B certified** by Chartered Accountant to show Average Annual Turnover.
- 1.3 Evidence of access to lines of credit, etc. will be provided in the format provided at **Tech Form 4B**.
- 1.4 Solvency certificate will be provided in the format provided at **Tech Form 4C**.
- 1.5 Name, address, and telephone, telex, and facsimile numbers of banks that may provide references if contacted by the Employer.
- 1.6 Information on **on-going works** that are yet to be completed as on the date of this Tender in the format provided at **Tech Form 5**.
- 1.7 Bidder's experience of execution of the similar works (Supply, Installation, Testing and Commissioning of Grid Connected Solar Power Project under CAPEX/ PPP model in last Seven (7) years) in the format provided at **Tech Form 7**. Separate forms for each of the member, if in JV/ Association/Consortium.
- 1.8 Details of the specific project/ work performed on works of similar nature over during the last 10 (Ten) years specified in **1.7** above in the format provided at **Tech Form 7A**.
- 1.9 The **Proposed Approach & Methodology** and **program of construction**, backed with equipment planning and deployment, duly supported with broad calculations and quality control procedures proposed to be adopted, justifying their capability of execution and completion of the work as per technical specifications within the stipulated period of completion as per milestones in the format provided at **Tech Form 8 (A-D)**.
- 1.10 The equipment specified in **Clause 4.4.3 (a)** of the ITB are considered essential for successfully carrying out the works. The Tenderer should furnish the information in the format provided at **Tech Form 8E**.
- 1.11 The Personnel specified in **Clause 4.4.3 (b)** of the ITB are considered essential for successfully carrying out the works. The Tenderer should furnish the information in the format provided at **Tech Form 8F**. The detailed resume of professionals is to be provided at Tech Form 8F(i).
- 1.12 Information on current litigation in which the bidder is involved in the format provided at **Tech Form 9**.
- 1.13 The bidder has to submit a declaration for not being Blacklisted / Debarred in the format provided at Tech Form 10.
- 1.14 Undertaking cum certificate as specified in Clause 3.6 of ITB to be provided in the format provided at Tech Form 12.

SECTION 4

PART I GENERAL CONDITIONS OF CONTRACT (GCC)

A. GENERAL

1. Definitions

1.1. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:

- i. **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid.
- ii. **Compensation Events** are those defined in **Clause 40** hereunder.
- iii. The **Completion Date** is the date of completion of the Works as certified by the **Engineer**, in accordance with **Clause 48.1 of GCC**.
- iv. The **Operation and Comprehensive Maintenance Contract** Period is five years calculated from the Commissioning of the project.
- v. The **Contract** is the Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in **Clause 2.3**.
- vi. The **Contractor** is a person or corporate body or a Joint Venture who's Bid to carry out the Works, including routine maintenance, has been accepted by the Employer.
- vii. The **Contractor's Bid** is the completed bidding document submitted by the Contractor to the Employer.
- viii. The **Contract Data** defines the documents and other information, which comprise the Contract.
- ix. The **Contract period** shall be from the date of issue of Notice to Proceed to the completion of the Operation and Comprehensive Maintenance Period of five (5) years for the entire scope of works.
- x. The **Contract Price** is the price stated in the Letter of Acceptance and thereafter as adjusted in accordance with the provisions of the Contract.
- xi. **Days** are calendar days; months are calendar months.
- xii. A **Defect** is any part of the Works not completed in accordance with the Contract.
- xiii. **Drawings** include calculations and other information provided or approved by the Engineer for the execution of the Contract.
- xiv. The **Employer** is the party as defined in the **Contract Data**, who employs the Contractor to carry out the Works. The Employer may delegate any or all functions to a person or body nominated by him for specified functions.
- xv. The **Engineer** is the Employer or his authorized representative.
- xvi. **Equipment** is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.
- xvii. The **Initial Contract Price** is the Contract Price listed in the Employer's Letter of Acceptance.
- xviii. The **Intended Completion Date** is as specified in the Contract Data. The Intended Completion Date may be revised only by the Engineer by issuing an extension of time.
- xix. **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- xx. **The Site** is the area defined as such in the Contract Data.
- xxi. **Site Investigation Reports** are those that were included in the bidding documents and are reports about the surface and subsurface conditions at the Site.

- xxii. **Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Engineer.
- xxiii. The **Start Date** is given in the Contract Data. It is the date when the Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.
- xxiv. A **Sub-Contractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the construction work in the Contract, which includes work on the Site.
- xxv. **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.
- xxvi. A **Variation** is an instruction given by the Engineer, which varies the Works.
- xxvii. The **Works**, as defined in the Contract Data, are what the Contract requires the Contractor to construct, install, maintain, and turn over to the Employer. Routine maintenance is defined separately.
- xxviii. **Plant** is any integral part of the Works that shall have a mechanical, electrical, electronic, chemical, or biological function.

2. Interpretation

- 2.1 In interpreting these Conditions of Contract, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Engineer will provide instructions clarifying queries about these Conditions of Contract.
- 2.2 If sectional completion is specified in the Contract Data, references in the Conditions of Contract to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 2.3 The documents forming the Contract shall be interpreted in the following order of priority:
 - i. Agreement,
 - ii. Notice to Proceed with the Work,
 - iii. Letter of Acceptance,
 - iv. Contractor's Bid,
 - v. Contract Data,
 - vi. Special Conditions of Contract Part II,
 - vii. General Conditions of Contract Part I,
 - viii. Scope of Work and Technical Specifications,
 - ix. Drawings, and
 - x. Any other document listed in the Contract Data.

3. Language and Law

- 3.1. The language of the Contract and the law governing the Contract are stated in the Contract Data.

4. Engineer's Decisions

- 4.1. Except where otherwise specifically stated, the Engineer will decide contractual matters between the Employer and the Contractor in the role representing the Employer. However, if the Engineer is required under the rules and regulations and orders of the Employer to obtain approval of some other authorities for specific actions, he will so obtain the approval.
- 4.2. Except as expressly stated in the Contract, the Engineer shall not have any authority to relieve the Contractor of any of his obligations under the contract.

5. Delegation

- 5.1. The Engineer, with the approval of the Employer, may delegate any of his duties and responsibilities to other people, after notifying the Contractor, and may cancel any delegation after notifying the Contractor.

6. Communications

- 6.1. All Certificate, notices, or instructions to be given to the Contractor by Employer / Engineer shall be sent on the address or contact details given by the Contractor in Section 7 - Form of Bid. The address and contact details for communication with the Employer/ Engineer shall be as per the details given Contract Data to GCC. Communications between parties that are referred to in the conditions shall be in writing. The Notice sent by Facsimile (fax) or other electronic means shall be effective on confirmation of the transmission. The Notice sent by Registered post or Speed post shall be effective on delivery or at the expiry of the normal delivery period as undertaken by the postal service.

7. Subcontracting

- 7.1. No sub-contracting is allowed.

8. Other Contractors

- 8.1. The Contractor shall co-operate and share the site with other Contractors. Public authorities' utilities, and the Employer between the dates given in the schedule of other Contractors, as referred to in the contract data. The Contractor shall also provide facilities and services for them as described in the schedule. The Employer may modify the schedule of other Contractor and shall notify the Contractor of any such modification.
- 8.2. The Contractor should take up the work in convenient reaches as decided by the Engineer to ensure there is least hindrance to the smooth flow of traffic including movement of vehicles and equipment of other Contractors till the completion of the works.

9. Personnel

- 9.1. The Contractor shall employ for the construction work and routine maintenance the technical personnel named in the Appendix to ITB or other technical persons approved by the Engineer. The Engineer will approve any proposed replacement of technical personnel only if their relevant qualifications and abilities are substantially equal to or better than those of the personnel stated in the Contract Data.
- 9.2. If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the Works in the Contract.
- 9.3. The Contractor shall not employ any retired Gazetted officer who has worked in the Engineering Department of the State Government and has either not completed two years after the date of retirement or has not obtained State Government's permission to employment with the Contractor.

10. Employer's and Contractor's Risks

- 10.1. The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks that this Contract states are Contractor's risks.

11. Employer's Risks

- 11.1. The Employer is responsible for the excepted risks which are (a) to provide drawings; b) provide hindrance/encumbrance free site; and (c) financing the project.

12. Contractor's Risks

12.1. All other risks not covered under Clause 11.1 are the Contractor's risks.

13. Insurance

13.1. The Contractor at his cost shall provide, in the joint names of the Employer and the Contractor, insurance cover from the Start Date to the date of completion of entire work including Construction stage and Operation & Comprehensive Maintenance Period, in the amounts and deductibles stated in the Contract Data for the following events which are due to the Contractor's risks:

- a. loss of or damage to the Works, Plant and Materials occurring on account of Force Majeure, Malicious Act, Accidental Damage, Explosion, Fire, Terrorism etc.,
- b. loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
- c. Personal injury or death.

13.2. Insurance policies and certificates for insurance shall be delivered by the Contractor to the Engineer for the Engineer's approval before the Start Date or any other date approved by the Engineer-in-Charge. All such insurance shall provide for compensation to be payable in Indian Rupees to rectify the loss or damage incurred.

13.3. Alterations to the terms of insurance shall not be made without the approval of the Engineer.

13.4. Both parties shall comply with any conditions of the insurance policies.

14. Site Investigation Reports

14.1. The Contractor, in preparing the Bid, may rely on any Site Investigation Reports referred to in the Contract Data, supplemented by any other information available to him, before submitting the bid.

15. Queries about the Contract Data

15.1. The Engineer will clarify queries on the Contract Data.

16. Contractor to Construct the Works

16.1. The Contractor shall construct and install the Works in accordance with the Specifications and RFP Conditions.

16.2. The Contractor shall construct the works by using the equipment as specified (but not limited to) in the Contract Data to ensure the quality of works as per specifications.

17. The Works to be completed by the Intended Completion Date

17.1. The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Engineer, and complete them by the Intended Completion Date.

18. Approval by the Engineer

18.1. The Contractor shall submit Specifications and Drawings showing the proposed Temporary Works to the Engineer, who is to approve them.

18.2. The Contractor shall be responsible for design of Temporary Works.

18.3. The Engineer's approval shall not alter the Contractor's responsibility for design of the Temporary Works.

18.4. The Contractor shall obtain approval of third parties to the design of the Temporary Works, where required.

18.5. All Drawings prepared by the Contractor for the execution of the temporary or permanent Works, are subject to prior approval by the Engineer before their use.

19. Safety

19.1. The Contractor shall be fully responsible for the safety of all activities on the Site.

20. Discoveries

20.1. Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

21. Possession of the Site

21.1. The Employer shall handover complete or part possession of the site to the Contractor 7 days in advance of construction program.

22. Access to the Site

22.1. The Contractor shall allow access to the Site and to any place where work in connection with the Contract is being carried out, or is intended to be carried out to the engineer and any person/persons/agency authorized by:

- a. The Engineer
- b. The Employer
- c. The Ministry of Housing and Urban Affairs, Government of India.
- d. Department of Urban Affairs (DUA), Govt. of Meghalaya;
- e. Shillong Municipal Board (SMB)
- f. Project Management Consultant for Shillong Smart City project
- g. Any other person/agency authorised by the Employer.

23. Instructions

23.1. The Contractor shall carry out all instructions of the Engineer, which comply with the applicable laws where the Site is located.

24. Dispute Redressal System

24.1. If any dispute or difference of any kind what-so-ever shall arise in connection with or arising out of this Contract or the execution of Works, whether before its commencement or during the progress of Works or after the termination, abandonment or breach of the Contract, it shall, in the first instance, be referred for settlement to the Competent Authority (As appointed by Urban Affairs Department, Government of Meghalaya). The Competent Authority shall, within a period of forty-five days after being requested in writing by the Contractor to do so, convey his decision to the Contractor. Such decision in respect of every matter so referred shall, subject to review as hereinafter provided, be final and binding upon the Contractor. In case the Works is already in progress, the Contractor shall proceed with the execution of the Works, including maintenance thereof if applicable, pending receipt of the decision of the competent authority as aforesaid, with all due diligence.

24.2. Either party will have the right of appeal, against the decision of the Competent Authority, to the Court of Law in Shillong, Meghalaya, India, if the amount appealed exceeds 5% of the contract price.

25. Procedure for Resolution of Disputes

25.1. The Competent Authority mentioned in clause 24.1 shall give a decision in writing within 45 days of receipt of a notification of a dispute.

25.2. Either party may refer a decision of the Competent Authority to a Court of Law in Shillong, Meghalaya, India within 28 days of the Competent Authority's written decision.

- 25.3. Performance under the contract shall continue even after reference to the Court of Law and payments due to the Contractor by the Employer shall not be withheld unless they are the subject matter of the Court proceedings.

B. TIME CONTROL

26. Programme

- 26.1. Within the time stated in the Contract Data, the Contractor shall submit to the Engineer for approval a Program showing the general methods, arrangements, order, and timing for all the activities in the Works, along with monthly cash flow forecasts for the construction of works.
- 26.2. The Contractor shall submit the list of equipment and machinery being brought to site, the list of key personnel being deployed, the list of machinery/ equipment being placed in field laboratory and the location of field laboratory along with the Program. The Engineer shall cause these details to be verified at each appropriate stage of the program.
- 26.3. An update of the Program shall be a program showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining Works, including any changes to the sequence of the activities.
- 26.4. The Contractor shall submit to the Engineer for approval an updated Program at intervals of 30 Days no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Program within this period, the Engineer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Program has been submitted.
- 26.5. The Engineer's approval of the Program shall not alter the Contractor's obligations. The Contractor may revise the Program and submit it to the Engineer again at any time. A revised Program shall show the effect of Variations and Compensation Events.

27. Extension of the Intended Completion Date

- 27.1. The Engineer shall extend the Intended Completion Date if a Compensation Event occurs or a Variation is issued which makes it impossible for Completion to be achieved by the Intended Completion Date without the Contractor taking steps to accelerate the remaining Works, which would cause the Contractor to incur additional cost.
- 27.2. The Engineer shall decide whether and by how much time to extend the Intended Completion Date within 21 days of the Contractor asking the Engineer for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information. If the Contractor has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

28. Delays Ordered by the Engineer

- 28.1. The Engineer may instruct the Contractor to delay the start or progress of any activity within the Works. Delay/delays totalling more than 30 days will require prior written approval of the Employer.

29. Management Meetings

- 29.1. The Engineer may require the Contractor to attend a management meeting. The business of a management meeting shall be to review the plans for the Works.
- 29.2. The Engineer shall record the business of management meetings and provide copies of the record to those attending the meeting. The responsibility of the parties for actions to be taken shall be decided by the Engineer either at the management meeting or after the management meeting and stated in writing to all those who attended the meeting.

C. QUALITY CONTROL

30. Identifying Defects

- 30.1. The Engineer shall check the Contractor's work and notify the Contractor of any Defects that are found. Such checking shall not affect the Contractor's responsibilities. The Engineer may instruct the Contractor to search for a Defect and to uncover and test any work that the Engineer considers may have a Defect.

31. Inspection of the factory and Tests

- 31.1. To ensure the quality of the system, Pre-Dispatch Inspection of the material proposed to be used by the Contractor, Pre-Dispatch Inspection of the Material is mandatory. Pre-Dispatch inspection of material will be conducted by Engineer-In-Charge or any other person authorized by the Contractor. The Contractor will offer the material for inspection along with routine test certificates. Detailed instructions of Pre-dispatch inspection of material done at point of source of material (i.e at works of the manufacturer) shall be made available to the Contractor.

- 31.2. The following facilities shall be provided by the Contractor at his own cost to the inspecting officer:

- a. Suitable accommodation and local conveyance between arrival point, place of stay, works and departure point.
- b. The Contractor shall arrange "To and Fro" air tickets of economy class for journey of inspecting officer from nearest airport of workplace of inspecting officer to their works or place where inspection is to be carried out and back at the Contractor's cost after coordinating with inspecting officer. Suitable Transport facility for inspecting officer from his workplace to the nearest airport for "To and Fro" journey will also be arranged by the Contractor. In case, place of inspection is not connected through air, contractor will arrange "To and Fro" air tickets of economy class at their cost up to the nearest airport of place of inspection and onward journey from nearest airport to place of inspection and back by suitable means i.e. taxi/train (2nd AC Class) at the cost of the Contractor.
- c. In case place of inspection is within 500 km distance from HQ of Inspecting Officer, the Contractor will make suitable travelling arrangement up to the destination of Inspection and back by taxi/train (2nd AC Class) at the Contractor's Cost.
- d. No deductions towards air fare / travel expenses will be made by the payment making authority, if inspection is waived by the competent authority.

- 31.3. If the Engineer instructs the Contractor to carry out a test not specified in the Specifications to check whether any work has a Defect and the test shows that it does, the Contractor shall pay for the test and any samples.

32. Correction of Defects noticed during the Operation and Comprehensive Maintenance Period of 5 year

- 32.1. The Engineer shall give notice to the Contractor of any Defects before the end of the Operation and Comprehensive Maintenance Period, which begins at Completion of Construction works (Commissioning of Solar PV systems). The Comprehensive Maintenance Period shall be extended for as long as Defects remain to be corrected.
- 32.2. Every time notice of Defect/Defects is given; the Contractor shall correct the notified Defect/Defects within the duration of time specified by the Engineer's notice.
- 32.3. The request for inspection (RFI) system will be followed for execution of work.

33. Uncorrected Defects

- 33.1. If the Contractor has not corrected a Defect pertaining to the Operation and Comprehensive Maintenance Period under Clause 32.1 and of these Conditions of Contract, to the satisfaction of the Engineer, within the time specified in the Engineer's notice, the Engineer will assess the cost of having the Defect corrected, and the Contractor will pay this amount, on correction of the Defect.

D. COST CONTROL

34. Bill of Quantities

- 34.1. The Bill of Quantities shall contain items for the supply, installation, testing, and commissioning, to be done by the Contractor.
- 34.2. The Bill of Quantities is used to calculate the Contract Price. The Contractor is paid for the quantity of the work done at the rate in the Bill of Quantities for each item for the construction works.

35. Variations/Deviations and Extra Items

- 35.1. The Engineer shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the Contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein and any altered, additional or substituted work which the Contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the Contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.
- 35.2. The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered, be extended, if requested by the Contractor, as follows:
- i. In the proportion which the additional cost of the altered, additional, or substituted work, bears to the original tendered value plus
 - ii. 25% of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer.
- 35.3. Extra items:
- a. In the case of extra item(s) (items that are completely new, and are in addition to the items contained in the contract), that are available in the latest Meghalaya PWD or MePDCL or PHED or any Government of Meghalaya Department/Agency Schedule of Rates, the rate shall be governed by those specified in the latest SoR as mentioned after applying appropriate adjustment as per procedure specified in Clause 36, GCC.
 - b. In the case of extra item(s) that are not available in the latest SoR as mentioned, the Contractor may within fifteen days of receipt of order or occurrence of the item(s) submit market rate, claim rates, supported by proper analysis which shall include invoices, vouchers etc. and Manufacturer's specification for the work failing which the rate approved later by the Engineer-in-charge shall be binding and the Engineer shall within prescribed time limit of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the Contractor, determine the rates on the basis of the market rates and the

Contractor shall be paid in accordance with the rates so determined, failing which it will be deemed to have been approved Deviation.

- 35.4. Substituted Items: In the case of substituted items (items that are taken up with partial substitution or in lieu of items of work in the contract), the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the following para:
- a. If the market rate for the substituted item so determined is more than the market rate of the agreement item (to be substituted), the rate payable to the Contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).
 - b. If the market rate for the substituted item so determined is less than the market rate of the agreement item (to be substituted), the rate payable to the Contractor for the substituted item shall be the rate for the agreement item (to be substituted) so decreased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).
- 35.5. The provisions of the preceding paragraph shall also apply to the decrease in the rates of items for the work in excess of the limits laid down in Clause 35.6, and the Engineer shall after giving notice to the Contractor within one month of occurrence of the excess and after taking into consideration any reply received from him within fifteen days of the receipt of the notice, revise the rates for the work in question within one month of the expiry of the said period of fifteen days having regard to the market rates.
- 35.6. Any operation incidental to or necessarily has to be in contemplation of tenderer while quoting tender, or necessary for proper execution of the item included in the Schedule of quantities or in the schedule of rates mentioned above, whether or not, specifically indicated in the description of the item and the relevant specifications, shall be deemed to be included in the rates quoted by the tenderer or the rate given in the said schedule of rates, as the case may be. Nothing extra shall be admissible for such operations.
- 35.7. In reference to the preceding paragraphs (35.1 to 35.5), the variation duly approved by the Engineer shall be as stipulated in the contract data.

36. Payments for Variations

- 36.1. In the case of contract items, substituted items, contract cum substituted items, which exceed the limits laid down in the contract data, the Contractor may within fifteen days of receipt of order or occurrence of the excess, claim revision of the rates, supported by proper analysis for the work in excess of the above mentioned limits, provided that if the rates so claimed are in excess of the rates specified in the schedule of quantities, the Engineer shall within prescribed time limit of receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the Contractor, determine the rates on the basis of the market rates (as per invoice, vouchers from the manufacturers or suppliers submitted by the agency and duly verified by the Engineer or his representative) and the Contractor shall be paid in accordance with the rates so determined.
- 36.2. The prescribed time limit for finalizing rates for Extra Item(s), Substitute Item(s) and Deviated Quantities of contract items is within 45 days after submission of proposal by the Contractor without observation of the Engineer.

37. Cash Flow Forecasts

- 37.1. When the Program is updated, the Contractor shall provide the Engineer with an updated cash flow forecast.

38. Payment Certificates

- 38.1. The payment to the Contractor will be as follows for construction work:
- a. The Contractor shall submit to the Engineer fortnightly/ monthly statements of the value of the work executed less the cumulative amount certified previously supported with detailed measurement of the items of work executed in measurement books authorized by CEO-Shillong Smart City Limited.
 - b. The Engineer shall check the Contractor's fortnightly/monthly statement within 14 days and certify the amount to be paid to the Contractor.
 - c. The value of work executed shall be determined, based on measurements by the Engineer.
 - d. The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.
 - e. The value of work executed shall also include the valuation of Variations and Compensation Events.
 - f. The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
 - g. The Payment of final bill shall be governed by the provisions of clause 50 of GCC.

39. Payments

- 39.1. The eligible payments for Supply, Installations, testing, commissioning, operation and Comprehensive Maintenance shall be paid to the Contractor by Employer as per the payment schedule mentioned under Clause No. 11 of Special Conditions of Contract.
- 39.2. Payments shall be adjusted for deductions for advance payments, security deposit, other recoveries in terms of the Contract and taxes at source, as applicable under the law. The Engineer shall pay the Contractor the amounts he had certified within 21 days of the date of each certificate.
- 39.3. The Employer may appoint another authority, as specified in the Contract Data (or any other competent person appointed by the Employer and notified to the Contractor) to make payment certified by the Engineer.
- 39.4. Items of the Works for which no rate or price has been entered in the Bill of Quantities, will not be paid for by the Employer and shall be deemed covered by other rates and prices in the Contract.

