Implementing Partner shall thereafter without delay and at its cost remove or arrange removal of the same from the Site.

42.2.5 Subject to GCC Sub-Clause 42.2.6, the Implementing Partner shall be entitled to be paid the Contract Price attributable to the Facilities executed as at the date of termination, the value of any unused or partially used Plant and Equipment on the Site, and the costs, if any, incurred in protecting the Facilities and in leaving the Site in a clean and safe condition pursuant to paragraph (a) of GCC Sub-Clause 42.2.3. Any sums due to the EESL from the Implementing Partner accruing prior to the date of termination shall be deducted from the amount to be paid to the Implementing Partner under this Contract.

42.2.6 If the EESL completes the Facilities, the cost of completing the Facilities by the EESL shall be determined.

If the sum that the Implementing Partner is entitled to be paid, pursuant to GCC Sub-Clause 42.2.5, plus the reasonable costs incurred by the EESL in completing the Facilities, exceeds the Contract Price, the Implementing Partner shall be liable for such excess.

If such excess is greater than the sums due to the Implementing Partner under GCC Sub-Clause 42.2.5, the Implementing Partner shall pay the balance to the EESL, and if such excess is less than the sums due to the Implementing Partner under GCC Sub-Clause 42.2.5, the EESL shall pay the balance to the Implementing Partner.

The EESL and the Implementing Partner shall agree, in writing, on the computation described above and the manner in which any sums shall be paid.

## 42.3 Termination by Contractor or Implementing Partner

## 42.3.1 If

- (a) the EESL has failed to pay the Implementing Partner any sum due under the Contract within the specified period, has failed to approve any invoice or supporting documents without just cause pursuant to Appendix 1 (Terms and Procedures of Payment) of the Contract Agreement, or commits a substantial breach of the Contract, the Implementing Partner may give a notice to the EESL that requires payment of such sum, requires approval of such invoice or supporting documents, or specifies the breach and requires the EESL to remedy the same, as the case may be. If the EESL fails to pay such sum, fails to approve such invoice or supporting documents or give its reasons for withholding such approval, fails to remedy the breach or take steps to remedy the breach within fourteen (14) days after receipt of the Implementing Partner's notice, or
- (b) the Implementing Partner is unable to carry out any of its obligations under the Contract for any reason attributable to the EESL, including but not limited to the EESL's failure to provide possession of or access to the Site or other areas or failure to obtain any governmental permit necessary for the execution and/or completion of the Facilities which the EESL is required to obtain as per provision of the Contract or as per relevant applicable laws of the country,

then the Implementing Partner may give a notice to the EESL thereof, and if the EESL has failed to



pay the outstanding sum, to approve the invoice or supporting documents, to give its reasons for withholding such approval, or to remedy the breach within twenty-eight (28) days of such notice, or if the Implementing Partner is still unable to carry out any of its obligations under the Contract for any reason attributable to the EESL within twenty-eight (28) days of the said notice, the Implementing Partner may by a further notice to the EESL referring to this GCC Sub-Clause 42.3.1, forthwith terminate the Contract.

42.3.2 The Implementing Partner may terminate the Contract forthwith by giving a notice to the EESL to that effect, referring to this GCC Sub-Clause 42.3.2, if the EESL becomes bankrupt or insolvent, has a receiving order issued against it, compounds with its creditors, or, being a corporation, if a resolution is passed or order is made for its winding up (other than a voluntary liquidation for the purposes of amalgamation or reconstruction), a receiver is appointed over any part of its undertaking or assets, or if the EESL takes or suffers any other analogous action in consequence of debt.

42.3.3 If the Contract is terminated under GCC Sub-Clauses 42.3.1 or 42.3.2, then the Implementing Partner shall immediately

(a) cease all further work, except for such work as may be necessary for the purpose of protecting that part of the Facilities already executed, or any work required to leave the Site in a clean and safe condition

(b) terminate all subcontracts, except those to be assigned to the EESL pursuant to paragraph (d)(ii)

(c) remove all Implementing Partner's Equipment from the Site and repatriate the Implementing Partner's and its Sub Implementing Partner's personnel from the Site

(d) In addition, the Implementing Partner, subject to the payment specified in GCC Sub-Clause 42.3.4, shall

(i) deliver to the EESL the parts of the Facilities executed by the Implementing Partner up to the date of termination

(ii) to the extent legally possible, assign to the EESL all right, title and benefit of the Implementing Partner to the

Facilities and to the Plant and Equipment as of the date of termination, and, as may be required by the

EESL, in any subcontracts concluded between the Implementing Partner and its Sub Implementing Partners

(iii) deliver to the EESL all drawings, specifications and other documents prepared by the Implementing Partner or its Sub Implementing Partners as of the date of termination in connection with the Facilities.