40. Compensation Events

- 40.1. The following shall be Compensation Events unless they are caused by the Contractor:
- a. The Engineer orders a delay or delays exceeding a total of 30 days.
 - b. The effects on the Contractor of any of the Employer's Risks.
- 40.2. If a Compensation Event would prevent the Works being completed before the Intended Completion Date, the Intended Completion Date shall be extended. The Engineer shall decide whether and by how much the Intended Completion Date shall be extended.

41. Tax

- 41.1. The rates quoted by the Contractor shall be deemed to be inclusive of the sales and other levies, duties, royalties, cess, toll, taxes (including GST) of Central and State Governments, local bodies and authorities that the Contractor will have to pay for the performance of this Contract. The Employer will perform such duties in regard to the deduction of such taxes at source as per applicable law.

42. Price adjustment and Currencies

- 42.1. Price adjustment is not applicable in this contract/RFP. Bidders are required to quote accordingly.
- 42.2. All payments will be made in Indian Rupees.

43. Security Deposit/ Retention and Release of Performance Security and Security Deposit/ Retention

- 43.1. The Employer shall retain security deposit of 5% of the amount from each payment due to the Contractor until completion of the whole of the construction Work.
- 43.2. On the completion of the whole of the construction Work half of the total amount retained as Security Deposit is repaid and half after the completion of Operation and Comprehensive Maintenance period of 5 (five) years in 5 (five) equal annual instalments and the Engineer has certified that all defects notified by the Engineer to the Contractor before the end of his period have been corrected.
- 43.3. The performance security as specified in Clause 33 of ITB shall be released to the Contractor the completion of the Contract Period and
 - i. A certificate is issued by Engineer-in-charge certifying that contractor has successfully completed all the works.
 - ii. After issuance of taking over certificate.

44. Liquidated Damages

- 44.1. If the Contractor fails in the due performance of the contract to deliver any part of the equipment or complete the work within the time fixed under the contract or any extension thereof granted to him by the Employer and/or to fulfill his obligations in time under the contract, they shall be liable to pay to the Employer @0.5% per week plus the applicable GST up to a maximum of up to 10% of work value delayed beyond contract period. The same will be applicable if monthly CMC report will not be submitted within a week of due date. The Employer may deduct liquidated damages from payments due to the Contractor. Payment of liquidated damages shall not affect the Contractor's other liabilities.
- 44.2. This excludes delay in the completion of the work due to unforeseen reasons beyond the control and without the fault and negligence of the Contractor including act of GOD or public anomie action of the Government in its sovereign capacity, floods, epidemics, strikes, lockouts, fires, and accidents. In the event of the contingencies, the Contractor shall in writing inform the Employer within 15 days of such event. The Employer on merits of the request will provide extension to complete the work subject to the approval of the competent authority.
- 44.3. If the Completion Date of Construction Works is extended after liquidated damages have been paid, the Engineer shall correct any overpayment of liquidated damages by the Contractor by adjusting the next payment certificate.

45. Advance Payment

- 45.1. The Employer will make the following advance payment to the Contractor against provision by the Contractor of an Unconditional Bank Guarantee in the prescribed format specified in the Bidding Document by a nationalized bank/scheduled commercial bank acceptable to the Employer in amounts equal to the advance payment and valid till the period of recovery:
 - a) **Mobilization Advance:** Mobilization Advance up to 5% (Five Percent) of the contract price may be given, if requested by the contractor in writing within one month from the date of issue of notice to proceed. Such advance shall be in two or more instalments to be determined by the Engineer at his sole discretion. The first instalment of such advance shall be released by the Engineer to the contractor on a request made by the contractor to the Engineer. The second

and subsequent instalments shall be released by the Engineer only after the contractor furnishes a proof of the satisfactory utilization of the earlier instalment to the entire satisfaction of the Engineer.

The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee may be progressively reduced by the amounts repaid by the Contractor.

Before any instalment of advance is released, the contractor shall execute an Unconditional Bank Guarantee in the prescribed format specified in the Bidding Document by a Nationalized Bank/Scheduled Commercial Bank acceptable to the Employer in amounts equal to the advance payment and valid till the period of recovery. The said Bank Guarantee shall be kept renewed from time to time to cover the balance amount and likely period of complete recovery.

Recovery of such sums advanced shall be made by the deduction from the contractor's bills commencing after first ten percent (10%) of the gross value of the work is executed and paid, on pro-rata percentage basis to the gross value of the work billed beyond 10% in such a way that the entire advance is recovered by the time eighty percent (80%) of the gross value of the contract is executed and paid.

No account shall be taken of the advance payment or the repayment in assessing valuation of work done, variations, price adjustments, Compensation events or liquidated damages.

If the circumstances are considered reasonable by the Engineer, the period mentioned above may be extended at the discretion of the Engineer, upon request by the contractor in writing for grant of mobilization advance.

The Contractor is to use the mobilization advance payment only for mobilization purpose. The Contractor shall demonstrate that the advance payment has been used in this way by supplying copies of invoices or other documents to the Engineer.

- 45.2. The Contractor is to use the advance payment only to pay for mobilization expenses required specifically for execution of works. The Contractor shall demonstrate the advance payment has been used in this way by supplying copies of invoices or other documents to the Engineer.

46. Securities

The Performance Security as specified in Clause 33 of ITB shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in the form given in Section 7 and by a Nationalized Bank or Scheduled Commercial Bank. The Performance Security shall be valid until a date 45 days from the date of expiry of the Contract period.

47. Cost of Repairs

- 47.1. Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at his cost if the loss or damage arises from the Contractor's acts or omissions.
- 47.2. Any future interventions by any other agencies working in the subject area, Employer will assist the Contractor to recover the resurfacing/repairing costs incurred due to additional interventions from the respective department.

E. FINISHING THE CONTRACT

48. Completion of Construction

48.1. The Contractor shall request the Engineer to issue a Certificate of Completion of the construction of the works, and the Engineer will do so upon deciding that the works is completed.

49. Taking Over

49.1. The Employer shall take over the works within seven days of the Engineer issuing a certificate of completion of entire works under the scope of work including Operation and Comprehensive Maintenance Contract Period.

50. Final Account

50.1. The Contractor shall supply the Engineer with a detailed account of the total amount that the Contractor considers payable for works under the contract within 21 days of issue of Certificate of completion of construction of works. The Engineer shall certify any payment that is due to the correct and complete. If the account is not correct or complete, the engineer shall issue within 42 days a schedule that states the scope of the corrections or additions that are necessary. If the account is still unsatisfactory after it has been resubmitted, the Engineer shall decide on the amount payable to the Contractor and issue a payment certificate within 28 days of receiving the Contractor's revised account.

The payment of final bill for construction of works will be made within 21 days thereafter.

50.2. In case the account is not received within 21 days of issue of Certificate of Completion as provided in clause 50.1 above, the engineer shall proceed to finalise the account and issue a payment certificate within 28 days. The payment of final bill for construction of works will be made within 21 days thereafter.

51. Operating and Maintenance Manuals

51.1. If "as built" Drawings and/or Operating and Maintenance manuals are required, the Contractor shall supply them by the dates stated in the Contract Data.

51.2. If the Contractor does not supply the Drawings and/or manuals by the dates stated in the Contract Data, or they do not receive the Engineer's approval, the Engineer shall withhold the amount stated in the Contract Data from payments due to the Contractor.

52. Termination

52.1. The Employer may terminate the Contract if the Contractor causes a fundamental breach of the Contract.

52.2. Fundamental breaches of Contract shall include, but shall not be limited to, the following:

- a. The Contractor stops work for 28 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Engineer,
- b. The Contractor is declared as bankrupt or goes into liquidation other than for approved reconstruction or amalgamation,
- c. The Engineer gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Engineer,
- d. The Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be paid, as defined in clause 44.1,
- e. The Contractor fails to provide insurance cover as required under Clause 13,
- f. If the Contractor, in the judgement of the Employer, has engaged in the corrupt or fraudulent practice in competing for or in executing the Contract. For the purpose of this clause, "corrupt

practice” means the offering, giving, receiving, or soliciting of anything of value to influence the action of a public official in the procurement process or in Contract execution. “Fraudulent Practice” means a misrepresentation of facts in order to influence a procurement process or the execution of a contract to the detriment of the Employer and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid process at artificial non-competitive levels and to deprive the Employer of the benefits of free and open competition. The Contractor shall execute the Integrity Pact as per format given in Tech Form 11,

- g. If the Contractor has not completed at least thirty percent of the value of construction Work required to be completed after half of the completion period has elapsed, and
 - h. Any other fundamental breaches as specified in the Contract Data.
 - i. If the Contractor fails to deploy machinery and equipment or personnel as specified in the contract Data at the appropriate time.
- 52.3. Notwithstanding the above, the Employer may terminate the Contract for convenience or for other reasons beyond its control.
- 52.4. If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

53. Payment upon Termination

- 53.1. If the Contract is terminated because of a fundamental breach of Contract by the Contractor, the Engineer shall issue a certificate for the value of the work done and Materials ordered less liquidated damages, if any less advance payments received up to the date of the issue of the certificate and less the percentage to apply to the value of the work not completed, as indicated in the Contract Data. If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be recovered from the security deposit, and performance security. If any amount is still left un-recovered it will be a debt payable to the Employer.
- 53.2. If the Contract is terminated at the Employer's convenience, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the Contractor's personnel employed solely on the Works, and the Contractor's costs of protecting and securing the Works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the Contract, and less taxes due to be deducted at source as per applicable law.

54. Property

- 54.1. All Materials on the Site, Plant, Equipment, Temporary Works, and Works shall be deemed to be the property of the Employer for use for completing balance construction work if the Contract is terminated because of the Contractor's default, till the Works is completed after which it will be transferred to the Contractor and credit, if any, given for its use.

55. Releases from Performance

- 55.1. If the Contract is frustrated by the outbreak of war or by any other event entirely outside the control of the Employer or the Contractor, the Engineer shall certify that the Contract has been frustrated. The Contractor shall make the Site safe and stop work as quickly as possible after receiving this certificate and shall be paid for all work carried out before receiving the certificate and for any work carried out afterwards to which a commitment was made.

F. OTHER CONDITIONS OF CONTRACT

56. Labour

- 56.1. The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.
- 56.2. The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer may require.

57. Compliance with Labour Regulations

- 57.1. During continuance of the Contract, the Contractor shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given in Appendix to Part I General Condition of Contract. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules/regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.
- 57.2. The employees of the Contractor in no case shall be treated as the employees of the Employer at any point of time.

58. Drawings and Photographs of the Works

- 58.1. The Contractor shall do photography/video photography of the site firstly before the start of the work, secondly mid-way in the execution of different stages of work and lastly after the completion of the work. No separate payment will be made to the Contractor for this.
- 58.2. The Contractor shall not disclose details of Drawings furnished to him and works on which he is engaged without the prior approval of the Engineer in writing. No photograph of the works or any part thereof or plant employed thereon, except those permitted under clause 58.1, shall be taken by the Contractor without the prior approval of the Engineer in writing. No photographs/ Video photography shall be published or otherwise circulated without the approval of the Engineer in writing.

59. The Apprentices Act 1961

- 59.1. The Contractor shall duly comply with the provisions of the Apprentices Act 1961 (III of 1961), the rules made there under and the orders that may be issued from time to time under the said Act and the said Rules and on his failure or neglect to do so he shall be subject to all liabilities and penalties provided by the said Act and said Rules.

60. Criminals are prohibited from bidding

- 60.1. Any bidder who has been convicted by a court of law for criminal activities including but not limited to organized crime or gangster activities or Mafia or Goonda or Anti-social activity in the last 5 years (till the date of NIT) is not eligible to bid. If it is established that any bidder has been convicted by a court of law, his bid shall be automatically cancelled.
- 60.2. The bidder has to produce Solvency certificate, self-declaration affidavit (on the prescribed proforma, which is attached with the bid document) etc., issued by the competent authority in original with bid document.

61. Force Majeure (FM) Clause

- 61.1. Conditions beyond control of either parties like war, hostility, acts of public enemy, civil commotion, sabotage, serious loss or damage by fire, explosions, epidemics, strikes, lockouts or acts of God come under the legal concept of Force Majeure (FM). Delays in performance of contractual obligations under influence of FM conditions are condonable by the other party without any right to termination or damages, provided, notice of the happening of any such event is given by the affected party to the other within 30 (thirty) days from the date of occurrence. Works under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist. However, if such event continues for a period exceeding 120 days, either party may at its option terminate the contract by giving notice to the other party.

CONTRACT DATA TO GENERAL CONDITIONS OF CONTRACT

Clause Reference of GCC																									
CI 1.1(xiv)	<p>The Employer is CEO, Shillong Smart City Limited, Shillong House No. C/B-037, Top Floor, Centre Nongrim Hills, Near JJ Cables, East Khasi Hills District, Meghalaya - 793003 Electronic mail: shillongsmartcitylimited@gmail.com</p>																								
CI 1.1(xviii)	The Intended Completion Date shall be 8 (eight) months from the date of issue of Notice to Proceed to the completion of Operation and Comprehensive Maintenance Contract period of 5 (five) years for the entire scope of work.																								
CI 1.1(xx)	The Sites are located: within Shillong Urban Agglomeration boundary																								
CI 1.1(xxiii)	The Start Date shall be as defined in the Notice to Proceed with the work																								
CI 1.1(xxvii)	The Works: Grid connected Roof Top Solar Photo-Voltic system for various buildings in Shillong, East Khasi Hills District, Meghalaya																								
CI 3.1	(a) The law which applies to the Contract is the law of Union of India. (b) The language of the Contract documents is English.																								
CI 8.1	The Schedule of Other Contractors – NA																								
CI 13.1	<p>Amount and deductible for insurance are:</p> <table border="1"> <thead> <tr> <th>SN</th> <th>Particulars</th> <th>Minimum Cover for Insurance</th> <th>Maximum Deductibles for Insurance</th> </tr> </thead> <tbody> <tr> <td>1.</td> <td>Work & Plant & Materials</td> <td>Equal to Contract Amount</td> <td>0.4% of Contract Amount</td> </tr> <tr> <td>2.</td> <td>Other Property (Unlimited occurrences)</td> <td>5% of Contract Amount</td> <td>0.4% of Contract Amount</td> </tr> <tr> <td colspan="4">Personal Injury or death insurance:</td> </tr> <tr> <td>3.</td> <td>a) For other people (unlimited occurrences)</td> <td>₹ 25 lacs</td> <td>-</td> </tr> <tr> <td>4.</td> <td>b) For Contractor's employees</td> <td colspan="2">In accordance with the statutory requirements applicable to India</td> </tr> </tbody> </table>	SN	Particulars	Minimum Cover for Insurance	Maximum Deductibles for Insurance	1.	Work & Plant & Materials	Equal to Contract Amount	0.4% of Contract Amount	2.	Other Property (Unlimited occurrences)	5% of Contract Amount	0.4% of Contract Amount	Personal Injury or death insurance:				3.	a) For other people (unlimited occurrences)	₹ 25 lacs	-	4.	b) For Contractor's employees	In accordance with the statutory requirements applicable to India	
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CI 14.1	Site Investigation Reports: Report of the Geotechnical Investigation as contained in the Detailed Project Report																								
CI 26.1	The Contractor shall submit for approval a Program for the Works within Fifteen days (15) from the date of the Letter of Acceptance.																								
CI 26.4	The period between Program updates is Thirty (30) days.																								
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CI 35.6	The Employer to decide deviation up to 1.5 times of tendered amount.																								
CI 39.2	The authorized person to make payments is Chief Executive Officer, Shillong Smart City Limited, Shillong																								

CI 51.1	(a) "As-built" drawings and the Schedule of Operating and Maintenance Manuals shall be provided by the Contractor (b) The date by which "as-built" drawings (in scale as directed) in electronic copy (AutoCAD and PDF format) and hard copy (2 sets) are required is within 28 days of issue of certificate of completion of whole or section of the work, as the case may be.
CI 51.2	The amount to be withheld for non-compliance to the Clause 51 by the date required is Rs. One Lakh. Thereafter, one lakh per week subject to maximum of Rs. 10 lakhs.
CI 52.2(i)	As per Clause 9.1 and 16.2 of GCC
CI 53.1	The percentage to apply to the value of the work not completed representing the Employer's additional cost for completing the Works shall be 20%.

Appendix 1 to Part I General Condition of Contract

SALIENT FEATURES OF SOME MAJOR LABOUR LAWS APPLICABLE TO ENGAGED IN BUILDING AND OTHER CONSTRUCTION WORK.

- a) **Workmen Compensation Act 1923:** - The Act provides for compensation in case of injury by accident arising out of and during the course of employment.
- b) **Payment of Gratuity Act 1972:** - Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed the prescribed minimum years (say, five years) of service or more or on death the rate of prescribed minimum days" (say, 15 days) wages for every completed year of service. The Act is applicable to all establishments employing the prescribed minimum number (say, 10) or more employees.
- c) **Employees P.F. and Miscellaneous Provision Act 1952:** The Act Provides for monthly contributions by the Employer plus workers at the rate prescribed (say, 10% or 8.33%). The benefits payable under the Act are:
 1. Pension or family pension on retirement or death as the case may be.
 2. Deposit linked insurance on the death in harness of the worker.
 3. Payment of P.F. accumulation on retirement/death etc.
- d) **Maternity Benefit Act 1951:** - The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.
- e) **Contract Labour (Regulation & Abolition) Act 1970:** - The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The principal Employer is required to take Certificate of Registration and the Contractor is required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ prescribed minimum (say 20) or more contract labour.
- f) **Minimum Wages Act 1948:** - The Contractor is to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Constructions of buildings, roads, runways are scheduled employment.
- g) **Payment of Wages Act 1936:** - It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.
- h) **Equal Remuneration Act 1979:** - The Act provides for payment of equal wages for work of equal nature to male and female workers and for not making discrimination against female employees in the matters of transfers, training and promotions etc.
- i) **Payment of Bonus Act 1965:** - The Act is applicable to all establishments employing prescribed minimum (say, 20) or more workmen. The Act provides for payments of annual bonus within the prescribed range of percentage of wages to employees drawing up to the prescribed amount of wages, calculated in the prescribed manner. The Act does not apply to certain establishments. The newly set-up establishments are exempted for five years in certain circumstances. States may have different number of employment size.
- j) **Industrial Disputes Act 1947:** - The Act lays down the machinery and procedure for resolution of industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.
- k) **Industrial Employment (Standing Orders) Act 1946:** - It is applicable to all establishments employing prescribed minimum (say, 100, or 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and get these certified by the designated Authority.
- l) **Trade Unions Act 1926:** - The Act lays down the procedure for registration of trade unions of workmen and Employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.
- m) **Child Labour (Prohibition & Regulation) Act 1986:** - The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulations of

employment of children in all other occupations and processes. Employment of child labour is prohibited in building and construction industry.

- n) **Inter-State Migrant Workmen's (Regulation of Employment & Conditions of Service) Act 1979:** - The Act is applicable to an establishment which employs prescribed minimum (say, five) or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The Inter-State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as Housing, Medical-Aid, Travelling expenses from home up to the establishment and back etc.
- o) **The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996:** - All the establishments who carry on any building or other construction work and employs the prescribed minimum (say, 10) or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as may be modified by the Government. The Employer of the establishment is required to provide safety measures at the building or construction work and other welfare measures, such as canteens, first-aid facilities, ambulance, housing accommodations for workers near the workplace etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.
- p) **Factories Act 1948:** - The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. It is applicable to premises employing the prescribed minimum (say, 10) persons or more with aid of power or another prescribed minimum (say, 20) or more persons without the aid of power engaged in manufacturing process.

SALIENT FEATURES OF SOME OF THE MAJOR LAWS THAT ARE APPLICABLE FOR PROTECTION OF ENVIRONMENT AND CONSERVATION OF HERITAGE

1. ***The Environment (Protection) Act, 1986 and as amended:*** This provides for the protection and improvement of environment and for matters connected therewith, and the prevention of hazards to human beings, other living creatures, plants and property. 'Environment' includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.
2. ***The Forest Conservation Act, 1980, as amended, and Forest (Conservation) Rules, 1981 as amended:*** These provides for protection of forests by restricting conversion of forested areas into non- forested areas and prevention of deforestation, and stipulates the procedures for cutting any trees that might be required by the applicable rules. Permissions under the Act also stipulate the norms and compliance requirements of the employer and any contractor on behalf of the employer.
3. ***State Tree Preservation Acts*** as may be in force: These provide for protection of trees of important species. Contractors will be required to obtain prior permission for full or partial cutting, uprooting, or pruning of any such trees.
4. ***The Wildlife (Protection) Act, 1972, and as amended:*** This provides for protection of wildlife through notifying National Parks and Sanctuaries and buffer areas around these zones; and to protect individuals of nationally important species listed in the Annex of the Act.
5. ***The Biological Diversity Act, 2002:*** This provides for conservation of biological diversity, sustainable use of components of biological diversity, and fair and equitable sharing of the benefits arising out of the use of biological resources, knowledge and for matters connected therewith or incidental thereto.
6. ***The Public Liability Insurance Act, 1991 as amended and The Public Liability Insurance Rules, 1991 as amended:*** These provide for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substances and for matters connected herewith or incidental thereto. Hazardous substance means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act 1986 and exceeding such quantity as may be specified by notification by the Central Government.
7. ***The Ancient Monuments and Archaeological Sites and Remains Act, 1958 and the Ancient Monuments and Archaeological Sites and Remains (Amendment and Validation) Act, 2010, the Ancient Monuments and Archaeological Sites and Remains Rules, 1959 amended 2011, the National Monuments Authority Rules, 2011 and the similar State Acts:*** These provide for conservation of cultural and historical remains found in India. Accordingly, area within the radii of 100m and 300m from the "protected property" are designated as "protected area" and "controlled area" respectively. No development activity (including building, mining, excavating, blasting) is permitted in the "protected area" and development activities likely to damage the protected property is not permitted in the "controlled area" without prior permission of the Archaeological Survey of India (ASI) or the State Departments of Art and Culture or Archaeology as applicable.
8. ***The Environmental Impact Assessment Notification, 2006 and as amended:*** This provides for prior environmental clearance for new, modernization and expansion projects listed in Schedule 1 of the Notification. Contractors will be required to ensure that no work starts until applicable clearances under the Notification is not available. Contractors will be responsible for implementation of any environmental management plan stipulated as per the permission under this Notification; and will be required to prepare and submit to the employer and compliance report stipulated in the permission under the Notification.
9. ***The Water (Prevention and Control of Pollution) Act, 1974 as amended, and the Water (Prevention and Control of Pollution) Rules, 1975 as amended:*** These provide for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. 'Pollution' means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water(whether directly or indirectly) as may, or is likely to,

create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial, agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms. Contractors will need to obtain consent for establishment and consent for operation of any item of work or installation of equipment that generates waste water, and observe the required standards of establishment and operation of these items of work or installations; as well as install and operate all required waste water treatment facilities.