42.3.4 If the Contract is terminated under GCC Sub-Clauses 42.3.1 or 42.3.2, the EESL shall pay to



the Implementing Partner all payments specified in GCC Sub-Clause 42.1.3, and reasonable compensation for all loss or damage sustained by the Implementing Partner arising out of, in connection with or in consequence of such termination.

42.3.5 Termination by the Implementing Partner pursuant to this GCC Sub-Clause 42.3 is without prejudice to any other rights or remedies of the Implementing Partner that may be exercised in lieu of or in addition to rights conferred by GCC Sub-Clause 42.3.

42.4 In this GCC Clause 42, the expression "Facilities executed" shall include all work executed, Installation Services provided, any or all Plant and Equipment acquired (or subject to a legally binding obligation to purchase by the Implementing Partner and used or intended to be used for the purpose of the Facilities, up to and including the date of termination.

42.5 In this GCC Clause 42, in calculating any monies due from the EESL to the Implementing Partner, account shall be taken of any sum previously paid by the EESL to the Implementing Partner under the Contract, including any advance payment paid pursuant to Appendix 1 (Terms and Procedures of Payment) to the Contract Agreement.

# 43. Assignment

43.1 The Implementing Partner shall not, without the express prior written consent of the EESL, assign to any third party the Contract or any part thereof, or any right, benefit, obligation or interest therein or thereunder, except that the Implementing Partner shall be entitled to assign either absolutely or by way of charge any monies due and payable to it or that may become due and payable to it under the Contract.

## 44. Bankruptcy

If the Contractor shall become bankrupt or have a receiving order made against him or compound with his creditors, or being a corporation commence to be wound up, not being a voluntary winding up for the purpose only of amalgamation

/ reconstruction, or carry on its business under a receiver for the benefit of its creditors or any of them, the Owner ill be at liberty :

to terminate the contract forthwith by notice in writing to the liquidator or receiver or to any person in whom the contract may become vested & to act in the manner provided in GCC clause 42 entitled "Termination" as though the last mentioned notice has been the notice referred to in such clause and the equipment and materials have been taken out of the contractor's hands.

to give such liquidator, receiver or other person, the option of carrying out the contract subject to his providing a guarantee, for the due and faithful performance of the contract up to an amount to be determined by the Owner.

# **45.Contractor Performance & Feedback and Evaluation System**

The Employer has in place an established 'Contractor Performance & Feedback System' against which the contractors performance during the execution of contract shall be evaluated on a continuous basis at regular intervals. In case the performance of the contractor is found unsatisfactory on any of the following four parameters, the contractor shall be considered ineligible for participating in future tenders for a period as may be decided by the Employer.



**Financial Status** 

Project Execution & Project Management Capability

Engineering & QA Capability

Claims & Disputes.

# **46.Fraud Prevention Policy**

The contractor along with their associate/collaborator/sub-contractors/sub-vendors/consultants/service providers shall strictly adhere to the Fraud Prevention Policy of EESL displayed on its tender website www.eeslindia.org

The Contractor along with their associate/collaborator/sub-contractors/sub-vendors/consultants/service providers shall observe the highest standard of ethics and shall not indulge or allow anybody else working in their organisation to indulge in fraudulent activities during execution of the contract. The contractor shall immediately apprise the Employer about any fraud or suspected fraud as soon as it comes to their notice.



## **SECTION-4**

# **Technical & Special Conditions of Contract**

NOTE: THE TERMS & CONDITIONS STIPULATED HEREIN (I.E., IN SECTION-4) WILL SUPERSEDE ANY CONTRADICTORY/ SIMILAR/ OVERLAPPING TERMS & CONDITIONS IN ANY OTHER SECTION/ PART OF THE TENDER.

#### PART A: GENERAL INFORMATION

Name of Work: Design, Engineering, Supply, Construction, Erection, Testing, Commissioning and O&M of grid connected Solar PV Rooftop Power Plants of cumulative capacity of approximate 7.5 MWp in various Buildings in the Union Territory of Andaman

NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-Andaman/202109016 Dated: 22-09-2020

#### NOTE:

Bidders are requested to select the NON-PARTICIPATING Lot (Lot - 1 to 2) and click on DELETE option and then PROCEED. Bidders has to mandatorily declare the participating Lot against this tender as per Attachment No.11 attached in Section-6 of tender documents. Only price-bid of the declared Lots in Attachment No.11 shall be opened subject to acceptance of technical bid.