10. ***The Water (Prevention and Control of Pollution) Cess Act, 1977 and The Water (Prevention and Control of Pollution) Cess Rules, 1978:*** These provide for the levy and collection of a cess on water consumed by persons carrying on certain industries and by local authorities, with a view to augment the resources of the Central Board and the State Boards for the prevention and control of water pollution under the Water (Prevention and Control of Pollution) Act, 1974.
11. ***The Air (Prevention and Control of Pollution) Act, 1981 as amended, and the Air (Prevention and Control of Pollution) Rules, 1982:*** These provides for prevention, control and abatement of air pollution. 'Air Pollution' means the presence in the atmosphere of any 'air pollutant', which means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment. Contractors will need to obtain consent for establishment and consent for operation of any item of work or installation of equipment that generates air pollution such as, hot mix plants, power generators, backup power generation, material handling processes, and observe the required standards of establishment and operation of these items of work or installations.
12. ***Noise Pollution (Control and Regulation) Rules, 2000, and as amended:*** This provides for standards for noise for day and night for various land uses and specifies special standards in and around sensitive receptors of noise such as schools and hospitals. Contractors will need to ensure compliance to the applicable standards and install and operate all required noise control devices as may be required for all plants and work processes.
13. ***Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996:*** This provides for Requirement of preparation of on-site and off-site Disaster Management Plans for accident-prone areas.
14. ***The Explosives Act 1884 and the Explosives Rules, 2008:*** These provide for safe manufacture, possession, sale, use, transportation and import of explosive materials such as diesel, Oil and lubricants etc.; and also for regulating the use of any explosives used in blasting and/or demolition. All applicable provisions will need compliance by the contractors.
15. ***The Petroleum Rules, 2002:*** This provides for safe use and storage of petroleum products and will need to be complied by the contractors.
16. ***The Gas Cylinder Rules 2004 and amendments:*** This provides for regulations related to storage of gas, and possession of gas cylinder more than the exempted quantity. Contractors should comply with all the requirements of this Rule.
17. ***Manufacture, Storage, and Import of Hazardous Chemical Rules of 1989 and as amended:*** These provide for use and storage of hazardous material such as highly inflammable liquids like HSD/LPG. Contractors will need to ensure compliance to the Rules; and in the event where the storage quantity exceeds the regulated threshold limit, the contractors will be responsible for regular safety audits and other reporting requirements as prescribed in the Rules.
18. ***Hazardous & Other Wastes (Management and Trans boundary Movement) Rules, 2016:*** These provide for protection of general public from improper handling storage and disposal of hazardous waste. The rules prescribe the management requirement of hazardous wastes from its generation to final disposal. Contractors will need to obtain permission from the State Pollution Control Boards and other designated authorities for storage and handling of any hazardous material; and will to ensure full compliance to these rules and any conditions imposed in the permit.
19. ***The Bio Medical Waste Management Rules, 2016:*** This provides for control, storage, transportation and disposal of bio-medical wastes. As and where the contractor has any first aid

facility and dispensaries, established in either temporary or permanent manner, compliance to these Rules are mandatory.

20. **Construction and Demolition Waste Management Rules, 2016:** This provides for management of construction and demolition waste (such as building materials possible to be reused, rubble and debris or the like); and applies to all those wastes resulting from construction, re-modelling, repair or demolition of any civil structure. Contractor will need to prepare a waste disposal plan and obtain required approval from local authorities, if waste generation is more than 20 tons in any day or 300 tons in any month during the contract period; and ensure full compliance to these rules and any conditions imposed in the regulatory approval.
21. **The E-Waste (Management) Rules, 2016:** This provides for management of E-wastes (but not covering lead acid batteries and radio-active wastes) aiming to enable the recovery and/or reuse of useful material from e-waste, thereby reducing the hazardous wastes destined for disposal and to ensure the environmentally sound management of all types of waste of electrical and electronic equipment. This Rule applies to every manufacturer, producer, consumer, bulk consumer, collection centres, dealers, e-retailer, refurbishes, dismantler and recycler involved in manufacture, sale, transfer, purchase, collection, storage and processing of e-waste or electrical and electronic equipment listed in Schedule I, including their components, consumables, parts and spares which make the product operational.
22. **Plastic waste Management Rules, 2016:** This provides for control and management of the plastic waste generated from any activity. Contractors will ensure compliance to this Rule.
23. **The Batteries (Management and Handling) Rules 2001:** This provides for ensuring safe disposal and recycling of discarded lead acid batteries likely to be used in any equipment during construction and operation stage. Rules require proper control and record keeping on the sale or import of lead acid batteries and recollection of the used batteries by registered recyclers to ensure environmentally sound recycling of used batteries. Contractors will ensure compliance to this Rule.
24. **The Ozone Depleting Substances (Regulation and Control) Rules, 2000 and as amended:** This provides for regulation of production and consumption of ozone depleting substances in the country, and specifically prohibits export to or import from countries not specified in the Rules, and prohibits unless specifically permitted, any use of ozone depleting substance.
25. **The Coastal Regulation Zone Notifications, 1991 and as amended: Not applicable.**
26. **The Motor Vehicle Act 1988 as amended (and State Motor Vehicle Acts as may be in force) and the Motor Vehicle Rules, 1989, and as amended (and State Motor Vehicle Rules as may be in force):** To minimize the road accidents, penalizing the guilty, provision of compensation to victim and family and check vehicular air and noise pollution. Contractors will be required to ensure full compliance to these rules.
27. **Easement Act, 1882:** This provides for the rights of landowners on groundwater. Contractors will need to ensure that other landowners' rights under the Act is not affected by any groundwater abstraction by the contractors.
28. **State Groundwater Acts and Rules as may be in force and the Guidelines for Groundwater Abstraction for drinking and domestic purposes in Notified Areas and Industry/Infrastructure project proposals in Non-Notified areas, 2012:** These provide for purposes. Contractors will need to obtain permission from Central/State Groundwater Boards prior to groundwater abstraction through digging any bore well or through any other means; and will ensure full compliance to these rules and any conditions imposed in the permit.
29. **The Mines Act, 1952 as amended;** the Minor Mineral and concession Rules as amended; and the State Mineral (Rights and Taxation) Acts as may be in force: These provide for safe and sound mining activity. The contractors will procure aggregates and other building materials from quarries and borrow areas approved under such Acts. In the event the contractors open any new quarry and/or borrow areas, appropriate prior permission from the State Departments of Minerals and Geology will need to be obtained. Contractors will also need to ensure full compliance to these rules and any conditions imposed in the permit.

30. **The Insecticides Act, 1968 and Insecticides Rules, 1971 and as amended:** These provide for regulates the manufacture, sale, transport, distribution, export, import and use of pesticides to prevent risk to human beings or animals, and for matters connected therewith. No one should import or manufacture; sell, stock or exhibit for sale; distribute, transport, use: (i) any misbranded insecticides, (ii) any insecticide the sale, distribution or use of which is for the time being prohibited under the Act; and (iii) any insecticide except in accordance with the condition on which it was registered under the Act.
31. **National Building Codes of India, 2016 and as amended:** This provides guidelines for regulating the building construction activities in India. The code mainly contains administrative regulations, development control rules and general building requirements; stipulations regarding materials, structural design and construction; and building and plumbing services. Contractors will be required to comply with all Bureau of Indian Standards Codes dealing with: (i) use and disposal of asbestos containing materials in construction; (ii) paints containing lead; (iii) permanent and temporary ventilations in workplace; (iv) safety, and hygiene at the workplace; (v) prevention of fire; (vi) prevention of accidents from faulty electrical gadgets, equipment and accessories; and all other such codes incidental to the Contract.

PART – II SPECIAL CONDITIONS OF CONTRACT

These Special Conditions of Contract (SCC) shall be read in conjunction with General Conditions of Contract including Contract Data and all Appendix, Instructions to Bidders (ITB) including Appendix to ITB, Notice Inviting Tenders (NIT), Bill of Quantities (BOQ), Tender Drawings, Scope of Work and Technical Specifications and other Documents as part of the Bidding Documents.

1. Difference in description of items:

In case it is found that there is difference in description of items between the Schedule of Rates (SOR) by Meghalaya PWD or Delhi Schedule of Rates (DSR) published by CPWD and the one as specified in the Bill of Quantities (BOQ) or any other part of the Bidding Document, the ones mentioned in SOR/DSR will prevail.

2. Procurement of materials

While procuring a particular material, the Contractor shall comply with the provisions of the following Order(s) by the Department of Promotion of Industry and Industrial Trade (DPPIT), (Public Procurement Section), Ministry of Commerce and Industry, Government of India:

Public Procurement (Preference to Make In India) Order 2017 (PPP-MII) on 15th June 2017 as amended vide DPPIT Order No. P-45021/2/2017-PP (BE-II) dated 4th June 2020.

3. Labour:

The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

The Contractor shall, if required by the Employer, deliver to the Employer a return in detail, in such form and at such intervals as the Employer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Employer may require.

4. Compliance with labour regulations:

During continuance of the contract, the Contractor shall abide at all times by all existing labour enactments and rules made thereunder, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Among other things as mandated by various Acts/Rules & Regulations/Notifications, the Contractor shall provide labour hutment with proper water supply and sanitation system including toilet (water closet and bath) and kitchen facility. All labour records/registers are to be maintained at site as per norms. The same shall be made available to the Employer as and when directed. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules/regulations including amendments, if any, on the part of the Contractor, Employer shall have the right to deduct any money due to the Contractor including his amount of security deposit. The Employer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer.

The employees of the Contractor in no case shall be treated as the employees of the Employer at any point of time.

5. Protection of Environment:

The Contractor shall take all reasonable steps to protect the environment on and off the Site and to avoid damage or nuisance to persons or to property of the public or others resulting from pollution, noise or other causes arising as a consequence of his methods of operation. During continuance of the contract, the Contractor and his sub-contractors shall abide at all times by all existing enactments on environmental protection and rules made there under, regulations, notifications and bye-laws of the State or Central Government, or local authorities and any other law, bye-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority. The Contractor shall submit Environmental Management Plan (EMP) and its monthly compliances.

Monitoring Requirement & Specifications

SN	Monitoring Requirements	Specification	Responsible agency
1.	Noise levels at the construction sites (only during construction period)	Monitoring at all location's hourly basis for 24-hour period. Once every season of the year during construction period.	Contractor
2.	Disposal of construction debris	Periodic inspection at sites for construction debris for safe collection and disposal to identified land fill sites.	Contractor
3.	Traffic and Transportation	Measures for diverting the traffic during construction across roads adjacent to the construction site (if required)	Contractor in consultation with SSCL and Shillong Traffic Police
4.	Domestic sewage and refuse management at the labour camps and construction sites	Check for adequacy of sanitation arrangements at the labour camps	Contractor
5.	Water Pollution	Check for: Blockage of flowing water which may lead to stagnation of water Soil erosion due to construction activities leading to contamination and siltation of water bodies. Water contamination due to use of fuel and lubricants at the construction sites.	Contractor
6.	Procurement of construction material	Check that procurement of construction materials should be only from permitted sites and quarries.	Contractor

Location of Noise monitoring shall be wherever the Contractor decides to locate the equipment yard. In case of noise levels causing disturbance to the sensitive receptors, management measures as suggested in the EMP shall be carried out.

The implementation of Mitigation Measures is the responsibilities of the Contractor /Employer. However, it may be noted that implementation of all the measures is full responsibility of Contractor. The Employer would be responsible only for monitoring/supervision/guidance, etc.

6. Safety:

The Contractor shall be responsible for the safety of all activities on the Site. The activities shall include, but not limited to, excavation, trenching, demolition, provision of scaffolding, ladder, working platforms,

gangways, mixing asphaltic materials, electric arc/ gas welding, use of hoist and construction machinery etc. The Contractor shall be governed by relevant provisions of safety code and as directed by the Engineer. The contract rates shall be deemed to include all costs of compliance with safety requirements in the Specifications. The rates for all items given in BOQ shall be deemed to include all costs on account of traffic diversions (if required) and all such hidden assessment/ items, which are not listed to entire satisfaction of Engineer.

Some of the common safety rules to be followed during working are as follows:

- i. Nobody is allowed to enter at construction site without Safety Shoes.
- ii. Never enter work area without Safety helmet & chin strap in place.
- iii. No climbing/working allowed without proper safety belt above 2 m. height.
- iv. Do not exceed the speed limit 25 Kmph within Premises.
- v. No debris obstacles allowed on the roads & passages.
- vi. Do not walk on pipelines or false ceiling.
- vii. Maintain good Housekeeping at work site.
- viii. No photography/ Videography allowed without permission.
- ix. All Site supervisors & engineers must be imparted structured training on construction safety before start of the job & record to be maintained.
- x. Availability of qualified & trained Site Engineer at site during all working hours.
- xi. Site Safety training to be imparted to all workers & plan to be made to cover every worker.
- xii. Tools box talk (5-15 minutes) by supervisor prior to commencement of any job.
- xiii. All accidents / incidents (Near Miss) to be reported & investigated (formats & procedure should be submitted to the Engineer for approval).
- xiv. Daily Safety Checking by Each Site Engineer along with Safety engineer.
- xv. Weekly co-ordination meeting of all Safety engineers with the Employer's representative.
- xvi. Monthly safety meeting with Site In-charges.
- xvii. All Safety equipment must be ISI marked & checked by Safety officer before use.
- xviii. Tag system for erection & use of scaffoldings.
- xix. LPG cylinders not allowed for gas cutting.
- xx. Separate waste bins to be used for flammable & non-flammable material.
- xxi. Safety awareness programs for workers by display of boards, posters, competitions, talks etc.
- xxii. Deployment of Safety Supervisors for every 250 workers and part thereof at work site.
- xxiii. Display of List of First Aid trained persons.
- xxiv. Testing certificates for lifting tools & tackle.
- xxv. Provision & maintenance of fire extinguishers at construction site & material stores.
- xxvi. Display of emergency telephone numbers at various locations.
- xxvii. For work in confined space use 24 V lamp fitting & use tools with air motors or electric tools with max. 24 V.
- xxviii. For confined space entry Gas test must be done before & at regular intervals.
- xxix. Checking & tag of equipment like grinding machine, welding machine, gas cutting set etc. by supervisors before use.
- xxx. All portions of the site should always have sufficient level of illumination.

7. Damages:

The work is in the urban area and underground utilities are already laid in the area of the project work. The Contractor will ensure that no damages are caused during execution of work to any property, government, or semi government or private. However, if during execution, any public utility services such as cables, pipes, or property (private or government or semi government etc.) such as boundary

wall, gate, fencing, walls of building etc. are damaged by the Contractor or its representative, the same shall be repaired or replaced or reconstructed and shall be put into use by the Contractor at his own cost for which no extra payment shall be made by the Employer. If the Contractor does not repair or replace the damaged utility or property, the Employer may request to the line department or owner of the property to repair or replace at the risk and cost of the Contractor and the amount paid to the line department or the owner of the property by the Employer or the invoice submitted by line department or the owner of the property shall be recovered from the Contractor's RA or Final bill or from the performance security or in combination of all, as per the amount to be recovered, as the case may be.

8. Death of a Contractor:

In the case of death of a Contractor after executing / commencement of the work, his legal heir, if an eligible registered Contractor and willing can executive and complete the work at the accepted tender rates irrespective of the cost of work.

9. Warranty & Maintenance

- a) The Contractor shall provide comprehensive maintenance support for all supplied hardware and other components as outlined in this RFP for a period of 5 (five) years from the date of Commissioning.
- b) During the warranty period, the bidder shall warrant that the goods supplied under the contract are new, unused, of the most recent version/ models and incorporate all recent improvements in design and materials unless provided otherwise in the contract. The Contractor further warrants that the goods supplied under this contract shall have no defects arising from design, materials or workmanship.
- c) The Employer or its designated officials shall promptly notify the Contractor in writing of any claims arising under this warranty. Upon receipt of such notice, the Contractor shall, within the warranty period and with all reasonable speed, repair or replace the defective systems, without costs to the Employer and within time specified and acceptable to the Employer.
- d) If the Contractor, having been notified, fails to remedy the defect(s) within the period specified in the contract, the Employer may proceed to take such reasonable remedial action as may be necessary, at the Contractor's risk and expense and without prejudice to any other rights, which Employer may have against the Contractor under the contract.
- e) During the comprehensive warranty period, the Contractor shall provide all product(s), patches and fixes, within 15 (fifteen) days of their availability and should carry out installation and make operational the same at no additional cost to the Employer.

The Contractor hereby warrants the Employer that:

- The supplied Hardware and Software meet all the requirements as outlined in the RFP and further amendments, if any and provides the functionality and performance, as per the terms and conditions specified in the contract.
- The proposed Hardware and Software shall achieve parameters detailed in the technical specification/ requirement.
- The Contractor shall be responsible for warranty and maintenance services from licensors of products included in the systems.
- The Contractor shall ensure the maintenance of the acceptance criterion/ standards in respect of the systems during the warranty and maintenance period.

10. Project Duration

Description of Activity	Time Period
Construction	Eight (08) Months (including monsoon period) from the date of issue of Notice to Proceed
Operation & Comprehensive Maintenance Period	The Operation and Comprehensive maintenance period shall be 5 (five) years from the date of completion of the entire scope (commissioning) of work on which a completion certificate shall be issued.

The contract period shall be from the date of issue of Notice to Proceed to the completion of the Operation and Comprehensive Maintenance of the entire scope of works.

11. PROJECT IMPLEMENTATION SCHEDULE, DELIVERABLES AND PAYMENT TERMS

11.1 Deliverables & Payment Schedule

Project includes A) Implementation of Solar PV systems and B) Civil Works.

A) Implementation of Solar PV System

80 % of Payment towards "Implementation of Solar PV System" will be made location wise on installation and commissioning on per KWp basis (capacity installed and commissioned in KWp multiplied by the per KWp price quoted).

20% of Payment towards "Implementation of Solar PV System" shall be made in equal installments of 4% each for five years on submission of the annual O&M report.

Operation and maintenance will start on successful completion of installation and commissioning certified by the Employer and authorized representative of MePDCL.

B) Civil Works

100% payments as per Bill of Quantities for execution of works "Civil works" including the water proofing works on selected RCC roofs and strengthen/ replacement of metal sheet on the selected buildings as directed by the Engineer-In-Charge.

11.2 Payment Terms

The Contract Price is inclusive of Costs towards A) Implementation of Solar PV systems and B) Civil Works. The payment terms for both the components are described below.

A) Implementation of Solar PV systems

Price as per template given at Fin Form 1 towards Implementation of Solar PV systems.

The Contractor shall have to carry out the works as per scope of work including Surveying, planning, Supply, Installation, Testing and Commissioning of Grid Connected Roof Top Solar Photo-Voltaic System including laying of power cable from Solar Plant to existing electrical lines, Net Metering, SCADA system etc. at various locations in Shillong City Including 5 (Five) Years of Operation and Comprehensive Maintenance Contract (CMC).

- The payment during the construction stage shall be made location wise on Survey/ workplan, procurement, installation and commissioning on per KWp basis (capacity installed and commissioned in KWp multiplied by the per KWp price quoted).
- The Payment during the O&M period shall be made on submission & acceptance of the O&M reports for that respective year.
- Upon receiving a report from the SSCL certifying the achievement of the below mentioned Payment Milestones.
- The Payment Milestone given below during Construction Period shall be as under:

S.No.	Stages of Work	PERCENTAGE OF PAYMENT	Documents to be submitted along with invoice
A.	<i>During Construction Stage</i>	<i>(80% of Price for “Implementation of Solar PV System”)</i>	
(i)	After completion and acceptance of Survey, layout, design-drawing/ Execution plan	05%	<ul style="list-style-type: none"> • Survey Reports • Execution Plan
(ii)	After procurement of materials & brought to the site	35%	<ul style="list-style-type: none"> • Project Report Format (Annexure – I of Section 5) • Delivery challan duly verified by Engineer- In-Charge
(iii)	After Installation & Testing of Solar System	20%	<ul style="list-style-type: none"> • Testing report certified by Engineer-In-Charge
(iv)	After Commissioning of solar system	20%	<ul style="list-style-type: none"> • Project Completion Report (Annexure – II of Section 5) • 7-day data log of solar plant
	Sub Total (During Construction Period)	80%	
B.	<i>During Operation & Maintenance Period of 5 Years</i>	<i>(20% of Price “Implementation of Solar PV System”)</i>	
(i)	After successful completion of O&M of 1 st year	04%	<ul style="list-style-type: none"> • Monthly O&M and CMC Report • Annual data log report
(ii)	After successful completion of O&M of 2 nd year	04%	<ul style="list-style-type: none"> • Monthly O&M and CMC Report • Annual data log report
(iii)	After successful completion of O&M of 3 rd year	04%	<ul style="list-style-type: none"> • Monthly O&M and CMC Report • Annual data log report
(iv)	After successful completion of O&M of 4 th year	04%	<ul style="list-style-type: none"> • Monthly O&M and CMC Report • Annual data log report
(v)	After successful completion of O&M of 5 th year	04%	<ul style="list-style-type: none"> • Monthly O&M and CMC Report • Annual data log report
	Sub Total (During O&M Period)	20%	

B) Towards “Civil works”

Price as per BoQ template given at Fin Form 1 towards carrying out Civil Works.

The Contractor shall be paid for the quantity of the work done at the rate in the Bill of Quantities for each item for the construction of Civil works after approval of the same by Engineer-In-Charge. The following process shall be followed.

- The Contractor shall submit to the Engineer fortnightly/ monthly statements of the value of the work executed less the cumulative amount certified previously supported with detailed measurement of the items of work executed in measurement books authorized by CEO-Shillong Smart City Limited.

- The Engineer-In-Charge shall check the Contractor's fortnightly/monthly statement within 14 days and certify the amount to be paid to the Contractor.
- The value of work executed shall be determined, based on measurements by the Engineer.
- The value of work executed shall comprise the value of the quantities of the items in the Bill of Quantities completed.

Note: 5% of the payment shall be deducted for security deposit on each payment and will be released as per the clause no. 43 of GCC.

- The payment shall be made on the actual work carried out (supported by work completion reports as required in the scope of work) at the site and approved by the Employer.
- Provided that in case of variation/deviation/extra items, the payment shall be made after approval from the Employer's competent authority.
- In case, there is a delay in achieving the Milestone due to reason attributed to client, the payments shall be made on prorata basis of the particular milestone.

12. Basic conditions to be followed by the Contractor

- i. The Contractor to arrange for emergency vehicle/staff vehicle.
- ii. The Contractor shall make his own arrangement for obtaining electric connection required for execution of work and make necessary payments directly to the concerned departments and nothing extra shall be payable on this account.
- iii. The Contractor shall make his own arrangement for water suitable for construction work as well as drinking and other purpose for the labour engaged by him for the execution of the work.
- iv. The Contractor shall provide, at his own cost instruments for surveying, weighing, and measuring purpose at the site of work as may be necessary for execution of the work.
- v. The Contractor shall submit to the Engineer samples of all materials for approval. Such samples of materials which affect aesthetics of the work shall also be got approved from the Engineer before procuring bulk supplies. These approved samples shall be preserved and retained in the custody of the Engineer as standards of materials till the completion of the work. The cost of such samples shall be borne by the Contractor and nothing shall be payable on this account over the Agreement rates.
- vi. Because of security consideration, some restrictions may be imposed by the security staff on the working and/or movement of men and materials etc. The Contractor shall be bound to follow all such restrictions/instructions and he shall organise his work accordingly. No claim on this account, whatsoever, shall be payable.
- vii. All the pre-construction approvals are to be obtained by the Employer. If any approvals are pending at the time of award of work, the Contractor will assist in getting clearance done from appropriate authorities. The fee for such clearances, if paid by the Contractor, (limited to statutory fee levied by the concerned public authority. Administrative expenses shall not be included in this) shall be reimbursed after production of receipt.
- viii. All approvals during construction stage and commissioning phase are to be obtained by the Contractor at his own cost.
- ix. The Contractor shall use materials bearing ISI Certification Mark unless otherwise specified or allowed in writing by the Engineer. Any material banned by any central/state/local public authority shall not be used in the work.
- x. The Contractor shall be required to get all the tests as per the specifications/IS codes, carried out on materials/work from an approved laboratory as per the direction of the Engineer. The testing charges and conveyance from the site shall be borne by the Contractor.

- xi. In case any material/ work is found sub-standard the same shall be rejected by the Engineer and the same shall be removed from the site of work within 48 hours, failing which the same shall be got removed by the Engineer at the risk and cost of the Contractor without giving any further notice and time. If it is found that even after reconstruction of the material/work (i.e. after removal and again constructing it), the same is sub-standard, the Employer will have right to impose penalty as the Employer deems appropriate.
- xii. Even ISI marked materials may be subjected to quality test at the discretion of the Engineer. Whenever ISI marked materials are brought to the site of work, the Contractor shall, if required by the Employer, furnish manufacturer's test certificate or test certificate from approved testing laboratory to establish that the materials procured by the Contractor, satisfy the provisions of relevant IS codes. The testing charges shall be borne by the Contractor. However, cement/steel will be necessarily tested before start of work and also during the execution of work as per the requirements of specifications and will not be used till test certificates are obtained and approved by Engineer.
- xiii. The Contractor shall be responsible for completing the work and for satisfying all terms and conditions of the Contract without any extra payment over his quoted rates unless otherwise specified. The Contractor shall quote his rates for various items of work accordingly and no claim whatsoever shall be entertained for any incidental or extra work involved in the execution of the work as per nomenclature of the item and the specifications indicated in the tender documents.
- xiv. The Contractor shall give a satisfactory performance test of installations individually and as a whole to ensure their proper functioning before the work is finally declared completed and accepted.
- xv. The Contractor shall protect the adjoining buildings or works and the work under execution from fire and shall make adequate arrangements for fire protection and firefighting and if any property is damaged, by fire due to the negligence of the Contractor, the same shall be rectified by the Contractor at his own cost, to the entire satisfaction of Engineer.
- xvi. The Contractor shall provide adequate lighting arrangements as approved by the Engineer for carrying out the work during night-time, if so required and also provide all other facilities for the labour employed to carry out the work as per direction of Engineer.
- xvii. In order to achieve the targeted date of completion the Contractor may have to work in multiple shifts, round the clock and nothing extra shall be paid on this account.
- xviii. The Contractor shall be responsible for all statutory provisions and deductions towards ESI, PF or any other, as the case may be, or any other levies and taxes shall be borne by the Contractor. The TDS and Contract Tax or any other statutory levies/ taxes incorporated from time to time shall be deducted progressively from the running account bills, as applicable at the time of payment. No claim in this regard shall be entertained.
- xix. For any clarification/ doubt, the Employer may organize regular meetings with Contractor. The Concerned representative of the Contractor who is aware of all the aspects of the project shall attend such meetings invariably as and when required.
- xx. The Contractor shall arrange for own office space/storage space for his use and same shall not to be provided by the Employer.
- xxi. The Contractor shall prepare and produce instruction, operation and maintenance manuals in English for the use, operation and the maintenance of the supplied equipment and installations and submit to the Engineer in (5) hard copies and the soft copy at the time of handing over. The manual shall generally consist of the following:
 - a. Description of the project
 - b. Operating instructions

- c. Maintenance instructions including procedures for Preventive maintenance
 - d. Manufacturers catalogues
 - e. Spare parts list
 - f. Trouble shooting charts
 - g. Drawings
 - h. Type and routine test certificates of major items.
 - i. One (1) set of reproducible 'as built' drawings on polyester film.
- xxii. All spaces allotted to the Contractor, as described above shall be vacated and all structures removed from site at any time as and when required and directed by the Engineer, unconditionally and without any reservation. The Engineer will not be obliged to give any reason for such removal. Upon receiving instructions to vacate the space, the Contractor shall immediately remove all his structures, materials, etc. from the sources and clear and clean-up the site to the satisfaction of the Engineer.
- xxiii. It shall be the responsibility of the Contractor to safeguard the site and ensure that no illegal encroachments are made by outside elements within the area allotted to the Contractor. Upon completion of the work or earlier as required by Engineer, the Contractor shall vacate the land totally without any reservation.
- xxiv. The Contractor will arrange to erect, at his own cost, barricading as per norms of NGT/CLIENT around the infrastructure site, with entry/ exit gates at suitable points. The Contractor shall, at his own cost, provide and erect suitable fencing around the spaces allotted to him at the infrastructure sites to ensure the security of his men, materials and equipment within the sites and in relation to other Contractors who will also be allotted spaces at above sites.
- xxv. The security of workmen, materials, equipment stores etc, shall be the responsibility of the Contractor.
- xxvi. **Manufacturer's Warranties:**
- a. The Contractor shall ensure that all the manufacturer's warranties are made available to the Employer and the legal documentation between the Contractor and the Supplier must have a transparent pass through of the warranty benefits to the Employer as the user/maintenance Body of the Asset for the entire duration of each available warranty.
 - b. The Contractor shall provide a Warranty that the material is new and free from all defects and faults in workmanship and manufacture and shall be of the highest grade and consistent with the established and generally accepted standards for materials of the type ordered and shall perform in full conformity with the specifications and drawings.
 - c. The Contractor shall be responsible for any defects that may develop under proper use but arising from faulty materials, design or workmanship and shall remedy such defects at its own cost, or get them remedied from the supplier, when called upon to do so by the Employer, who shall state in writing in what respect the material is faulty.
 - d. If it becomes necessary for the Contractor, or on its behalf by the supplier, to replace or renew any defective portion/portions of the material/equipment supplied in the work, the provisions above would also apply to the portion/portions of materials so replaced or renewed until the end of the contract period. If any defect is not remedied within a reasonable time, the Employer may proceed to do the work at the Contractor's risk and cost but without prejudice to any other rights which the Employer may have against the Contractor in respect of such defects. However, for such components, which require immediate replacement, the Employer shall act, and the Contractor shall be required to reimburse that cost.
- xxvii. **Witnessing of Tests by the Engineer:** The Contractor shall make under the direction and in the presence of Engineer, such tests and inspections as have been specified or as the

Engineer shall consider necessary to determine whether or not the full intent of requirements of the specifications and the other related contract documents have been fulfilled. In case the work does not meet the full intent of the specifications and the other related contract documents it shall be rectified by the Contractor at no extra cost and the Contractor shall bear all the expenses for any further tests considered necessary.

- xxviii. **Inspection of materials & Equipment:** The Contractor before supplying of any materials/ equipment shall give an inspection notice well in advance for inspection & testing of the same at the manufacturing units/ shop. The expenditure on account of TA/ DA of inspecting officials of the Employer and its representatives including Consultants for the inspection of the said items shall be borne by the Contractor. However, inspection report issued by the inspecting officials representing the Employer should not be treated as a waiver of quality /performance of equipment & due quality/performance & successful commissioning of equipment is the responsibility of Contractor.
- xxix. The final bill will be submitted by the Contractor within 90 days from the date of acceptance of completion of work accompanied by the following documents:
- Completion certificate issued by the Employer specifying the handing over of the work.
 - No claim certificate by the Contractor.
 - 'As built' drawings and Operation and Maintenance manual
 - O&M Reports
 - Plant Record books.
 - All statutory approvals from various State/Central Govt./Local Bodies /Owner if required for completion & handover of work.
 - All test certificates of manufacturers and test conducted at site as well as outside agencies.
 - "FINAL REPORT" of the completed project containing all Pre & other related details.
- xxx. **Handing over of project:** The Contractor within 15 days from completion of Project including Operation and Comprehensive Maintenance Period. The Contractor shall prepare a list of all inventory/ components and submit to the Engineer.

The Contractor shall certify the following:

- That all payments towards labours and suppliers have been made,
- That the site is free from all materials, and
- That the site is free from all machineries and equipment.

If the project is not taken over by the Owner due to any reason, the Contractor shall provide necessary watch & ward at his own cost which will be reimbursed beyond completion of Operation and Comprehensive Maintenance period till the project is handed over to the Owner.

- xxxi. Along with running bill/ final bill, the Contractor shall submit a progress report (as required in the scope of work) showing various details, photographs of works etc. as per direction of the Engineer in two hard copies and soft copies. Please note that the running / final bill payment shall only be released after submission as aforesaid.
- xxxii. Tender drawings enclosed with the tender documents are indicatives only.
- xxxiii. **Minor details of construction:** The rates quoted by the Contractor shall be deemed to cover for all the minor details / requirement of construction which may not have been specifically shown on the drawings or given in particular specifications, BOQ, but are required as per established engineering practice.

- xxxiv. Documents for supply items: For supply items in BOQ the Contractor shall submit the following documents to the Engineer:
- a) Warranty Cards.
 - b) Manufacturer's test certificate.
 - c) Any other test certificate from an external laboratory to determine the technical Specification.
 - d) Catalogues
 - e) Pollution Control Certificate.
 - f) List of recommended spares with specification and costs thereof.
 - h) Operation & Maintenance manuals.
- xxxv. The quantities of various items as entered in the Templates given in Fin Form 1 regarding Solar PV System and Bill of Quantities for "Civil Works" are indicative only and may vary depending upon the actual requirement. The Contractor shall be bound to carry out and complete the stipulated work irrespective of the variation in individual items specified in the bill of quantities. The variation of quantities will be governed as per clause of contract.

SECTION 5

SCOPE OF WORK AND TECHNICAL SPECIFICATIONS

5.1 Brief Description of Work:

Supply, Installation, Testing and Commissioning of Grid Connected Roof Top Solar Photo-Voltaic System including laying of power cable from Solar Plant to existing electrical lines, Net Metering, SCADA system etc. at various locations in Shillong City Including 5 (Five) Years of Operation and Comprehensive Maintenance Contract (CMC).

5.2 Introduction:

Solar energy production and usage is one of the cleanest and newest technologies leading to more sustainable way to generate power. Rooftop solar forms an essential part of the smart cities development and serves as a remedy towards the growing infrastructural problems of the city to build a smarter and more sustainable future.

With a rapid expansion, there is a need to shift in energy resources and to develop a framework that would encourage and assist cities in assessing their present energy consumption status and setting clear targets for generating energy through renewable energy sources and in conserving energy through energy efficiency measures in delivering urban services. There is a huge potential of solar Photo Voltaic through roof top based Solar Photo Voltaic (SPV) Panels. SPV Panels of different capacities ranging from 5 kW to 50 Kw can be installed on the roof top of Office buildings, hotels, hospitals, institutional buildings, residences, etc. in stand-alone mode as well as integrated mode for its captive use.

The city will focus on transforming the city into a clean and green city. It will implement harnessing of solar energy. It will focus on implementation of solar mission through solar PV roof tops on all government and institutional buildings in the city.

According to the Smart city provisions, the main focus is to install Solar PV on rooftops of institutional and govt. owned complexes in ABD to meet peak power demand. The main aim is as follows below.

- To achieve 7.8 ha area Solar PV on rooftops of Public Buildings
- Output: 12.5 MWh of solar power, which is more than 10% of peak demand.
- Uninterrupted 24x7 Electricity Supply in ABD.

Presently, the Shillong city does not have any significant renewable source of energy (except a very few). Shillong at present, primarily depends on electricity generated from non-renewable sources distributed by Meghalaya Power Distribution Corporation Limited (MePDCL). Overloading on 11kV lengthy feeders is resulting in poor voltage regulations and the old lines having multiple joints in between leading to increase in effective resistance of the line causing high technical losses.

In view of the above, the SSCL has carried out reconnaissance survey and identified 41 nos. building premises to be taken up for implementation of Grid Connected Solar Rooftop PV panels in the Shillong City based on the following parameters.

- Type of roof
- Structural stability of the building
- Shaded and shade free area
- Sanctioned Load/ Connected Load as per MePDCL
- LT panel for voltage and power
- Transformer Capacity
- Mapping roof area, Connected load and Injection voltage

5.3 Major Components of the system:

The following are the major components of the system:

- Solar PV Array
- Array Mounting Structure
- Junction Box
- Grid Tied Power Conditioning Unit (PCU) and Inverter
- Data Logger
- Cables
- Bi-Directional Meter

5.4 Details of identified Buildings for Implementation of Solar PV system:

The details of the identified 41 nos. of buildings for implementation of Grid Connected Roof Top Solar PV systems across the city is summarised below.

Details of buildings identified for Grid connect Solar PV System.

S. No.	Name of the building	Concerned Department/ Agency	Jurisdiction	Available Roof Top Area (Sqm)@ 90% of roof area	Capacity of Solar Plant (KWp)
1	Raitong Building	Urban Affairs Department	State Govt.	415.80	42.00
2	State Disaster Management Authority	Revenue and Disaster Management Department	State Govt.	236.19	6.00
3	Secretariat, Government of Meghalaya	Secretariat Administration Department	State Govt.	882.54	88.00
4	3 rd Secretariat Building	Secretariat Administration Department	State Govt.	812.70	81.00
5	Directorate of Printing and Stationery, Government of Meghalaya	Printing and Stationery Department	State Govt.	2,195.10	189.00
6	Office of the Chief Commissioner of Income Tax	Income Tax Department	Central Govt.	811.44	81.00
7	BSNL Circle Office	BSNL	Central Govt.	882.00	88.00
8	National Informatics Centre (NIC)	Department of IT&C, Govt. of Meghalaya	State Govt.	352.49	35.00
9	Office of Public Works Department (PWD)	Public Works Department	State Govt.	622.80	62.00
10	Office of Public Health and Engineering Department (PHED)	Public Health and Engineering Department	State Govt.	986.90	99.00
11	Jawaharlal Nehru Stadium	Shillong Recreational Grounds Trust (SRGT)	State Govt.	9,252.72	925.00
12	State Sports Council, District Sports Complex (Indoor Stadium)	Department of Sports and Youth Affairs	State Govt.		
13	Indoor Training Hall, Polo, Shillong	Department of Sports and Youth Affairs	State Govt.		
14	The Meghalaya Co-Operative Apex Bank Ltd, Police Bazar	The Meghalaya Co-Operative Apex Bank Ltd.	State Govt.	351.00	35.00
15	Director of Account (Postal) - DAP	Postal and Communication Department	Central Govt.	919.54	92.00
16	District Transport Office	Transport Department	State Govt.	523.09	25.00
17	High Court of Meghalaya	High Court	State Govt.	1,375.61	138.00

Bidding Document for Grid Connected Roof Top Solar Photo-Voltic system for various buildings in Shillong, East Khasi Hills District, Meghalaya under Smart Cities Mission

S. No.	Name of the building	Concerned Department/ Agency	Jurisdiction	Available Roof Top Area (Sqm)@ 90% of roof area	Capacity of Solar Plant (KWp)
18	Meghalaya Public Service Commission Office, Horse Shoe Building	Public Service Commission	State Govt.	1,275.93	100.00
19	State Central Library, Captain Williamson Sangma State Museum	Department of Art and Culture	State Govt.	2,002.50	200.00
20	SSA Football Ground	Shillong Recreational Grounds Trust (SRGT)	State Govt.	2,361.52	236.00
21	Meghalaya Urban Development Authority Complex	Meghalaya Urban Development Authority	State Govt.	604.80	60.00
22	Vendors Market	Shillong Municipal Board (SMB)	State Govt.	1,485.00	149.00
23	Regional office of Meghalaya Board of Secondary Education (MBOSE) Meghalaya State Law Commission Office of the District Treasury Officer	MBOSE and Law Department	State Govt.	826.52	10.00
24	Office of the Director General of Police (DGP)	Police Department	State Govt.	270.00	27.00
25	Pine Mount School	Directorate of School Education and Literacy	State Govt.	681.30	13.00
26	Shillong Public School	Directorate of School Education and Literacy	State Govt.	635.40	14.00
27	Directorate of Higher technical Education	Directorate of Higher & Technical Education	State Govt.	306.00	9.00
28	EMBOSE GUEST HOUSE	Directorate of School Education and Literacy	State Govt.	72.90	4.00
29	Directorate of School Education and Literacy	Directorate of School Education and Literacy	State Govt.	643.50	21.00
30	Government Girl's Higher Secondary School	Directorate of School Education and Literacy	State Govt.	229.50	12.00
31	Government Boy's Higher Secondary School	Directorate of School Education and Literacy	State Govt.	867.60	10.00
32	Office complex of Meghalaya State Warehousing Corporation	Meghalaya State Warehousing Corporation	State Govt.	180.00	7.00
33	Annexe Building to High Court	High Court	State Govt.	900.00	90.00
34	Office of the Transport Commissioner	Transport Department	State Govt.	162.00	10.00
35	Proposed new Multi-Level Car Parking at Motphran	Shillong Smart City Limited	State Govt.	450.00	45.00
36	Existing Multilevel Parking Building at Khlieh Iew	MUDA	State Govt.	2,304.00	230.00
37	Existing Multilevel Parking Building at Mowlonghat	Shillong Municipal Board (SMB)	State Govt.	2,025.00	203.00
38	Existing Multilevel Parking Building opposite to Anjalee Galleria	Shillong Municipal Board (SMB)	State Govt.	2,160.00	216.00
39	Proposed Commercial Complex at Polo	Shillong Smart City Limited	State Govt.	1,800.00	180.00

S. No.	Name of the building	Concerned Department/ Agency	Jurisdiction	Available Roof Top Area (Sqm)@ 90% of roof area	Capacity of Solar Plant (KWp)
40	Proposed Building for Integrated Command and Control Centre (ICCC)	Shillong Smart City Limited	State Govt.	405.00	41.00
41	Proposed Laitumkhrah Market	Shillong Municipal Board (SMB)	State Govt.	1,350.00	135.00
Total Area				44,618.37	4,008.00

4 MWp

*** PLEASE NOTE: THE LIST OF BUILDINGS GIVEN ABOVE IS AS PER THE CURRENT REQUIREMENT, THE SAME IS SUBJECT TO CHANGE AT ANY TIME AT THE DISCRETION OF THE EMPLOYER AS PER VARIATION CLAUSE SUBJECT TO CLAUSE 1.7.**

5.5 Scope of Work

Scope of work include but not limited to Survey, Supply of all accessories and equipment's, Installation, Testing, Commissioning of Grid connected Rooftop Solar Photovoltaic Power Plants including Operations and Comprehensive maintenance services for 5 years with free replacement warranty on spare parts against manufacturing defects up to five years on the buildings mention in the project. It also includes obtaining all the relevant approvals from MePDCL and the respective Electrical Inspectorate of the state.

Detailed Scope of work:

I. For Supply, Installation, Testing, Commissioning and O&M of Grid Connected Solar Power Project.

A. During Construction Stage (Installation to Commissioning)

- a) The Contractor needs to conduct a detailed survey of all the project sites to develop construction drawings⁵ and execution plan mentioning the timelines for each location/ site. The same shall be submitted to the Employer for their acceptance and approval.
- b) The Contractor shall submit duly filled Building wise project report (Format given at Annexure – I of this section) for seeking approval from the Engineer-In-Charge.
- c) The Contractor shall proceed for procurement of the materials only after seeking approval from the Engineer-In-Charge.
- d) All necessary statutory clearances / permissions such as approval from authorities in Meghalaya etc has to be obtained by the Contractor. However, the actual fees (if any) incurred will be paid by the Employer.
- e) Obtaining Net-metering approval for respective buildings from MePDCL for grid connectivity.
- f) Execution of the work shall be carried out in an approved manner as per the technical specification, in case of any dispute relevant MNRE/BIS/ISI specification shall be followed and work carried out to the reasonable satisfaction of the engineer in charge.
- g) Construction of Site office, storage godown for Photo-Voltic Cells, Panel Boards, Cables, junction boxes, Metal sheets etc & other construction material and fabrication yard for reinforcement etc. shall be responsibility of the Contractor.
- h) All the material required for the installation of solar power plant as per the Technical Specification and shall be kept at site in custody of the Contractor. The Employer shall not be responsible for any loss or damage of any material during the installation. The Contractor shall be responsible and take an insurance policy for transit-cum-storage-erection for all the materials.
- i) All labour, materials, tools plants, machinery, equipment, and any other things required for execution for work shall be arranged by the Contractor at his own cost.
- j) All arrangements for establishment, watch & ward of stores and security of sites, appropriate vehicles for transportation etc. shall have to be made by the Contractor at his own cost and nothing extra on this account shall be paid.
- k) All construction equipment required for execution of the work shall be arranged, procured & hired by the Contractor at his own cost along with operations, skilled & semiskilled personnel. The Contractor shall also furnish a list of construction equipment /staff deployment.
- l) The Contractor 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

⁵ *Details and drawings given in this document are for information purpose only and the Contractor shall undertake confirmatory surveys for accuracy and completeness of data. It is in scope of the Contractor to undertake Site surveys as per requirements, obtaining all required approvals from the relevant authorities.*

Electricity Act-2003 and there amendments time to time, Central Electricity Authority (CEA) guidelines and Meghalaya State Electricity Regulatory Commission (MSERC) (Metering for Grid Connected Renewable Energy) Regulation 2015, it shall be responsibility of the Contractor to take approval from concerned authority and engage person as per provisions as per in CEA Rules and Regulations and Inspectorate of Electricity, Government of Meghalaya.