#### BIDS ARE TO BE SUBMITTED AS FOLLOWS:

(Please note that, EESL has switched the tender system into e-tendering. Bidders will submit their bid accordingly).

## **Envelope 1 (Pre-Qualifying documents) should contain following:**

- 1. Bid document fee in the form of NEFT/RTGS or Banker's Cheque/ Demand Draft drawn in favor of "Energy Efficiency Services Limited" payable at New Delhi. (To be submitted in hard copy/ manually in the tender-box on and before Technical E-Bid Opening Date & Time. Scanned Copy to be uploaded at E-tendering portal.)
- 2. Bid Security Fee/Earnest Money Deposit as **Attachment-2** by NEFT/RTGS or Banker's Cheque / Demand Draft drawn in favour of "Energy Efficiency Services Limited" or in the form of Bank Guarantee as per prescribed format in section 6. (To be submitted in hard copy/manually in the tender-box on and before Technical E-Bid Opening Date & Time. Scanned Copy to be uploaded at E-tendering portal).
- 3. Letter of the bidder submitting the bid in the form as stipulated in the bid document i.e., as per Bid Form as **Attachment-1** of section 6, Forms& Procedures. (Scanned Copy to be uploaded at E-tendering portal) Duly filled and Signed by authorized signatory.
- 4. Notarized Power of attorney to sign the bid as **Attachment-3** of section 6, Forms & Procedure. Bidders to use their own format. (*Scanned Copy to be uploaded at E-tendering portal*). The submitted power of attorney shall be as per the respective clause in Section-2.
- 5. Certificate regarding acceptance of important terms and conditions as per ITB clause 4.6 as **Attachment-4**. Format enclosed in section 6. (**Scanned Copy to be uploaded at E-tendering portal**) Duly filled and Signed by authorized signatory.
- 6. Form of acceptance of EESL fraud prevention policy and declaration as per **Attachment-7** of section 6, Forms & Procedure. (*Scanned Copy to be uploaded at E-tendering portal*) Duly filled and Signed by authorized signatory.
- 7. NEFT/RTGS Bank details as per **Attachment-10** of section-6, forms and procedure. (Scanned Copy to be uploaded at E-tendering portal) Duly filled and Signed by authorized signatory.
- 8. Self-Declaration for not been blacklisted by Central/State/UT Government or any Public sector entities duly signed and stamped at company's Letter Head. (Scanned Copy to be uploaded at E
  Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN
  MANAGEMENT, O=ENERGY EFFICIENTIES, C=IN

NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-Andaman/202109016 Dated: 22-09-2020 SECTION-4 (Technical & SCC)

- <u>tendering portal</u>. Bidder shall clearly mention tender reference number and date of signing the self-declaration.
- 9. Consortium Agreement (if applicable) on Rs. 100 stamp paper duly signed and notarized. Bidder to use their own format. (To be submitted in hard copy/ manually in the tender-box on and before Technical E-Bid Opening Date & Time. Scanned Copy to be uploaded at E-tendering portal.)
- 10. Declaration form for quoted Lot(s) (as per format in Attachment 11) duly filled and Signed on Company's Letter Head Pad with Company seal. (Scanned Copy to be uploaded at E-tendering portal).
- 11. Certificate Regarding Compliance of Meity Notification Vide File No. 1(10)/2017-Cles Dt. 02.07.18 as per **Attachment-13** of Section-6, Forms & procedures Duly filled Signed by authorized signatory (*Scanned Copy to be uploaded at E-tendering portal*).
- 12. Certificate regarding Declaration of Local Content (as per Format in Attachment-14). (Scanned Copy to be uploaded at E-tendering portal).
- 13. Declaration of GST rates (as per format in Attachment 15) duly filled and Signed on Company's Letter Head Pad with Company seal. (Scanned Copy to be uploaded at E-tendering portal).
- 14. Self-Declaration duly signed and stamped at company's Letter Head for not being under debar list/undergoing debarment period on account of breach of the code of integrity under Rule 175(1)(i)(h) of the General Financial rules for giving false declarations of local content. (Scanned Copy to be uploaded at E-tendering portal. Bidder shall clearly mention tender reference number and date of signing the self-declaration.
- 15. Compliance Matrix/Checklist for Bidder as per Annexure-IX duly filled and signed on Company's Letter head pad with company seal. (Scanned Copy to be uploaded at E-tendering portal).
- 16. Compliance Matrix/Checklist for Technical and Financial QR as per Annexure-X duly filled and signed on Company's Letter head pad with company seal. (Scanned Copy to be uploaded at E-tendering portal).