- m) The Contractor shall ensure proper safety of all the workmen, material, plants and equipment related to works. In case any accident occurs during the construction / erection or during guarantee period for work undertaken by Contractor thereby causing any minor or major or fatal accident will be the responsibility of the Contractor. The Contractor 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 etc.
- n) The Contractor shall need to arrange all certificates and test reports of the module and inverter (PCU) and other equipment.
- o) Each array structure of the PV yard should be grounded/ earthed properly as per IS:3043-1987.
- p) Cables used shall be of appropriate size and meet IEC 60227/IS 694, IEC 60502/IS1554 standards, Temp. Range: -10°C to $+80^{\circ}\text{C}$, Voltage rating 660/1000/1500 V.
- q) Danger boards should be provided as and where necessary as per IE Act. /IE rules.
- r) Bidirectional Meters shall be installed at each Solar PV plant for measurement of Import/Export of Energy.
- s) Remote Server and Software for centralized Internet monitoring system shall be provided for download and analysis of cumulative data of all the plants and the data of the solar radiation and temperature monitoring system. The server and software shall be integrated with Shillong Smart City Ltd. Integrated Command and Control Centre (ICCC) to remotely monitor the energy generation.
- t) Third party inspection: The Employer may appoint any approved government agency/Authority or any person for third party inspection of the work, on contractor's cost.
- u) On the completion of the construction work, the CONTRACTOR shall clear away and remove from the site all construction plants, temporary works, surplus material and rubbish of every kind and leave the site and works clean to the satisfaction of the Engineer-in- charge.
- v) The Contractor shall submit duly filled Building wise project completion report for Grid-connected Rooftop Solar (Format given at Annexure – II of this section), and photographs of the installed power plant (Hard & Soft copy) along with the bills.
- w) Performance testing of the complete system (Inspection at Manufacture location and at site) as per IS Code / Standard. The procedure for performance testing is given at Annexure – III of this section.
- x) The Contractor shall prepare 'As Built Drawings' after execution depicting the exact construction carried out on site, other specifications & additional maintenance and Operation manual, in soft and hard copy format.
- y) The Contractor is expected to complete the construction works in 08 (eight) months from the date of signing of the agreement.

B. Five years of Operation and Comprehensive Maintenance Contract (CMC) Period:

- a) The date of Operation and Comprehensive maintenance period shall begin on the date of actual commissioning of Grid Connected Rooftop SPV Power Plant and its net metering connection with existing MePDCL Grid.
- b) The Contractor shall clean the installed PV Modules with plain water or mild dish washing detergent once in a week. The cleaning of Bird droppings / dark spots found on module, if any shall be required to cleaned immediately after notice/ reporting by building owners.

- c) The Contractor shall be responsible for frequently checking of any shade problems due to vegetation or new construction of building, if found, make arrangements for removing the vegetation or moving the panels to a shade-free place.
- d) Ensure that the module terminal connections shall not be exposed while cleaning; this poses a risk of electric shock.
- e) Check the cable insulating sheath for cracks, breaks or burns. If the insulation is damaged, replace the wire.
- f) Register is to be maintained by the Contractor at each location to capture the regular maintenance works. The same may be inspected by the Employer or its Authorized representative at any time during the Operation & CMC period.
- g) The Contractor must adhere to the Operation and Maintenance procedure given in Annexure – IV of this section. It is mandatory for the Contractor to carry out Operation and Maintenance regularly and submit O&M report (Format is given at Annexure – V of this section) to the Employer monthly. Failure to submit monthly O&M reports timely shall invite penalty and action.
- h) The Contractor shall compulsorily submit monthly O&M report to the Employer. Unless otherwise terminated under relevant clauses, this contract shall be deemed to have been completed on the expiry of Operation and Comprehensive Maintenance Contract (CMC) during guarantee period.
- i) To ensure long term sustainability of the system, the bidder must provide his representatives name, full address, mobile number and photographs to the Employer with one hard copy as well as the names and contact details of all technicians must also be provided. Failure to do so shall invite penalty and administrative action.
- j) The Operation and Comprehensive Maintenance Contract shall include servicing & replacement guarantee for parts and components (such as Electronics, Inverter, PV modules and other hardware) of Grid Connected Rooftop SPV Power Plant for five years from the date of installation. PV modules shall be warranted for 25 years.
- k) For any issue related to operation & maintenance, a contact number shall be made available to the consumer to resolve immediately, if the Contractor does not attempt the rectification of any such defect within 07 (Seven) days of communication of such complaint to the bidders, the Contractor will be liable for a penalty of Rs. 100 Per Day beyond 07 (Seven) Days of reporting of such complaint. Further if the outage of the plant is more than 30 days continuously, then the 50% amount shall be deducted by the Employer from the balance amount for that building/ project site of that year and if the outage exceeds more than 60 days then complete balance amount for that building/ project site of that year shall be deducted.

II. Towards “civil works” (water proofing and strengthen/ replacement of metal sheet on the selected buildings.

The Contractor shall be required to undertake the following “civil works” towards strengthening of the roof (RCC/ Metal sheets) for making roof ready for installations of Solar PV systems as directed by the Engineer- In – Charge, if required.

- a) Water Proofing of RCC roofs, if the current condition of the roof of the building is not feasible for Solar PV system installations. Terrace Slabs shall be finished with proper treatment of Water Proofing of approved specifications.
- b) Repair or replacement of metal sheet roof on the buildings where it is necessary before installation of Solar PV system.

The structure stability test reports conducted by the SSCL for building with RCC roof to check strength of the roof and structure are available for most of the buildings. The same shall be shared with the Contractor for their reference, if required.

The brief information of repairing works to be undertaken are:

S.No.	Roof details of Buildings	Nos.	Repairing Requirements	Type of strengthening (civil works)
1	RCC Roof Only*	22	12 Nos. (Approx. 10000 Sq.m of RCC Roof)	Water Proofing of RCC roofs
2	Metal Roof Only**			
a)	Under SSCL	7	0 (New Buildings)	Not required
b)	Other Buildings	10	3 Nos. (Repair/ Replacement of Metal roof of approx. 2500 Sqm)	Repair or replacement of metal sheet roof
3	Combined (RCC + Metal Roof)	2	0 (New Buildings)	Not required

* Based on structure stability test and consultations
**based on Visual Survey and Consultations

For detailed Bill of Quantities on the items and quantities, please refer the template given in the Fin Form 1 for “civil works”.

5.6 Technical Specifications for installation of Solar PV system

DEFINITION:

A Grid Tied Solar Rooftop Photo Voltaic (SPV) power plant consists of SPV array, Module Mounting Structure, Power Conditioning Unit (PCU) consisting of Maximum Power Point Tracker (MPPT), Inverter, and Controls & Protections, interconnect cables, Junction boxes, Distribution boxes and switches. PV Array is mounted on a suitable structure. Grid tied Solar PV system is without battery. Solar PV system shall consist of following equipment's/components.

1. Solar Photovoltaic Power Plant conforming to MNRE specifications as amended, consisting of Mono / Poly Crystalline silicon solar cells
2. Grid interactive Power Conditioning Unit with Remote Monitoring System
3. Aluminium / GI structure of suitable strength for mounting Photo Voltaic Modules
4. Array Junction Boxes & Main junction box with IP-65 protection.
5. Earthing and lightening protections.
6. IR/UV protected PVC Control Cables, necessary channel / conduit lugs and other accessories
7. Main power cables XLPE insulated 1.1 kV grade armoured to connect Grid supply along with PCU.

The primary components of a typical solar rooftop PV plant include the following:

1. Solar Photovoltaic panels (also known as solar PV modules) work by converting sunlight into electricity. Its operation is based on the ability of semiconductors to convert sunlight directly into electricity by exploiting the photovoltaic effect. In the conversion process, the incident energy of light creates mobile charged particles in the semiconductor, which are then separated by the device structure and produce electricity.

Solar Photo voltaic Module of capacity 330Wp or above, manufactured in India, conforming to IS14286 / IEC61215, IS/IEC61730-Part-1, IS/IEC61730-Part-2, conforming to MNRE specifications as amended.

Solar Photo voltaic Module conversion efficiency shall not be less than 16.5%. PV modules used in solar powerplants / systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years.

Protective devices against surges at the PV module shall be provided. Low voltage drop bypass diodes shall be provided

2. Inverters: The electricity generated by the PV panels is Direct Current (DC). This needs to be converted into Alternating Current (AC) using an inverter. As the amount of sunlight falling on the panels varies during the day (due to clouds, etc.), the power output from the panels also varies. As this variation in power could damage equipment, the inverter continuously matches the PV plant's output to another source of steady power.

Maximum power point tracker shall be integrated in the PCU/inverter to maximize energy drawn from the array. The cumulative kVA rating of inverter/s for each PV system shall be according to the technical design and system wattage.

3. Power Conditioning Unit (PCU): PCU of 350-800 VDC Input voltage range and 400VAC, three phase, 4wire, 50Hz+/-2.5Hz, output voltage suitable to generate AC Power with efficiency not less than 97%, total harmonic distortion less than 3% and suitable for ambient temperature from 0to50 degree C. The PCU shall adjust the voltage and frequency level to suit the Grid Voltage Frequency.

PCU should have the following certifications:

- IEC 62109-1, IEC 62109-2: Safety of power converters for use in photovoltaic power systems - Part 1.
- IEC 62116 or, IEEE 1547: Utility-interconnected Photovoltaic Inverters - Test Procedure of Islanding Prevention Measures.
- IEC 61727:2004 Photovoltaic (PV) systems - Characteristics of the utility interface is being added, along-with “Technical Standards for Connectivity of the Distributed Generation Resources” as published by Central Electricity Authority (CEA), Ministry of Power, Government of India.
- IEC 60068-2 (1, 2, 14, 30 & 64): Environmental Testing of PV System – Power Conditioners and Inverters
- IEC 60068-2-1: Environmental testing -Part 2-1: Tests - Test A: Cold
- IEC 60068-2-2: Environmental testing -Part 2-2: Tests - Test B: Dry heat.
- IEC 60068-2-64: Environmental testing - Part 2-64: Tests - Test Fh: Vibration, broadband random and guidance.
- IEC 60068-2-30: Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle).
- IEC 60068-2-14: Environmental testing - Part 2-14: Tests - Test N: Change of temperature

4. AC DISTRIBUTION PANEL BOARD:

AC Distribution Panel Board (DPB) shall control the AC power from PCU/ inverter and should have necessary surge arrestors. Interconnection from ACDB to mains at LT Bus bar while in grid tied mode without Battery option. For plants with Battery this shall also have provision to keep all priority loads, DG/Grid Selection switch and one By-pass switch. The ratings of all switches should be at least 150% of the maximum current flowing through them.

All switches and the circuit breakers, connectors should conform to IEC 60947, part I, II and III/ IS60947 part I, II and III or equivalent IS wherever applicable.

All indoor panels will have protection of IP54 or better. All outdoor panels will have protection of IP65 or better. The panels shall be designed for minimum expected ambient temperature of 45 °C, 80 percent humidity upto maximum of 50 °C and dusty weather.

The Panels shall be metal clad, totally enclosed, rigid, floor / Wall mounted, air - insulated, cubical type suitable for operation on three phase / single phase, 415 or 230 volts, 50 Hz.

5. JUNCTION BOXES (JBs):

The junction boxes are to be provided in the PV array for termination of connecting cables. The J. Boxes (JBs) shall be made of Polycarbonate /GRP/FRP/Powder Coated Aluminium /cast aluminium alloy with IP 66 degree of protection. 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 bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification. All fuses shall have DIN rail mountable fuse holders and shall be housed in thermoplastic IP 65 enclosures with transparent covers.

DC DPBs shall have sheet from enclosure of dust & vermin proof conform to IP 65 protection. The bus bars are made of copper of desired size. Suitable capacity MCBs/MCCB shall be provided for controlling the DC power output to the PCU along with necessary surge arrestors.

Copper bus bars/terminal blocks housed in the junction box with suitable termination threads conforming to IP65 standard and IEC 62208 Hinged door with EPDM rubber gasket to prevent water entry. Single / double compression cable glands. Provision of earthing's.

Each Junction Box shall have High quality Suitable capacity Metal Oxide Varistors (MOVs) / SPDs, suitable Reverse Blocking Diodes or 1000/1500 V grade Solar fuses of min two times rating of max short circuit current of string. The Junction Boxes shall have suitable arrangement monitoring and disconnection for each of the groups.

All fuses shall have DIN rail mountable fuse holders and shall be housed in thermoplastic IP 65 enclosures with transparent covers.

6. MOUNTING EQUIPMENT / STRUCTURE:

Hot dip galvanized MS mounting structures may be used for mounting the modules/panels/arrays. Each structure should have angle of inclination as per the site conditions to take maximum installation. However, to accommodate more capacity the angle inclination may be reduced until 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. It may be ensured that the design has been certified by a recognized Lab/ Institution in this regard and submit wind loading calculation sheet to the Employer. Suitable fastening arrangement such as grouting and calming should be provided to secure the installation against the specific wind speed.

The mounting structure steel shall be as per latest IS 2062: 1992 and galvanization of the mounting structure shall be in compliance of latest IS 4759.

The fasteners used should be made up of stainless steel. The structures shall be designed to allow easy replacement of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels.

Regarding civil structures the bidder need to take care of the load bearing capacity of the roof and need arrange suitable structures based on the quality of roof.

Proper Water-proofing shall be done wherever its necessary.

Structural material shall be corrosion resistant and electrolytic alloy compatible with the materials used in the module frame, its fasteners, nuts and bolts.

7. PRE-DISPATCH INSPECTION:

The Employer shall carry out Factory acceptance test (FAT) on need basis of the OEM in order to check their compliance with the specifications. All the cost associated with FAT will be to the account of Contractor.

8. MATERIAL WARRANTY:

The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a period not less than Twenty-five (25) years from the date of sale to the original customer ("Customer").

Non conformity to specifications due to faulty manufacturing If the solar Module(s) fails to conform to this warranty, the bidder will repair or replace the solar module(s), at the Owners sole option A certificate of warranty to be provided by Original Equipment Manufacturer (OEM), giving warranty for 25 years.

The list of manufacturing units of the OEM also to be provided. It may be noted that the contractor who has been awarded the order against this RFP, shall take the necessary warranty from their vendor as a measure of compliance before executing the project. Non-submission of such warranty before supplies may result in cancellation of the order.

9. NET METERING:

Net metering is the concept which records difference between generated energy and consumed energy from MePDCL grid during billing cycle. The building with Roof Top Solar shall pay for the net energy in a billing period as per applicable retail supply tariff as determined by regulatory commission, if the supplied energy by the MePDCL is more than the injected energy by the solar PV sources of the consumer(s).

Meghalaya State Electricity Regulatory Commission (MSERC) for Meghalaya has issued "(Metering for Grid Connected Renewable Energy) Regulation 2015". The installation of Roof Top Solar Power Plants under this scheme will also be governed by the rules & regulations of MSERC, Metering for Grid-connected Renewable Energy Regulation 2015 and other related regulations as notified by MSERC and amended time to time.

The Contractor shall bear the entire cost of PV installation and Net meter including its accessories. The installation of meters, at each site, shall be carried out by the Contractor.

10. LIGHTNING PROTECTION:

The SPV power plants shall be provided with lightning and overvoltage protection. The main aim in this protection shall be to reduce the over voltage 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 the entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors. Lightning protection should be provided as per IEC 62305 standards. The protection against induced high-voltages shall be provided by the use of metal oxide varistors (MOVs) and suitable earthing such that induce transients find an alternate route to earth.

11. SURGE PROTECTION:

Internal surge protection shall consist of three MOV type surge arrestors connected from +ve and -ve terminals to earth (via Y arrangement).

12. DATA ACQUISITION SYSTEM / PLANT MONITORING:

Data Acquisition System shall be provided for each of the solar PV plant.

Data Logging Provision for plant control and monitoring, time and date stamped system data logs for analysis with the high quality, suitable PC. Metering and Instrumentation for display of systems parameters and status indication to be provided. A seven (7) day and one year data log reports of plant are to be submitted with project completion report (after commissioning) and Monthly O&M and CMC reports respectively as a requisite document.

Solar Irradiance: An integrating Pyrometer / Solar cell-based irradiation sensor (along with calibration certificate) provided, with the sensor mounted in the plane of the array. Readout integrated with data logging system.

Temperature: Temperature probes for recording the Solar panel temperature and/or ambient temperature to be provided complete with readouts integrated with the data logging system.

PV array energy production: Digital Energy Meters to log the actual value of AC/ DC voltage, Current & Energy generated by the PV system provided. Energy meter along with CT/PT should be of 0.5 accuracy class.

String and array DC Voltage, Current and Power, Inverter AC output voltage and current (All 3 phases and lines), AC power (Active, Reactive and Apparent), Power Factor and AC energy (All 3 phases and cumulative) and frequency shall be monitored.

Computerized AC energy monitoring shall be in addition to the digital AC energy meter.

Remote Server and Software for centralized Internet monitoring system shall be provided for download and analysis of cumulative data of all the plants and the data of the solar radiation and temperature monitoring system. The server and software shall be integrated with Shillong Smart City Ltd. / Integrated Command and Control Centre (ICCC) to remotely monitor the energy generation.

Remote Monitoring and data acquisition through Remote Monitoring System software at the owner / PEC location with latest software/hardware configuration and service connectivity for online / real time data monitoring / control complete to be supplied and operation and maintenance / control to be ensured by the Contractor.

The Contractor shall be obligated to push real-time plant monitoring data on a specified intervals (say 15 minute) through open protocol at receiver location (cloud server) in XML/JSON format, preferably. Suitable provision in this regard will be intimated to the Contractor.

13. EARTHING PROTECTION:

Each array structure of the PV yard should be grounded/ earthed properly as per IS:3043-1987. In addition, the lighting arrester/masts should also be earthed inside the array field. Earth Resistance shall be tested in presence of the representative of MePDCL as and when required after earthing by calibrated earth tester. PCU, ACDB and DCDB should also be earthed properly.

Earth resistance shall not be more than 5 ohms. It shall be ensured that all the earthing points are bonded together to make them at the same potential.

14. POWER CABLES:

Cables of appropriate size to be used in the system shall meet IEC 60227/IS 694, IEC 60502/IS1554 standards, Temp. Range: -10°C to $+80^{\circ}\text{C}$, Voltage rating 660/1000/1500 V.

Flexible Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop (power loss) of the entire solar system to the minimum (2%).

For the DC cabling, XLPE or, XLPO insulated and sheathed, UV stabilized single core multi-stranded flexible copper cables shall be used; multi-core cables shall not be used. The DC cables from the SPV module array shall run through a UV stabilized PVC conduit pipe of adequate diameter with a minimum wall thickness of 1.5mm.

All cables and connectors for use for installation of solar field must be of solar grade which can withstand harsh environment conditions including High temperatures, UV radiation, rain, humidity, dirt, salt, burial

and attack by moss and microbes for 25 years and voltages as per latest IEC standards. DC cables used from solar modules to array junction box shall be solar grade copper (Cu) with XLPO insulation and rated for 1.1kV as per relevant standards only.

15. DANGER BOARDS AND SIGNAGES:

Danger boards should be provided as and where necessary as per IE Act. /IE rules as amended up to date. Text of the signage may be finalized in consultation with the Employer.

16. DRAWINGS & MANUALS:

Two sets of Engineering, electrical drawings and Installation and O&M manuals are to be supplied. Contractor shall provide complete technical data sheets for each equipment giving details of the specifications along with make/makes along with basic design of the power plant and power evacuation, synchronization along with protection equipment. ISI Approved and reputed makes for equipment be used.

For complete electro-mechanical works, Contractor shall supply complete design, details and drawings for approval of Engineer-in-Charge before progressing with the installation work.

17. IDENTIFICATION AND TRACEABILITY:

Each PV module used in any solar power project must use a RF identification tag. The following Information must be mentioned in the RFID used on each module (This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions.)

- a. Name of the manufacturer of PV Module
- b. Name of the Manufacturer of Solar cells
- c. Month and year of the manufacture (separately for solar cells and module)
- d. Country of origin (separately for solar cells and module)
- e. I-V curve for the module at Standard Test Condition (1000 W/m², AM 1.5, 250C)
- f. Wattage, I_m, V_m and FF for the module
- g. Unique Serial No and Model No of the module.
- h. Date and year of obtaining IEC PV module qualification certificate
- i. Name of the test lab issuing IEC certificate
- j. Other relevant information on traceability of solar cells and module as per ISO 9000.
- k. Site owners would be required to maintain accessibility to the list of Module IDs along with the above
- l. parametric data for each module.

18. 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:

Item	Standards	Description
	IEC 61215/ IS 14286	Design Qualification and Type Approval for Crystalline Silicon Terrestrial Photovoltaic (PV) Modules

Item	Standards	Description
Solar Modules/ Panels	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/ IEEE1547(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)	Environmental Testing of PV System – Power Conditioners and Inverters a) IEC 60068-2-1: Environmental testing - Part 2-1: Tests - Test A: Cold b) IEC60068-2-2: Environmental testing - Part 2-2: Tests - Test B: Dry heat c) IEC60068-2-14: 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 - Part2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)

Item	Standards	Description
	IEC 61000 – 2,3,5 (as applicable)	Electromagnetic Interference (EMI) and Electromagnetic Compatibility (EMC) testing of PV Inverters
Fuses	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
Surge Arrestors	IEC 60269-6	Low-voltage fuses - Part 6: Supplementary requirements for fuse-links for the protection of solar photovoltaic energy systems
	IEC 62305-4	Lightning 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, IEC60502/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	IEC62561 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 electrode
	IEC62561 Series (Chemical earthing) 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
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 after due consultation with the Employer and MePDCL.

LIST OF APPROVED MAKES / BRANDS

The contractor is required to use the approved makes as per the MPWD (Buildings) Electrical Division Schedule of Rates 2021-22 for the items during the construction works. In case, the item mentioned under above mentioned MPWD SOR is not available during execution, the item can be changed after taking approval from Engineer – In Charge.

5.7 Technical Specifications for Civil Works

Specifications (Vol. 1 and 2), as published by the Central Public Works Department (CPWD), Government of India in 2019 and as amended from time to time will be applicable for the project, unless otherwise mentioned hereinunder. The Technical Specifications mentioned in CPWD Specifications are the minimum required specifications and the Employer/Client reserves the right to select products/material that exceed the specifications. Contractors are required to submit the manufacturer datasheets, wherever applicable.

LIST OF APPROVED MAKES / BRANDS

The contractor is required to use the approved makes as per the MPWD (Buildings) Schedule of Rates 2021-22 for the items during the construction works. In case, the item mentioned under above mentioned MPWD SOR is not available during execution, the item can be changed after taking approval from Engineer – In Charge.

Annexure – I

Project Report Format

Format for Summary Project Report for Grid Connected Rooftop Power Plants

1. Name of Contractor:
2. Project details (Site location & Address):
3. Brief about the Rooftop Solar Power Generation System:
4. Specifications of the Components and Bill of Material/ Quantities:

S.No	Component	Specifications	Quantity	Make
A	Solar PV module capacity (kWp)			
B	Grid Tie PCU (Type and Capacity(kVA))			
C	Module mounting structure (Certified by a Structural Engineer			
D	Array Junction Box			
E	AC Distribution Board			
F	Cable (All type)			
G	Earthing Kit (maintenance free)			
H	Online monitoring System			
I	Any other component required, which are not included in this list.			

5. Unit cost of solar power generation:
6. Expected output/annum:
7. Respective drawings for layout, electrical wiring connections, earthing, components etc.:
8. Connectivity details with grid and metering arrangement (with sketch diagram):
9. Copy of electricity bill of the building:
10. Any other information:

Annexure – II

Work Completion - Building wise Report for Grid-Connected Rooftop solar system

Site / Building Name			
Site / Building Details			
Technology Description & System Design /Specification			
(Compliance to BIS/IEC Standards is mandatory)			
Project Components	Unit	Quantity	
1. PV Module			
Capacity / Power of Each PV Module (Wp)			
Cumulative capacity of Modules (KWp)			
Solar Cell Technology			
Module efficiency (in %)			
2. Power Conditioning Unit(PCU)			
Type of PCU:			
Make of iPCU:			
Capacity / Power of PCU / Inverters (KVA):			
Inverter efficiency (full Load): (in %)			
3. Metering			
Detail of Metering			
Type of Meter			
Make of Meter			
4. Other Information's			
Units of electricity generated by the solar plant as per meter (in KWh):			
Monitoring Mechanism:			
No. of personnel to be trained in O&M:			
Task & Expected Schedule (in Months):			
5. Grid connectivity level:			
Grid connectivity level phase*:			
Installed Capacity (KWp)			

Annexure – III

Procedure for Performance Testing

Operational Acceptance Test Procedure

Part A: Performance Ratio (PR) - Test Procedure

1. Performance Ratio as determined through the PR Test Procedure specified here should not be less than 0.75 for Operational Acceptance Test.
2. The Performance Ratio Test to prove the guaranteed performance parameters of the power plant shall be conducted at site by the Contractor in presence of the Employer representative. The Contractor shall make the plant ready to conduct such tests. The Operational Acceptance Test shall be commenced, within a period of one (1) month after successful Commissioning and, there will be continuous monitoring of the performance for 30 days. Any extension of time beyond the above one (1) month shall be mutually agreed upon. These tests shall be binding on both the parties to the contract to determine compliance of the equipment with the guaranteed performance parameters. This monitoring will be performed on the site under the supervision of the Employer / Engineer In charge.
3. The test will consist of guaranteeing the correct operation of the plant over 30 days, by the way of the efficiency rate (performance ratio) based on the reading of the energy produced and delivered to the grid and the average incident solar radiation.
4. PR shall be demonstrated against the installed DC Capacity.
5. The Efficiency or performance ratio (PR) of the PV Plant is calculated as follows (according to IEC 61724)

Performance Ratio (PR) = YA / YR

Where;

YA = Final (actual measured) PV system yield in kilo-watt hours at the point of measurement during the testing period, and

YR = Reference yield calculated as the product of the insolation on the plane of the collector (i.e. PV modules) in kWh/ m² during the testing period and the installed DC capacity of the plant in kW.

Monitoring System for PR Verification

The following instrumentation will be used to determine the Solar Plant Performance:

- Power Meter at the delivery point.
- Power Meter for each inverter for reference only.
- One no. calibrated pyranometer to determine irradiance on the plane of array (with a target measurement uncertainty of ± 2).
- One no. calibrated pyranometer to determine irradiance on horizontal plane (with a target measurement uncertainty of ± 2)
- Two nos. thermocouples to measure module temperature with a measurement uncertainty of ± 1 °C.
- Shielded ventilated thermocouple with a measurement accuracy of ± 1 °C.
- Data measurement shall be witnessed in the format mutually agreed before the start of PR test by the employer and the Contractor jointly for the said period.
- The Contractor shall show the specified PR for Operational Acceptance.

The procedure for Performance Guarantee Test (PGT) - cum- Final Acceptance Test- shall be as follows:

1. A weather station with a calibrated pyranometer shall be installed by the Contractor at the location mutually agreed by the Contractor and the Employer and MePDCL. The test report for the calibration shall be submitted by the Contractor for approval by the Employer and MePDCL. The calibration should be traceable to a national/international laboratory. The output of this pyranometer for shall be logged in the Data Logger system.
2. In case the pyranometer is found to be working erratically then immediately the Contractor shall take necessary steps to rectify and/or recalibrate the instrument to the satisfaction of the Employer and MePDCL. However, for the dispute period for which such error has occurred and until the instrument is recalibrated to the satisfaction of MePDCL, data from any one of the following the list of sources as decided by MePDCL will be used:
 - i. A separate pyranometer installed by the Contractor near the site
 - ii. Average of two closest solar power projects, as identified by MePDCL.
 - iii. Nearest MNRE weather station
3. "Actual Delivered Energy" from the plant supplied by the Contractor (each building / site) shall be noted for every month and summed up for entire year. For this purpose, the net delivered energy at the metering point shall be taken into account.
4. Further, if the plant is not able to achieve the CUF of 13.5% during PGT and O&M period and there is a shortfall in energy generation, then the Contractor shall be penalized as per relevant Clause of the Tender.
5. The Contractor shall share with MePDCL all the radiation, generation, etc. parameters details and all other factors necessary for MePDCL to corroborate the estimate. Employer / MePDCL has the right to cross verify data submitted by the Contractor by all possible means/sources.

Following factors may be noted for computing the Base CUF:

1. Effect due to variation in annual insolation shall only be considered for computing the Base CUF.
2. Effect due to variation of meteorological parameters e.g., ambient temperature, wind speed, humidity etc. shall not be considered.
3. Generation loss due to grid outage (or power evacuation system which is not in the scope of the Contractor): The measured global solar radiation of the period of the outage of the power evacuation system shall be excluded to calculate average global solar radiation for the period of PGT and O&M.

Plant Performance Evaluation

The Contractor shall be required to meet minimum guaranteed generation with Performance Ratio (PR) at the time of commissioning and related Capacity Utilization Factor as per the GHI (Global Horizontal Irradiance) 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 payment. Minimum CUF (Capacity Utilization Factor) of 13.5% should be maintained for a period of 5 Years to achieve annual CUF within + 10% and - 15% of the declared value for fulfilling one of the conditions for release of for release of PBG.

The bidder should send the periodic plant output details to MePDCL for ensuring the CUF. The PR will be measured at inverter output level during peak radiation conditions. The PR and CUF will be calculated as per the methods quoted in Document. The Contractor is not authorized to work on

MePDCL's HT and LT lines, without obtaining permit to work from the office of the concerned Engineer In charge of the Distribution Sub Division, MePDCL. Subjected to approval from the concerned officer, the work may be undertaken and duly returned the permission on completion of the work.

Annexure – IV

Operation and Maintenance Guidelines of Grid Connected PV Plants

For the optimal operation of a PV plant, maintenance must be carried out on a regular basis.

All the components should be kept clean. It should be ensured that all the components are fastened well at their due place.

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

The panels are cleaned at least once in a week.

- Any bird droppings or spots should be cleaned immediately.
- Use water and a soft sponge or cloth for cleaning.
- Do not use detergent or any abrasive material for panel cleaning.
- Iso-propyl alcohol may be used to remove oil or grease stains.
- Do not spray water on the panel if the panel glass is cracked or the back side is perforated.
- Wipe water from module as soon as possible.
- Use proper safety belts while cleaning modules at inclined roofs etc.
- The modules should not be cleaned when they are excessively hot. Early morning is particularly good time for module cleaning.
- 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.
- Ensure that the module terminal connections are not exposed while cleaning; this poses a risk of electric shock.
- Never use panels for any unintended use, e. g. drying clothes, chips etc.
- Ensure that monkeys or other animals do not damage the panels.

CABLES AND CONNECTION BOXES

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

INVERTER

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

SHUTTING DOWN THE SYSTEM

Disconnect

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

INSPECTION AND MAINTENANCE SCHEDULE

Component	Activity	Description	Interval	By
PV Module	Cleaning	Clean any bird droppings/ dark spots on module	Immediately	User/Technician
	Cleaning	Clean PV modules with plain water or mild dishwashing detergent. Do not use brushes, any types of solvents, abrasives, or harsh detergents.	Once in a week or as per the site conditions	User/Technician
	Inspection	Need to check the PV Module efficiency	Half Yearly	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.	Immediately as per the site conditions and half yearly	User/Technician
	Vermin Removal	Remove bird nests or vermin from array and rack area.	Once in a month	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.	Half yearly	Electrician
Wiring	Inspection	Inspect cabling for signs of cracks, defects; loose connections, overheating, arcing,	Half Yearly	Electrician

Component	Activity	Description	Interval	By
		short or open circuits, and ground faults.		
Inverter (PSU)	Inspection	Observe instantaneous	Monthly	Electrician
	Service	Clean or replace If found defective.	As needed	Electrician

Annexure – V

Format for Monthly O&M and CMC Report

[On the letterhead of Bidding Company]

To
 The Chief Executive Officer (CEO)
 Shillong Smart City Limited (SSCL),
 House No. C/B-037, Top Floor,
 Centre Nongrim Hills, Near JJ Cables, Shillong,
 East Khasi Hills District, Meghalaya - 793003

Dear Sir,

Subject: Grid Connected Roof Top Solar Photo-Voltic system for various buildings in Shillong, East Khasi Hills District, Meghalaya under Smart Cities Mission.

Name of the Building and Site:

Project Capacity:

Address of the site:

Date:

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 dish washing detergent			
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				
Junction Boxes	Inspection	Inspect electrical boxes for corrosion, Intrusions 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.			
Plant	Monitoring	Daily operation and performance monitoring			
Spare Parts	Management	Manage inventory of spare parts			
Log Book	Documentation	Maintain Daily Log records.			

Total generation for the month in kWh:

Cumulative generation since commissioning in kWh:

CUF for month in %:

Cumulative CUF since commissioning in %:

(Signature of Authorized Signatory)

Name:

Designation:

Company Seal

SECTION 6: DRAWINGS

Enclosed separately

SECTION 7: FORM OF BID

TECH FORM – 1: LETTER OF TECHNICAL BID

_____ [Date]

To
The Chief Executive Officer (CEO)
Shillong Smart City Limited (SSCL),
House No. C/B-037, Top Floor,
Centre Nongrim Hills, Near JJ Cables, Shillong,
East Khasi Hills District, Meghalaya - 793003

Name of the Work: _____

I/ We offer to execute the works described above and remedy any defects therein in conformity with the Conditions of Contract, specifications, drawings and Corrigenda/Addenda.

We are submitting our proposal in JV/ Consortium/ association with [insert name of the JV Member, if applicable]

We hereby confirm that this Bid complies with the requirements as stipulated in the Bidding Document for Bid validity (for a period of 180 days as per Clause no. 18 of ITB) and Bid Security/ Earnest Money Deposit.

This Bid and your written acceptance of it shall constitute a binding Contract between us. We undertake to commence the works on receiving the Notice to Proceed with work in accordance with the contract documents.

We hereby declare that all the information and statements made in this proposal are true and accept that (i) any misinterpretation contained in it, and (ii) non-disclosure of required information may lead to our disqualification.

We understand that you are not bound to accept the lowest or any Bid you receive.

Authorized Signature:

Name and Title of Signatory:

Name of Bidder:

Authorized Address of communication:

Telephone No(s):

(Office) : _____

Mobile No. : _____

Facsimile (FAX) No. : _____

Electronic Mail Identification (E-Mail ID): _____

TECH FORM – 2: BIDDERS INFORMATION SHEET

Name of the Bidder	
Name of the JV/Association partner if any	
Address of Registered Office of Lead Bidder	
Year of Establishment:	
Contact Person with Contact Details: (Name, address, telephone numbers, fax numbers, e-mail address)	
Annual Turnover* in last three years (in Lakhs) FY 2021-22: FY 2020-21: FY 2019-20: Average Annual Turnover for above three Financial Years: *Financial Statements to be enclosed	
PAN Number	
GST Number	
Any Other Relevant Details:	
<p>*Enclose the copies of the following original documents.</p> <p><input type="checkbox"/> 1. In case of single entity, articles of incorporation or constitution of the legal entity named above.</p> <p><input type="checkbox"/> 2. Authorization to represent the firm or JV named in above.</p> <p><input type="checkbox"/> 3. In case of JV or Consortium or Association, relevant Agreement.</p> <p><input type="checkbox"/> 4. In case of a government-owned entity, any additional documents not covered under 1 above.</p>	

Each member of a JV or Consortium or Association must fill in this form

For brevity, only JV is mentioned below

JV / Specialist Sub-Contractor Information	
Bidder's legal name	
JV Partner's or Specialist Sub-Contractor's legal name	
JV Partner's or Specialist Sub-Contractor's country of constitution	
JV Partner's or Specialist Sub-Contractor's year of constitution	
JV Partner's or Specialist Sub-Contractor's legal address in country of constitution	
JV Partner's or Specialist Sub-Contractor's authorized representative information (name, address, telephone numbers, fax numbers, e-mail address)	
*Enclose the copies of the following original documents.	
<input type="checkbox"/> 1. Articles of incorporation/constitution or Partnership Deed (as applicable) of the legal entity named above	
<input type="checkbox"/> 2. Authorization to represent the firm named above.	
<input type="checkbox"/> 3. In the case of government-owned entity, documents establishing legal and financial autonomy and compliance with commercial law.	

TECH FORM – 2A: JV AGREEMENT

Joint Venture Agreement (*Similar Consortium Agreement/ Association Agreement to be signed in case of a Consortium/ Association)
(On Rs 200/- Non-judicial Stamp Paper)

Memorandum of Understanding for

JOINT VENTURE

This Memorandum of Understanding (hereinafter referred to as "**MOU**") is made and entered into this ----- ("**Effective Date**").

BETWEEN

M/s. _____, a company incorporated, and having its registered office at _____. (Hereinafter referred to as the "**First Party**"/ "**One Partner**").

M/s. _____) a company incorporated, and having Registered office at _____. (Hereinafter referred to as the "**Second Party**"/ "**Each Partner**").

Hereinafter jointly referred to as the "**Parties**" and individually as "**Each Party**" or "**a Party**" as the case may be.

WHEREAS,

A) **SHILLONG SMART CITY LIMITED, Shillong, Meghalaya (hereinafter referred to as the SSCL or procuring entity)** invited bid for _____ [name of the work]

(B) The Parties hereto formed a Joint Venture or will form a joint venture (hereinafter referred to as the "**JV**") to jointly execute the above project in all respect

NOW THEREFORE IT IS HERE BY AGREED as follows

ARTICLE 1: JOINT VENTURE:

- 1.1. The Parties hereto agree to form the Joint Venture with _____ designated as the One Partner and First Partner.
- 1.2. _____ shall be the Second Member – or Second Partner

ARTICLE 2: JOINT VENTURE NAME:

2. The JV shall do business in the name of " _____ Joint Venture".

ARTICLE 3: JOINT AND SEVERAL LIABILITY:

3. The Parties hereto shall, for the above-referred Projects, be jointly and severally liable to the Employer for the execution of the Projects in accordance with the Contract till the actual completion of Contract including Operations & comprehensive maintenance period as per bid conditions.

ARTICLE 4: PROPORTIONATE SHARE:

- 4.1 Each member of the Joint Venture agrees to place at the disposal of the Joint Venture, the benefit of all its experience, technical knowledge and skill, and shall in all respects bear its share of responsibility and burden of completing the contract. The parties herein shall be responsible for physical and financial distribution of work as under.

Lead Partner:

Financial responsibility: -----

Physical responsibility: -----

Other Partner:

Financial responsibility: -----

Physical responsibility: -----

- 4.2 All rights, interests, liabilities, obligations, risks, costs, expenses and pecuniary obligations and all net profits or net losses arising out of the Contract shall be shared or borne by the Parties in the above Proportions.
- 4.3 The members in the proportion as mention in article 4.1, shall contribute sufficient Initial fixed capital for timely execution of the project including commissioning & operating period as per the contract.

ARTICLE 5: JOINT EFFORT AND MANAGEMENT:

- 5.1 The Parties shall participate as a JV in the submission of bids and further negotiations with the Employer and shall co-operate and contribute their respective expertise and resources to secure and execute the Projects.
- 5.2 On award of Projects, the First Partner in consultation with the other member of JV will decide on the final management structure for the successful execution of the Projects as per the terms of Contract.
- 5.3 All the Parties hereby agree to pool in their financial, administrative, managerial, technical and material resources for execution of the Projects, including commissioning & operation for the period as stipulated in the contract. The share of interest of the JV shall be as per the mutual understanding for the successful completion of the project.

ARTICLE 6: EXCLUSIVITY:

- 6.1 The co-operation between the Parties hereto shall be mutually exclusive i.e., none of them shall without the other Party's consent & prior approval of SSCL, approach or cooperate with any other parties in respect of the Project.
- 6.2 In the course of working as associates, the parties to the JV will be sharing information with each other which may be proprietary /confidential information /knowledge acquired by each other. It is hereby agreed that the parties will maintain complete secrecy regarding such information / knowledge and will not divulge to any party for any other purpose except for the success of the joint

execution of the contract. All parties will also indemnify each other against any claim that may arise out of using information, which are being claimed proprietary.

ARTICLE 7: MEMORANDUM OF UNDERSTANDING:

7.1 This Memorandum of Understanding shall be terminated: -

- a. if the Parties mutually confirm that the JV's bid proposal has not been finally accepted by Employer and all rights and obligations of the Parties under or in connection with this Memorandum of Understanding have ceased, or
- b. after successful completion of the project including commissioning & operation and Comprehensive Maintenance period from the date of this Memorandum of Understanding unless extended for a further period on demand of SSCL & mutual consent of the Parties, or

7.2 The Memorandum of Understanding can be modified by mutual consent of the Parties to suit the efficient and expeditious execution of Projects including commissioning & operation of Plant or to make this agreement more meaningful to suit the requirements of Employer after the consent of the Employer.

ARTICLE 8: ARBITRATION:

8.1 Any dispute resulting from this Agreement shall be settled amicably by mutual Consultation by the Managing Directors/ Chairman of _____ & _____. In the event that an amicable settlement is not reached within 60 days in any particular case, the dispute shall be referred to arbitration and shall be resolved in accordance with and subject to the provisions of the _____ and any statutory modifications and enactment hereof for the time being in force. The decision of the arbitrators shall be final and binding upon both parties. The venue of arbitration will be _____.

ARTICLE 9: GOVERNING LAWS:

9.1 This Agreement shall in all respects be governed by and interpreted in accordance with the _____ Laws.

ARTICLE 10: CONFIDENTIALITY:

10.1 No Party hereto shall disclose to any other party any information of a confidential nature including but not limited to trade secrets, know-how acquired from any Party in connection with the subject matter of this Agreement.

ARTICLE 11: ADDRESS OF CONSORTIUM:

11.1 Any and all correspondence from the Employer to the JV shall be addressed to (name of JV) at the address stated herein below– (any one of the partners). The address of the Consortium office of the partner companies will be deemed to be the address for the purpose of communication. The notice, if any required to be served on the party by the other party, will be deemed to be served, if the said notice / communication is delivered by Registered Post at the respective address (name of JV)

ARTICLE 12: AUTHORIZED REPRESENTATIVE:

12.1 The JV shall nominate a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution.

Authorized Representative of JV: _____

ARTICLE 13: ASSIGN ABILITY:

13.1 The interests and rights of a Party in the Contract and as a Party of the Joint Venture shall not be transferable or assignable without the written consent of the Employer & other party.

ARTICLE 14: INTERPRETATION OF HEADINGS:

14.1 The headings of each of the Articles herein contained are inserted merely for convenience of reference and shall be ignored in the interpretation and construction of any of the provisions herein contained.

ARTICLE 15: OTHERS

15.1 Any other matters not contained in this Agreement shall be discussed and amicably agreed upon by the Parties in the spirit of mutual trust and cooperation for timely completion of project including commissioning & operation of project. Notwithstanding anything above all the Parties are severally and jointly responsible to the Employer for execution of the Contract:

IN WITNESS WHEREOF the Parties hereto have caused this Agreement to be executed by each of the duly authorized representatives as appearing below: -

Signed by
For and on behalf of (_____)
Designation:
Name:
Designation:

in the presence of
Name:

Signed by
For and on behalf of (_____)
Designation:
Name:
Designation:

in the presence of
Name:

TECH FORM – 2B(1): FORMAT FOR POWER OF ATTORNEY AUTHORISING THE LEAD MEMBER OF A JV (or Consortium/ Association, as applicable)

[To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant Stamp Act. The stamp paper to be in the name of the company who is issuing the power of attorney]

To know all men by these presents that we parties whose details are as follows;

1. M/s _____, having its registered office at _____ (hereinafter referred as “___”, which the term shall unless otherwise repugnant to the context shall mean and include all its successors and permitted assigns) and represented by its _____

2. M/s _____, having its registered office at _____ (hereinafter referred as “___”, which the term shall unless otherwise repugnant to the context shall mean and include all its successors and permitted assigns) and represented by its _____

Have entered into a JV agreement for the purpose of tender for _____ vide tender No: ___ and with our principal place of business at _____ herein after referred as "___", which the term shall unless otherwise repugnant to the context shall mean and include all its successors and permitted assigns)

We, the above said parties, through this power of attorney mutually agrees to hereby constitute, nominate and appoint "_____", who is the lead member of the JV as our duly constituted Lawful Attorney (hereinafter referred as "Lead Member") to exercise all or any of the powers for and on behalf of the JV Members in regards to the Specification No. _____, the bids for which have been invited by the Shillong Smart City Limited (herein after referred to as "SSCL")

- a. To submit proposal and participate in the above-mentioned bid specification of SSCL on behalf the “JV”.
- b. To negotiate with the Purchaser the terms and conditions for award of the contract pursuant to the above-mentioned bid and to sign the Contract with SSCL for and on behalf of the “JV”.
- c. To do any other act or submit any document related to the above.
- d. To receive, accept and execute the contract for and on behalf of the “JV”.
- e. To authorise any person, employee or otherwise to represent the Lead Member and JV for doing the aforesaid
- f. In the event of an order placed on the JV the work shall be executed as per the terms and conditions of the Purchase Order issued and the Agreement executed between SSCL and the JV.

It is expressly understood that this Power of Attorney shall remain valid, binding and irrevocable until the completion of the tender or till the completion of the tenure of contract to be executed between the JV and Shillong Smart City Limited, if tender is awarded in favour of the JV.

We hereby agree to ratify all the acts, deeds and things lawfully done by the Lead Member and its authorised person/s pursuant to this Power of Attorney and that all acts, deeds and things done by above mentioned Lead Member shall always be deemed to have been done by us.

IN WITNESS THEREOF, the Members constituting the JV as previously mentioned have executed these presents on this ___ day of ___ 20__ under the Common Seal(s) of their companies.

For _____

For _____

Authorized Signatory

Authorized Signatory

**TECH FORM – 2B(2): FORMAT FOR POWER OF ATTORNEY AUTHORISING
SIGNATORY OF BID**

[To be executed on non-judicial stamp paper of the appropriate value in accordance with relevant Stamp Act. The stamp paper to be in the name of the company who is issuing the power of attorney]

Know by all men by these presents, We _____ (Name of the Bidder and address of their registered office) do hereby constitute, appoint and authorize Mr. / Ms _____ (name and residential address of Power of attorney holder) who is presently employed with us and holding the position of _____ as our true and lawful attorney (hereinafter referred to as the "Authorized Representative") to do in our name and on our behalf, all such acts, deeds and things as are necessary or required in connection with or incidental to submission of our Proposal for the Bid for "**Grid connected Roof Top Solar Photo-Voltaic System at various building in Shillong, East Khasi Hills District, Meghalaya**" under Smart City Mission Including but not limited to signing and submission of all applications, proposals and other documents and writings, participating in pre bid and other conferences and providing information/responses to SSCL, representing us in all matters before SSCL, signing and execution of all contracts and undertakings consequent to acceptance of our proposal and generally dealing with SSCL in all matters in connection with or relating to or arising out of our Proposal for the said Project and/or upon award thereof to us till the entering into of the Agreement with SSCL.

AND, we do hereby agree to ratify and confirm all acts, deeds and things lawfully done or caused to be done by our said Authorized Representative pursuant to and in exercise of the powers conferred by this Power of Attorney and that all acts, deeds and things done by our said Authorized Representative in exercise of the powers hereby conferred shall and shall always be deemed to have been done by us.

IN WITNESS WHEREOF WE, THE ABOVE-NAMED PRINCIPAL HAVE EXECUTED THIS POWER OF ATTORNEY ON THISDAY OF, 20**

For _____

Name:

Designation:

Date:

Time:

Seal:

Business Address:

Witness:

1.

2.

Notarized Accepted

Signature of the Applicant
(Signature, name, designation, and address)

Bid for "Construction of a Commercial Complex at Polo, Shillong" under Smart City Mission.

Accepted,
_____ (Signature)

(Name, Title and Address of the Attorney)

Note:

- 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 when it is so required the same should be under common seal affixed in accordance with the required procedure.
- The Power of Attorney shall be provided on a stamp paper of Rs.200/- and above
- The Power of Attorney should be supported by a duly authorized resolution of the Board of Directors of the Bidder authorizing the person who is issuing this power of attorney on behalf of the Bidder.

CERTIFICATE AS TO AUTHORISED SIGNATORIES

I _____, the Company Secretary of _____, certify that _____ who signed the above Bid is authorized to do so and bind the company by authority of its board/ governing body.

Date:

Signature:

(Company Seal) (Name)

TECH FORM – 3A: FINANCIAL CAPACITY

Each Bidder or member of a JV or Consortium or Association must fill in this form

SN	Description	Financial Data for Latest Last 3 Years (Indian Rupees)		
		Year 2019-20	Year 2020-21	Year 2021-22
1	Total Assets			
2	Current Assets			
3	Total external Liabilities			
4	Current Liabilities			
5	Profits Before Taxes			
6	Profits After Taxes			
7	Net Worth = (1-3)			
8	Working Capital = (2-4)			
9	Annual Turnover			

*Enclose the copies of financial statements (balance sheets including all related notes, and income statements) for the last THREE years, as indicated above, complying with the following conditions.

- All such documents reflect the financial situation of the legal entities comprising the Bidder or partner to a JV, and not sister or parent companies, subsidiaries or affiliates
- financial statements must be audited by a certified accountant. In case, Audited report of immediate FY2021-22 is not available, a certified copy by Chartered Accountant of unaudited account statement is to be submitted.
- financial statements must be complete, including all notes to the financial statements.
- financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).

TECH FORM – 3B: AVERAGE ANNUAL TURNOVER FROM CONSTRUCTION WORKS

Each Bidder or member of a JV or Consortium or Association must fill in this form (Certified by Chartered Accountant).

Annual Turnover Data for the Last 3 Years (Construction works only)			
Year	Amount Currency	Exchange Rate	INR Equivalent
Year-3 2021-22			
Year-2 2020-21			
Year-1 2019-20			
Average Annual Construction Turnover for the Last 3 Years			

The information supplied should be the Annual Turnover of the Bidder or each member of a JV in terms of the amounts billed to Clients for each year for work in progress or completed, converted to INRs at the rate of exchange at the end of the period reported.

TECH FORM – 4A: AVAILABILITY OF FINANCIAL RESOURCES

Specify proposed sources of financing, such as liquid assets, lines of credit, and other financial resources (means other than any Contractual advance payments), available to meet the financial resources requirements. Each Bidder or member of a JV must fill in this form.

Financial Resources		
SN	Source of financing	Amount (INR equivalent)
•		
•		
•		

Note:

- i. The bidder shall provide supporting documents like letter from the Banks for the revolving line of credit facility etc specific to the project if applicable for its declared availability of financial resources.
- ii. Bidder shall provide details on available credit facility from each source of financing after utilizing to the commitments

**TECH FORM – 4B: SAMPLE FORMAT FOR EVIDENCE OF ACCESS TO OR
AVAILABILITY OF CREDIT FACILITIES**

BANK CERTIFICATE

This is to certify that M/S ----- is a reputed company with a good financial standing.

If the contract for the work, namely, _____ is awarded to the above firm, we shall be able to provide overdraft/credit facilities to the extent of Rs. _____ to meet their working capital requirements for executing the above contract.

Signature of Senior Bank Manager _____

Name of the senior Bank Manager _____

Address of the Bank -----

Stamp of the Bank

Note: Certificate should be on the letter head of the bank.

TECH FORM – 4C: FORMAT OF SOLVENCY CERTIFICATE

No.....

To

.....

This is to state that to the best of our knowledge and information, Mr. / Ms. / M/s a customer of our Bank is respectable and can be treated as good up to a sum of Rs..... (Rupees in words).

It is clarified that this information is furnished without any risk and responsibility on our part in any respect whatsoever more particularly either as guarantor or otherwise. This certificate is issued at the specific request of the customer.

Signature of Bank Manager _____

Name of the Bank Manager _____

Address of the Bank -----

Stamp of the Bank

Place:

Date:

Note:

- (i) Certificate should be on the letter head of the bank and to be signed by Bank Manager/ Senior Bank Manager.
- (ii) In case of partnership firm, the certificate shall include name of all the partners as recorded with Bank.

TECH FORM – 5: CURRENT CONTRACT COMMITMENTS / WORKS IN HAND

Bidder (or each JV partner) should provide information indicated below in order to calculate the aggregated financial resources requirement, which equals the sum of: (i) the Bidder's (or each JV partner's) current commitments on all contracts that have been awarded, or for which a letter of intent or acceptance has been received, or for contracts approaching completion, but for which an unqualified, full completion certificate has yet to be issued and (ii) financial resources requirement for subject contract as determined by the Employer. Bidder must also disclose any other financial obligations that could materially affect the implementation of subject contract if such contract were to be awarded to the Bidder.

Description of Work	Place & State	Contract No. & Date	Name and Address of Employer	Value of Contract (Rs. lakhs)	Stipulated period of completion	Value of works remaining to be completed (Rs. lakhs)	Anticipated date of completion
1	2	3	4	5	6	7	8

TECH FORM – 6: BIDDING CAPACITY INFORMATION & DECLARATION

(To be submitted by bidder through affidavit)

Bidders (JV put together) who meet the minimum qualification criteria will be qualified only if their available bid capacity for construction work is equal to or more than the total bid value. The available bid capacity will be calculated as under:

$$\text{Assessed Available Bid capacity} = (A*N*M - B)$$

Where,

A = Maximum value of civil engineering works executed in any one year during the last seven years (updated to the price level of the last year at the rate of 8 percent a year) taking into account the completed as well as works in progress.

N = Number of years prescribed for completion of the works for which bids are invited (period up to 6 months to be taken as half-year and more than 6 months as one year). $M = 2.5$

B = Value, at the current price level, of existing commitments and on-going works to be completed during the period of completion of the works for which bids are invited.

Note:

- i. The statements showing the value of existing commitments and on-going works as well as the stipulated period of completion remaining for each of the works listed should be countersigned by the Engineer in charge, not below the rank of an Executive Engineer or equivalent.
- ii. In the case of a JV or Consortium or Association, the above formula will be applied to each member to the extent of the proposed participation in the JV or Consortium or Association. If the proposed % participation is not mentioned, then equal participation will be assumed.

Example for calculation of bid capacity in case of JV or Consortium or Association

Suppose there are 'P' and 'Q' members of the JV or Consortium or Association with their participation as 70% and 30% respectively and available bid capacity of these members as per above formula individually works out 'X' and 'Y' respectively, then Bid Capacity of the JV or Consortium or Association shall be as under:

$$\text{Bid Capacity of the JV or Consortium or Association} = 0.7X + 0.3Y$$

TECH FORM – 7: BIDDER’S EXPERIENCE IN SIMILAR WORKS

Each Bidder or member of a JV or Consortium or Association must fill in this form

General Construction Experience				
Starting Month Year	Ending Month Year	Years	Contract Identification and Name; Name and Address of Employer; and Brief Description of the Works Executed by the Bidder (including value of works)	Role of Bidder

TECH FORM – 7(A): DETAILES OF EACH OF THE SIMILAR WORK

(List projects in the last Ten years which are similar to that in the RFP)

[The following information should be provided in the format below for each reference assignment for which your firm, either individually as a corporate entity or as one of the major companies within a consortium, was legally contracted by the Employer stated below.]

Name of the Project:	Approx. value of the contract (in current `):
Country: Location within country:	Duration of contract (months):
Name of Client:	
Address:	
Start date (month/year): Completion date (month/year):	
Name of joint venture partner or associated partner if any:	
Name of senior regular full-time employees of the firm involved and functions performed (indicate most significant profiles such as Project Director/Coordinator, Team Leader):	
Narrative description of Project:	
Description of actual services* provided in the Contract:	

Firm's Name: __

Signature of Authorized Representative:

Note:

- Copy of Work Order/Agreement, Completion Certificate in support of above experience shall be furnished by the Bidder.
- Details of only "completed" works as defined at Clause 4 of the ITB shall be furnished by the Bidder.

TECH FORM – 8A: SITE ORGANIZATION

(Bidder shall insert the Site Organization information)

The Bidder shall supply a table of personnel and a chart showing the proposed organization to be established for (i) carrying out the construction works during all phases of works included under this Contract package like mobilization; preparation of Service Improvement Plan; design, drawing, construction and commissioning separately.

TECH FORM – 8B: APPROACH & METHODOLOGY

(Bidder shall insert the Approach & Methodology complying to the following)

1. The bidder is required to submit Approach and Method Statement for carrying out all the activities under this project.
2. The activities for methodology shall also include following:
 - a. Bidder's assessment of site(s), availability of construction materials, labour, etc.
 - b. Surveys/Investigations, if required,
 - c. Preparation of phasing of works,
 - d. Construction Methodology for various works,
 - e. Implementation schedule as per scope of works:
 - f. Proposed Safety Plan / safety measures to be put in place,
 - g. Proposed mechanism to protect environment,
 - h. Any other activities

TECH FORM – 8C: MOBILIZATION SCHEDULE

(Bidder shall insert the Mobilization Schedule)

The Bidder shall submit mobilization and de-mobilization schedule of personnel and equipment in detail for all phases of works. The mobilization schedule should include mobilization of skilled and unskilled manpower, different machineries and equipment, materials, as required in each Phase.

TECH FORM – 8D: WORK PLAN AND CONSTRUCTION SCHEDULE

(Bidder shall insert the Work plan and Construction Schedule)

The Contractors will submit detailed work plan as part of technical bid covering all sections of work to achieve sectional and full work key milestones as shown in Employer's Requirement

The Bidder shall prepare and submit overall construction schedule. The construction schedule shall be designed and documented in a series of tasks and task assignments complete with projected completion target dates with the aid of computer operated management software like Microsoft project office, Primavera or latest by using Gantt charts and PERT diagrams to allow all actors to know their contribution towards fulfilling the Employer's Requirement.

TECH FORM – 8E: EQUIPMENT

The Bidder shall provide adequate information to demonstrate clearly that it has the capability to meet the requirements for the key equipment listed in Clause 4.4.3(a) of ITB. A separate Form shall be prepared for each item of equipment listed, or for alternative equipment proposed by the Bidder.

Item of equipment		
Equipment information	Name of manufacturer	Model and power rating
	Capacity	Year of manufacture
Current status	Current location	
	Details of current commitments	
Source	Indicate source of the equipment <input type="checkbox"/> Owned <input type="checkbox"/> Rented <input type="checkbox"/> Leased <input type="checkbox"/> Specially manufactured	

Please provide the following additional information in case of equipment proposed to be taken on rent or lease:

Owner	Name of owner	
	Address of owner	
	Telephone	Contact name and title
	Fax	Telex
Agreements	Details of rental / lease / manufacture agreements specific to the project	

Note: For owned equipment, copy of bills/invoices are to be furnished (only owned equipment are to be given marks during evaluation of Bids).

Item of Equipment	Requirement			Owned and available		Remarks
	No.	Capacity	Owned	Number/ Capacity	Age/ Condition	

TECH FORM – 8F: PERSONNEL

Bidders should provide the names of suitably qualified personnel to meet the specified requirements stated in Clause 4.4.3 (b) if ITB. The data on their experience should be supplied using the Form below for each candidate.

1.	Title of position*
	Name
2.	Title of position*
	Name
3.	Title of position*
	Name
4.	Title of position*
	Name
5.	Title of position*
	Name
6.	Title of position*
	Name
7.	Title of position*
	Name

TECH FORM – 8F(i): RESUME OF PROPOSED PERSONNEL

1. Proposed Position:

2. Name of Firm:

3. Name of Staff:

4. Date of Birth:

5. Nationality:

6. Education:

[Indicate college/university and other specialized education of staff member, giving names of institutions, degrees obtained, and dates of obtainment]:

7. Other Training:

8. Languages [For each language indicate proficiency: good, fair, or poor in speaking, reading, and writing]:

9. Employment Record:

[Starting with present position, list in reverse order every employment held by staff member since graduation, giving for each employment (see format here below): dates of employment, name of employing organization, positions held.]:

From [Year]: To Year]:

Employer:

Positions held:

10. Work Undertaken that Best Illustrates Capability to Handle the Tasks Assigned

[Among the Assignment/jobs in which the staff has been involved, indicate the following information for those Assignment/jobs that best illustrate staff capability to handle the tasks listed under point 12.]

Name of Assignment/job or project:

Year:

Location:

Employer:

Main project features:

Positions held: Activities

performed:

11. Certification:

I, the undersigned, certify that to the best of my knowledge and belief, this CV correctly describes myself, my qualifications, and my experience. I understand that any wilful misstatement described herein may lead to my disqualification or dismissal, if engaged.

Date:

[Signature of staff member or authorized representative of the staff]

Place:

[Full name of authorized representative]

TECH FORM – 9: PENDING LITIGATIONS

Each Bidder or member of a JV or Consortium or Association must fill in this form

Pending Litigation			
No pending litigation and arbitration in accordance with Clause 4.2(j) of ITB.			
or			
Below is the description of all Pending litigation and arbitration involving the bidder (or each JV member if Bidder is a JV member) in accordance with Clause 4.2(j) of ITB			
Year & Client	Matter in Dispute	Value of Pending Claim in INR	Value of Pending Claim as a Percentage of Net Worth

TECH FORM – 10: FORMAT FOR DECLARATION BY THE BIDDER FOR NOT BEING BLACKLISTED / DEBARRED

(To be submitted on the Letterhead of the Bidder)
(To be provided by Lead bidder and all members of Consortium in separate letters)

Date: dd/mm/yyyy

To

Subject: Declaration for not being debarred / black-listed by any Ministry/Department/Agency of Central Government/any State Government/any Union Territory or PSU or Local Body in India as on the date of submission of the bid

RFP Reference No: XX

Dear Sir,

I, authorized representative of _____, hereby solemnly confirm that the Company _____ is not debarred / black-listed by any Central/State Government/ PSU entity in India or similar agencies globally for unsatisfactory past performance, corrupt, fraudulent or any other unethical business practices or for any other reason as on last date of submission of the Bid. In the event of any deviation from the factual information/ declaration, SSCL reserves the right to reject the Bid or terminate the Contract without any compensation to the Company.

Thanking you,

Yours faithfully,

Signature of Authorized Signatory (with official seal)

Date:

Name:

Designation:

Address:

Telephone & Fax:

E-mail address:

TECH FORM – 11: INTEGRITY PACT

To

The Chief Executive Officer,
Shillong Smart City Limited (SSCL)
Shillong, Meghalaya.

Sub: Submission of Tender for the work of _____
[name of the work]

Dear Sir,

I/We acknowledge that Shillong Smart City Limited (SSCL) is committed to follow the principles thereof as enumerated in the Integrity Agreement enclosed with the tender/bid document.

I/We agree that the Notice Inviting Tender (NIT) is an invitation to offer made on the condition that I/We will sign the enclosed Integrity Agreement, which is an integral part of tender documents, failing which I/We will stand disqualified from the tendering process. I/We acknowledge that THE MAKING OF THE BID SHALL BE REGARDED AS AN UNCONDITIONAL AND ABSOLUTE ACCEPTANCE of this condition of the NIT.

I/We confirm acceptance and compliance with the Integrity Agreement in letter and spirit and further agree that execution of the said Integrity Agreement shall be separate and distinct from the main contract, which will come into existence when tender/bid is finally accepted by SSCL. I/We acknowledge and accept the duration of the Integrity Agreement, which shall be in the line with Article 1 of the enclosed Integrity Agreement.

I/We acknowledge that in the event of my/our failure to sign and accept the Integrity Agreement, while submitting the tender/bid, SSCL shall have unqualified, absolute and unfettered right to disqualify the tenderer/bidder and reject the tender/bid in accordance with terms and conditions of the tender/ bid.

Yours faithfully

(Duly authorized signatory of the Bidder)

To be signed by the bidder and signatory competent / authorized to sign the relevant contract on behalf of SSCL

INTEGRITY AGREEMENT

This Integrity Agreement is made at..... on this day of..... 20

BETWEEN

Shillong Smart City Limited (SSCL) represented through the Chief Executive Officer, (Hereinafter referred as the '**Principal/Owner**', which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

..... (Name and Address of the Individual/firm/Company) through (Details of duly authorized signatory) (Hereinafter referred to as the "**Bidder/Contractor**" and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Preamble

WHEREAS the Principal / Owner has floated the Tender (Tender No) (Hereinafter referred to as "Tender/Bid") and intends to award, under laid down organizational procedure, contract for (Name of work) hereinafter referred to as the "Contract".

AND WHEREAS the Principal/Owner values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness/transparency in its relationship with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as "Integrity Pact" or "Pact"), the terms and conditions of which shall also be read as integral part and parcel of the Tender/Bid documents and Contract between the parties.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Pact witnesses as under:

Article 1: Commitment of the Principal/Owner

- (1) The Principal/Owner commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - a) No employee of the Principal/Owner, personally or through any of his/her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - b) The Principal/Owner will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal/Owner will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
 - c) The Principal/Owner shall endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
- (2) If the Principal/Owner obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC)/Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the

Principal/Owner will inform the Chief Vigilance Officer of Meghalaya and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

- (1) It is required that each Bidder/Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government /Department all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
- (2) The Bidder(s)/Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:
 - a) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal/Owner's employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.
 - b) The Bidder(s)/Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
 - c) The Bidder(s)/Contractor(s) will not commit any offence under the relevant IPC/PC Act. Further the Bidder(s)/Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal/Owner as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - d) The Bidder(s)/Contractor(s) of foreign origin shall disclose the names and addresses of agents/representatives in India, if any. Similarly, Bidder(s)/Contractor(s) of Indian Nationality shall disclose names and addresses of foreign agents/representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participates in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.
 - e) The Bidder(s)/Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.
- (3) The Bidder(s)/Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
- (4) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice means a wilful misrepresentation or omission of facts or submission of fake/forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and/or to influence the procurement process to the detriment of the Government interests.
- (5) The Bidder(s)/Contractor(s) will not, directly or through any other person or firm use Coercive Practices (means the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his/ her reputation or property to influence their participation in the tendering process).

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal/Owner under law or the Contract or its established policies and laid down procedures, the Principal/Owner shall have the following rights in case of breach of this Integrity Pact by the Bidder(s)/Contractor(s) and the Bidder/ Contractor accepts and undertakes to respect and uphold the Principal/Owner's absolute right:

- (1) If the Bidder(s)/Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal/Owner after giving 14 days' notice to the Contractor shall have powers to disqualify the Bidder(s)/Contractor(s) from the Tender process or Terminate/determine the Contract, if already executed or exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal/Owner. Such exclusion may be forever or for a limited period as decided by the Principal/Owner.
- (2) Forfeiture of EMD/Performance Guarantee/Security Deposit: If the Principal/Owner has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated/determined the Contract or has accrued the right to terminate/determine the Contract according to Article 3(1), the Principal/Owner apart from exercising any legal rights that may have accrued to the Principal/Owner, may in its considered opinion forfeit the entire amount of Earnest Money Deposit⁶, Performance Guarantee and Security Deposit of the Bidder/Contractor.
- (3) Criminal Liability: If the Principal/Owner obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of IPC Act, or if the Principal/Owner has substantive suspicion in this regard, the Principal/Owner will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

- (1) The Bidder declares that no previous transgressions occurred in the last 5 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central/State Public Sector Enterprises in India that could justify his exclusion from the Tender process.
- (2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the Tender process or action can be taken for banning of business dealings/ holiday listing of the Bidder/Contractor as deemed fit by the Principal/ Owner.
- (3) If the Bidder/Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal/Owner may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Sub-Contractors

- (1) The Bidder(s)/Contractor(s) undertake(s) to demand from all sub-Contractors, if applicable, a commitment in conformity with this Integrity Pact. The Bidder/Contractor shall be responsible for any violation(s) of the principles laid down in this agreement/Pact by any of its Sub-Contractors/sub-vendors.
- (2) The Principal/Owner will enter into Pacts on identical terms as this one with all Bidders and Contractors.
- (3) The Principal/Owner will disqualify Bidders, who do not submit, the duly signed Pact between the Principal/ Owner and the bidder, along with the Tender or violate its provisions at any stage of the Tender process, from the Tender process.

Article 6- Duration of the Pact

⁶ If applicable

This Pact begins when both the parties have legally signed it. It expires for the Contractor/Vendor 12 months after the completion of work under the contract or till the continuation of Operation and Comprehensive Maintenance period, whichever is more and for all other bidders, till the Contract has been awarded. If any claim is made/lodged during the time, the same shall be binding and continue to be valid despite the lapse of this Pacts as specified above, unless it is discharged/determined by the Competent Authority, CPWD.

Article 7- Other Provisions

- (1) This Pact is subject to Indian Law, place of performance and jurisdiction is Shillong, Meghalaya.
- (2) Changes and supplements need to be made in writing. Side agreements have not been made.
- (3) If the Contractor is a Joint Venture or Consortium or Association, this Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners and consortium members. In case of a Company, the Pact must be signed by a representative duly authorized by board resolution.
- (4) Should one or several provisions of this Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- (5) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Agreement / Pact, any action taken by the Owner/Principal in accordance with this Integrity Agreement/ Pact or interpretation thereof shall not be subject to arbitration.

Article 8- LEGAL AND PRIOR RIGHTS

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contract documents with regard any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

(For and on behalf of Principal/Owner)

(For and on behalf of Bidder/Contractor)

WITNESSES:

1
(signature, name, and address)

2
(signature, name and address)

Place:

Dated

TECH FORM – 12: CERTIFICATE FROM THE BIDDERS REGARDING COMPLIANCE

Format for Certification in accordance with Clause 3 of the ITB

Certificate

"I have read the clause regarding restrictions on procurement from a bidder of a country which shares a land border with India; I certify that this bidder is not from such a country or, if from such a country, has been registered with the Competent Authority⁷. I hereby certify that this bidder fulfils all requirements in this regard and is eligible to be considered. *[Where applicable, evidence of valid registration by the Competent Authority shall be attached]*

⁷ For the purpose of this registration, Competent Authority is as defined in the Office Memorandum No. F.No.6/18/2019-PPD dated 23rd July, 2020 of the Public Procurement Division, Department of Expenditure, Ministry of Finance, Govt. of India.

FIN FORM – 1: LETTER OF FINANCIAL BID

[to be submitted in Financial Bid Envelope]

Dated:

To,

The Chief Executive Officer (CEO)
Shillong Smart City Limited (SSCL),
House No. C/B-037, Top Floor,
Centre Nongrim Hills, Near JJ Cables, Shillong,
East Khasi Hills District, Meghalaya - 793003

Name of the Work: _____

We, the undersigned, declare that:

- a. We have examined and have no reservations to the Bidding Documents, including Addenda issued,
- b. We offer to execute in conformity with the Bidding Documents and the Technical Bid submitted for the following Works: Grid Connected Roof Top Solar Photo-Voltic system for various buildings in Shillong, East Khasi Hills District, Meghalaya under Smart Cities Mission.
- c. We undertake that the prices are in conformity with the specifications prescribed. The quote/ price are inclusive of all cost likely to be incurred for executing this work. The prices are inclusive of all type of government taxes/ duties in the financial bid.
- d. We undertake, if our bid is accepted, to deliver the goods and services in accordance with the deliverables schedule specified in clause 11 of SCC of the RFP.
- e. We undertake to successfully operationalize the Project as per scope of work mentioned in the RFP document.
- f. We understand that any additional hardware and software required to make the Project operational shall have to be provided by us.
- g. The total Price Bid is Rs..... (In figures and words). The total Price bid includes cost towards A) "Implementation of Solar PV systems" is Rs. (In figure and words), and B) "Civil works" is Rs..... (In figure and words).
- h. We confirm, 20% of Payment towards "implementation of Solar PV systems" shall be made in equal installments of 4% each for five years on submission of the annual O&M report for Solar PV system.
- i. Our Bid shall be valid for a period of 180 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- j. If our Bid is accepted, we commit to obtain a performance security in accordance with the Bidding Documents,
- k. We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed; and

- I. We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Signature of Authorised Person

Name

In the capacity of

Signed

Duly authorized to sign the Bid for and on behalf of

Date

Company Seal

Template for Financial Bid

Project Name: Grid Connected Roof Top Solar Photo-Voltic system for various buildings in Shillong, East Khasi Hills District, Meghalaya under Smart Cities Mission.

The Price bid is inclusive of Costs towards A) Implementation of Solar PV systems and B) Civil Works. The price for both components are given below.

Summary of Price Bid:

S.No.	Components	Price (In Figure)	Price (In Figure)
A	Implementation of Solar PV systems		
B	Civil Works		
Total Price Bid (A+B)			

The detailed break-up of components is given below.

The above price is inclusive of GST and other taxes.

Signature of Authorised Person

Name

In the capacity of

Signed

Duly authorized to sign the Bid for and on behalf of

Date

Company Seal

A) Implementation of Solar PV systems

The Price for Supply of all accessories and equipment's, Installation, Testing, Commissioning of Grid connected Rooftop Solar Photovoltaic Power Plants including Operations and Comprehensive maintenance services for 5 years with free replacement warranty on spare parts against manufacturing defects up to five years on the various buildings in Shillong as per detailed scope & specification of RFP.

Description of Item	Unit	Capacity (In KWp)	Rate (Rs. Per KWp)	Total cost (Rs.)
<p>"Supply, Installation Testing and Commissioning of on grid Solar Photovoltaic Power Plant conforming to MNRE specifications as amended, consisting of Mono/Poly Crystallin) silicon solar cells, net metering facility, necessary protections, earthing, mounted on Aluminium/GI structure of suitable strength with following components complete as required: -</p> <p>a) Solar Photovoltaic Module of capacity 330 Wp or above, manufactured in India, conforming to IS 14286/IEC 61215, IS/IEC 61730-(Part-1), IS/IEC 61730-(Part-2). Solar Photovoltaic Module conversion efficiency shall not be less than 16.5%o. PV modules used in solar power plants/ systems must be warranted for their output peak watt capacity, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years."</p> <p>"b) Power Conditioning Unit (PCU) of 350-800 V DC Input voltage range and 400 V AC, three phase, 4 wire, 50Hz +-2.5Hz, output voltage suitable to generate AC Power with efficiency not less than 97%, total harmonic distortion less than 3 % and suitable for ambient temperature from 0 to 50 degree C. The PCU shall adjust the voltage and frequency level to suit the Grid Voltage Frequency.</p> <p>c) Data Monitoring System complete with accessories.</p> <p>d) Fixing of Array junction box & Main junction box with IP 65 protection and termination arrangement for incoming and outgoing cable along with glands, lugs and other accessories etc. as required.</p> <p>e) Lightning and surge voltage protection.</p> <p>f) Connections & Interconnections by supplying & fixing required size XLPE insulated copper conductor 1.1 kV grade armoured power and control cables between solar modules, main power cable to grid supply PCU unit along with supplying & fixing of necessary channel / conduit lugs and other accessories etc. as required."</p> <p>Including 5 years of Operation & Comprehensive Maintenance Period.</p>	KWp	4000		

Total Price for Implementation of Solar PV system (A) is Rs..... (in figure & Words)

Note:

- a) Above quoted price for Grid Connected Rooftop Solar Power Plants are complete in all respect as per Technical Specifications inclusive of all Central/State/Local taxes & duties, packing, forwarding,

transit insurance, loading & unloading, transportation & other charges etc. for destination at any places in Meghalaya and inclusive of installation, testing, commissioning, operation & maintenance, performance testing, training and 5 years CMC charges.

- b) Certified that rates quoted for Rooftop Solar Power Plants and Civil items are as per specifications, terms & conditions mentioned in the bid document.
- c) The above-mentioned Price/ rates are inclusive of GST.
- d) Price will be quoted in complete numeric figure and words.
- e) Shillong Smart City Limited (SSCL) does not guarantee the quantity for the particular line items given above. The actual quantity for the given items may vary. The payment shall be made based on unit cost quoted for the particular item on actual work/ item is undertaken/ supplied.
- f) All items provided should be under Insurance. The Insurance should be for entire duration of the Project including operation and comprehensive maintenance period covering damages for occurring on account of Force Majeure, Malicious Act, Accidental Damage, Explosion, Fire, Terrorism etc as per clause 13 for GCC.

Signature of Authorised Person

Name

In the capacity of

Signed

Duly authorized to sign the Bid for and on behalf of

Date

Company Seal

B) Towards “Civil Works”

The Bill of Quantities for carrying out “Civil works” including the water proofing works on selected RCC roofs and strengthen/ replacement of metal sheet on the selected buildings as directed by the Engineer-In-Charge.

Bill of Quantities for “Civil Works”

1. The Bill of Quantities (BOQ) shall be read in conjunction with the Instructions to Bidders, General and Particular Conditions of Contract, Specifications, and Drawings.
2. The quantities given in the BOQ are estimated and provisional and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Employer’s Representative and valued at the rates and prices bid in the priced BOQ, where applicable, and otherwise at such rates and prices as the Employer’s Representative may fix within the terms of the Contract.
3. Description of items is given briefly and is linked with relevant clauses & sections of Technical Specifications (CPWD, whichever is applicable) specified in this Bidding Document. For detailed description, provisions and interpretation, the Technical Specifications are to be referred. In case of any discrepancy between the description given in the BoQ and that given in the Technical Specifications, the one given in the Technical Specifications will prevail.
4. The rates and prices bid in the priced Bill of Quantities shall, except as otherwise provided under the Contract, include all construction equipment, labour, supervision, materials, surveying, setting out, erection, maintenance, insurance, profit, taxes (including GST), and duties, together with all general risks, liabilities, and obligations set out or implied in the Contract.
5. Submissions shall be strictly in accordance with the documents and shall not be qualified in any way. The Bidder shall not alter the text of the BOQ.
6. Extra and excess items of work shall not vitiate the Contract. The Contractor shall be bound to execute extra items of work as directed by the Engineer. The rates for extra items will be as per rates decided under Contract Conditions.
7. All rules and regulations of the labour department, contract labour Laws, provident fund and employee state insurance and connected Laws, and all other Laws of the land are to be complied with by the Bidder within the quoted rates.
8. Contractor shall make arrangements for required space for construction of, office and stores at suitable locations. No land will be provided by the Employer to the Contractor for constructing any structure for his labour, workman and supervisory camps, un-authorized hutments, at the Site or within the premises. The Contractor shall make his/her own arrangements for the same outside the premises/boundary. These, if any, shall be with the knowledge of and prior approval of the Employer’s Representative.

BOQ for Civil Works

S.No.	MPWD (B) 2021- 22 SOR	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE (Rs.)	AMOUNT (Rs. In fig.)	AMOUNT (In Words)
A. Repairing the RCC Surface in Roof Slab							
1	17.47	Hacking of CC flooring including cleaning of surface etc. complete as per direction of the Engineer-In-Charge.	Sqm	10,193.37			
2	25.7	Providing and laying integral cement-based water proofing treatment including preparation of surface as required for treatment of roofs, balconies, terraces etc. consisting of following operations:					
a.		Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to Is:2645 and approved by Engineer-in charge over the PCC slab including adjoining walls up to 300 mm height including cleaning the surface before treatment.					
b.		Laying brick bats with mortar using broken bricks/ brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement: 5 coarse sand) admixed with water proofing compound conforming to Is:2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar Of mix 1 :5 (1 cement: 5 coarse sand) admixed with water proofing compound conforming to Is:2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls up to 300 mm height including rounding of junctions of walls and slabs					

S.No.	MPWD (B) 2021- 22 SOR	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE (Rs.)	AMOUNT (Rs. In fig.)	AMOUNT (In Words)
c.		After two days of proper curing applying a second coat of cement slurry using 2.75 kg/sqm of cement admixed with water proofing compound conforming to Is:2645 and approved by Engineer-in-charge.					
d.		Finishing the surface with 20 mm thick jointless cement mortar of mix 1 :4 (1 cement: 4 coarse sand) admixed with water proofing compound conforming to Is:2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with neat cement slurry and making pattern of 300x300 mm square 3 mm deep					
e.		The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test					
		All above operations to be done in order and as directed and specified by the Engineer-in-Charge					
		With average thickness of 120 mm and minimum thickness of 65 mm.	Sqm	10,193.37			
3	21.75	Cutting holes upto 15x15 cm in C.C. floors and roofs for passing drain pipe etc. and repairing the hole after insertion of drain pipe etc. with cement concrete 1:2:4 (1 cement: 2 coarse sand: 4 graded stone aggregate 20 mm nominal size), including finishing complete so as to make it leak proof	Each	120.00			

S.No.	MPWD (B) 2021- 22 SOR	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE (Rs.)	AMOUNT (Rs. In fig.)	AMOUNT (In Words)
4	7.3	Brick work in cement mortar with first class brick in superstructure above plinth level upto first floor level in all shape and sizes:					
		Cement mortar 1:4 (1 cement: 4 coarse sand)	Cum	40.00			
5	15.1	Cement Plaster (In Fine Sand)					
		12 mm cement plaster of mix: a) 1:4 (1 Cement: 4 fine sand)	Sqm	200.00			
B. Repairing the Metal Sheet Surface in Roof Slab							
6	18.23	Dismantling roofing including ridges, hips, valleys and gutters etc., and stacking the material within 50 meters lead of:					
	a)	G. S. Sheet	Sqm	2,503.42			
7	13.1	Providing corrugated G.S or galvanised iron sheet roofing including vertical/curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete (up to any pitch in horizontal/ vertical or curved surfaces), excluding the cost of purlin, rafters and trusses and including cutting to size and shape wherever required.					
	a)	1 mm thick with zinc coating not less than 275 gm/sqm	Sqm	2,503.42			

S.No.	MPWD (B) 2021- 22 SOR	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE (Rs.)	AMOUNT (Rs. In fig.)	AMOUNT (In Words)
8	13.2	Extra for straight cutting in C.G.S sheet roofing for making opening of area exceeding 40 sq. decimetre for chimney stacks, sky light etc.:					
	a)	1 mm thick	Rm	250.00			
9	13.3	Extra for circular cutting in C.G.S sheet roofing for making opening of area exceeding 40 sq. decimetre:					
	a)	1 mm thick	Rm	250.00			
10	13.4	Providing ridges or hips of width 60 cm overall width plain G.S sheet fixed with polymer coated J or L hooks, bolts and nuts 8 mm dia. G.I. limpet and bitumen washers complete.					
	a)	0.80 mm thick with zinc coating not less than 275 gm/sqm	Rm	1,000.00			
11	13.5	Providing valleys of 90 cm wide overall in plain G.S/G.I. sheet fixed with polymer coated J or L hooks, bolts and nuts 8 mm dia. G.I. limpet and bitumen washers complete.					
		1.60 mm thick with zinc coating not less than 350 gm/sqm	Rm	750.00			
12	11.2	Structural Steel Work riveted, bolted or welded in built up sections, trusses and framed work, including cutting hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	Kg	12,000.00			

S.No.	MPWD (B) 2021- 22 SOR	DESCRIPTION OF ITEMS	UNIT	QUANTITY	RATE (Rs.)	AMOUNT (Rs. In fig.)	AMOUNT (In Words)
13	13.7	Providing and fixing 15 cm wide, 45 cm overall semi-circular plain G.S. Sheet gutter with iron brackets 40x3 mm size, bolts, nuts and washers etc., including making necessary connection with rain water pipe complete.					
	a)	0.80 mm thick with zinc coating not less than 275gm/sqm	RM	400.00			
Total Price for "Civil Works" (B)							

Signature of Authorised Person

Name

In the capacity of

Signed

Duly authorized to sign the Bid for and on behalf of

Date

Company Seal

SECTION 8: OTHER FORMS

FORMAT A: FORMAT OF SENDING PRE-BID QUERIES

NIT Reference No: XX

Bidder's Request for Clarification				
Name and complete official address of Organization submitting query / request for clarification			Telephone, Fax and E-mail of the organization Tel: Fax: Email:	
SN	Clause No.	Page No.	Content of Bid document Requiring Clarification	Change Requested/ Clarification required
1				
2				
3				
4				
5				

Signature:

Name of the Authorized signatory:

Company seal:

Date and Stamped

Note: Bidder(s) are requested to send the queries in PDF with Sign and Company Seal and also in MS Word / Excel for making consolidation process easy.

FORMAT B: LETTER OF ACCEPTANCE (LOA)

To,

M/s.....
.....
.....

This is to notify you that on behalf of the Employer, the Chief Executive Officer, Shillong Smart City Limited has accepted your Bid dated for [name of the work] for the Contract Price of Rs..... (Rupees.....only).

You are hereby requested to furnish the following within 10 days of the receipt of this Letter of Acceptance valid up to 45 days from the date of expiry of Comprehensive Maintenance Contract Period (i.e. up to) and sign the contract, failing which action as stated in Clause 33 of ITB will be taken.

- Performance Security, in the form detailed in Clause 33 of ITB for an amount of Rs..... (Rupees.....).

Yours faithfully,

Chief Executive Officer
Shillong Smart City Limited

FORMAT C: ISSUE OF NOTICE TO PROCEED WITH THE WORK

LETTER NO.....

DATED.....

To,

.....

.....

.....

Dear Sir,

Pursuant to your furnishing the requisite Performance Security in accordance with Clause 33 of Instructions to Bidders (ITB) and Clause 46 of General Conditions of Contract (GCC) of the Bidding Document and signing of the contract for _____ [name of the work], you are hereby instructed to proceed with the execution of the said works in accordance with the contract documents.

Yours faithfully

Chief Executive Officer
Shillong Smart City Limited

FORMAT D: AGREEMENT

This Agreement is made at..... on this day of..... 2021

BETWEEN

Shillong Smart City Limited (SSCL) represented through the Chief Executive Officer, (hereinafter called "the Employer", which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

AND

M/s _____ [name and address of the Contractor/JV or Consortium or Association] through _____ [name of the PoA holder] (hereinafter called "the Contractor", which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assigns)

Whereas the Employer is desirous that the Contractor execute the Work of _____ [name of the work] (hereinafter called "the Works") and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein at a cost of Rs. _____ (Rupees _____) and applicable GST.

NOW THIS AGREEMENT WITNESSETH as follows:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract hereinafter referred to, and they shall be deemed to form and be read and construed as part of this Agreement.
2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects with the provisions of the Contract.
3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.
4. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz:
 - i) Letter of Acceptance;
 - ii) Notice to proceed with the works;
 - iii) Contractor's Bid;
 - iv) Contract Data;
 - v) Special Conditions of contract and General Conditions of Contract;
 - vi) Scope of Work and Technical Specifications;
 - vii) Drawings;
 - viii) Addenda and Corrigenda; and
 - ix) Any other document listed in the Contract Data as forming part of the contract.
 - a) Response to pre-bid queries; and
 - b) Performance Security furnished by the Contractor.

In WITNESS WHEREOF, the parties through their duly Authorized representatives have executed these presents (execution whereof has been approved by the Competent Authorities of both the parties) on the day, month and year first above mentioned at Shillong.

For and on behalf of:

Chief Executive Officer
Shillong Smart City Limited
Shillong, Meghalaya

For and on behalf of:

M/s _____
[name and address of the Contractor]

WITNESS

1.

2.

WITNESS:

1.

2.

FORMAT E: BANK GUARANTEE FOR ADVANCE PAYMENT

(Unconditional irrevocable Bank guarantee of any nationalized/ scheduled banks on INR 100/- Stamp Paper)

To,
Chief Executive Officer,
Shillong Smart City Limited
Shillong, Meghalaya

Gentlemen:

In accordance with the provisions of the General Conditions of contract, clause 45 ("Advance Payment") of the above-mentioned Contract, _____ [name and address of Contractor, which in the case of a joint venture shall be the name of the joint venture (whether legally constituted or prospective) or the names of all members thereof] (hereinafter called "the Contractor") shall deposit with _____ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ [amount of guarantee] _____ [in words].

We, the _____ [bank or financial institution] as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as Surety merely, the payment to _____ [name of Employer] on his first demand without whatsoever right of objection on our part and without his first claim to the Contractor, in the amount not exceeding _____ [amount of guarantee]⁸ _____ .

We further agree that no change or addition to or other modification of the terms of the Contract or of Works to be performed thereunder or of any of the Contractor documents which may be release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ [name of Employer] receives full repayment of the same amount from the Contractor.

Yours truly,

Signature and seal: _____

Name of Bank/Financial Institution: _____

Address: _____

Date: _____

⁸ An amount shall be inserted by the bank or financial institution representing the amount of the Advance Payment and denominated in Indian Rupees.

FORMAT F: PERFORMANCE BANK GUARANTEE

(Unconditional irrevocable Bank guarantee of any nationalized/ scheduled banks on INR 100/- Stamp Paper)

To,
Chief Executive Officer,
Shillong Smart City Limited
Shillong, Meghalaya

WHEREAS _____ [Name and Address of Contractor, which in the case of a joint venture shall be the name of the joint venture (whether legally constituted or prospective) or the names of all members thereof] (Hereinafter called "the Contractor") has undertaken, in pursuance of Contract No. _____ dated _____ to execute _____ [Name of Contract and brief description of Works] herein after called "The Contract".

AND WHEREAS it has been stipulated by you in the said contract that the Contractor shall furnish you with a bank guarantee by a Nationalized Bank for the sum specified therein as security for compliance with his obligations in accordance with the Contract;

AND WHEREAS we have agreed to give the Contractor such a Bank Guarantee;

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you on behalf of the Contractor, up to a total of _____ [amount of guarantee] _____ [in words], such sum being payable in the types and proportions of currencies in which the Contract price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of _____ [amount of guarantee] as aforesaid without your needing to prove or to show grounds or reasons for a demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the Contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract or of the Works to be performed thereunder or of any of the Contract documents which may be made between you and the Contractor shall in anyway release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This Guarantee shall be valid until a date 45 days after the expiry of Intended Completion Date (completion of Comprehensive Maintenance Period).

Signature and seal of the guarantor _____

Name of Bank _____

Address _____

Date _____

FORMAT G: EARENST MONEY DEPOSIT/ BID SECURITY BANK GUARANTEE

(Unconditional irrevocable Bank guarantee of any nationalized/ scheduled banks on INR 100/- Stamp Paper)

To,
Chief Executive Officer,
Shillong Smart City Limited
Shillong, Meghalaya

Whereas [Name and Address of Contractor, which in the case of a joint venture shall be the name of the joint venture (whether legally constituted or prospective) or the names of all members thereof] (Hereinafter called "the Contractor") has submitted the bid for Submission of RFP..... [RFP Number] dated..... [Date] for..... [Name of the assignment] (hereinafter called "the Bid") to..... [Name of Authority].

Know all Men by these presents that we [Name of Bank] having our office at [Registered Address] (hereinafter called "the Bank") are bound unto the [Name of Authority] (hereinafter called "the Authority") in the sum of Indian Rupees [Amount in figures] (Rupees..... [Amount in words] only) for which payment well and truly to be made to the said Authority, the Bank binds itself, its successors and assigns by these presents.

Sealed with the Common Seal of the said Bank this..... [Date]. The conditions of this obligation are:

1. If the Bidder having its bid withdrawn during the period of bid validity specified by the Bidder on the Bid Form; or
2. If the Bidder, having been notified of the acceptance of its bid by the Authority during the period of validity of bid
 - a) fails or refuses to execute the Form of Agreement in accordance with the Instructions to contractor, if required;
 - OR
 - b) fails or refuses to furnish the Performance Guarantee, in accordance with the provisions of tender document and Instructions to contractor,

We undertake to pay to the Authority up to the above amount upon receipt of its first written demand, without the Authority having to substantiate its demand, provided that in its demand the Authority will note that the amount claimed by it is due to it owing to the occurrence of one or both of the two conditions, specifying the occurred condition or conditions.

This guarantee will remain in force up to and including the date⁹..... after the deadline for submission of tender as such deadline is stated in the Instructions to contractor or as it may be extended by the Engineer-in- Charge, notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

NOTWITHSTANDING ANYTHING CONTAINED HEREIN:

- I. Our liability under this Bank Guarantee shall not exceed Indian Rupees [Amount in figures] (Rupees..... [Amount in words] only)
- II. This Bank Guarantee shall be valid up to [insert date]

⁹ Date to be worked out on the basis of validity period of 6 months from last date of receipt of tender

III. It is a condition of our liability for payment of the guaranteed amount or any part thereof arising under this Bank Guarantee that we receive a valid written claim or demand for payment under this Bank Guarantee on or before [insert date] failing which our liability under the guarantee will automatically cease.

Date:

(Authorized Signatory of the Bank)

Seal:

WITNESS

(SIGNATURE, NAME AND ADDRESS)