# **Envelope-II, i.e., Techno-Commercial Proposal of the Bid Should Contain (***scanned copies of***) the following:**

- i. Deviation statement as per **Attachment 5** of section 6, Forms & Procedure.
  - <u>NOTE</u>: EESL reserves the right to consider or disregard deviations, and reject bids in case of non-compliance. Bids containing material deviations from or reservation to the terms and conditions and specifications mentioned in the Tender will be treated as non-responsive and will not be considered further.
- ii. Specific confirmation by the bidder duly signed and stamped on letter head as per Annexure-II
- iii. Techno-commercial bid as indicated in bid document, i.e., documentary evidences regarding bidder's qualifications to perform the Contract, as required per the Qualifying Requirements along with other documents as mentioned in the Tender Document.
- iv. One complete set of RfP documents and subsequent amendments (if any), duly signed and stamped on each page.

## Envelope-III should contain Price Bid (Annexure-I to be filled-up online) shall comprise of

- i. Price Bid in the format prescribed in the tender document for <u>Lot-1</u>
- ii. Price Bid in the format prescribed in the tender document for <u>Lot-2</u>

Price Bid in the format prescribed in the tender document.

Since the bids are to be submitted through E-tendering mode, the prices are to be filled on e-tender portal only and bidders are requested **not to submit the price bid in hard copy at EESL along with the documents. The same will not be entertained**.

Signature: Cui = PRASHANT KUMAR, ST = DELHI, OID. 2.5.4.17—110003, OU=SUPPLY CHAIN NEW ACKEMENT, O = NERCY EFFICIENCY SERVICES LIMITED, C = IN USER LIBERT OF THE STATE OF THE SERVICES LIMITED, C = IN USER LIBERT OF THE SERVICES LIMITED, C = IN USER LIBERT OF THE SERVICES LIMITED, C = IN USER LIBERT OF THE SERVICES LIMITED C = IN USER LIBERT OF THE SERVICES LIBERT O

Initially, Envelope-I containing documents as stated above will be opened electronically. Envelope-II will be opened on the same day of only those bidders who have submitted EMD and requisite documents in Envelope-I.

Envelope-III (Price Bid) shall be opened subsequently subject to acceptance of Techno-Commercial Bid. Opening date will be intimated to all those bidders, who are found technically & commercially acceptable to EESL.

Price-Bid of the technically disqualified bidders will not be opened.

For and on behalf of EESL

Engineer (SCM)

## **PART-B: Definitions**

Following terms used in the document will carry the meaning and interpretations as described below:

- "Affiliate" shall mean a Company that, directly or indirectly,
- i. controls, or
- ii. is controlled by, or
- iii. is under common control with, a Company developing a Project or a Member in a Consortium developing the Project and control means ownership by one Company of at least 51% (fifty one percent) of the voting rights of the other Company;
- **"DISCOM"** means Power Distribution Company of the state, responsible for distribution of Electrical power in the region and associated activities
- **"EIC"** shall mean Engineer or Engineers authorized by EESL for the purpose of this contract. Inspecting Authority shall mean any Engineering person or personnel authorized by EESL to supervise and inspect the erection, commissioning of the grid connected solar PV based r;
- "Beneficiary" shall mean the Andaman State Electricity Department
- "Bid" shall mean the Technical and Financial Bid submitted by the Bidder along with all documents/credentials/attachments annexure etc., in response to the bidding document, in accordance with the terms and conditions hereof;
- "Bidder(s)" shall mean bidding company submitting the Bid and includes Financially Evaluated Company. Any reference to the Bidder includes its successors, executors and permitted assigns as the context may require;
- "B.I. S" shall mean specifications of Bureau of Indian Standards (BIS);
- "BoP" shall mean balance of plant
- "BoS" shall mean balance of system;
- "COD" shall mean the commercial operation date;
- "Comprehensive O&M" shall mean insurance, onsite warranty, spare parts and operation & maintenance of Project / installations for ten years from the date of Commissioning and issuance of completion certificate;
- "Commissioning" means demonstration of successful operation of the project/ system by the Successful Bidder;
- "IEC" means International Electro-technical Commission.
- "kWp" shall mean Kilo Watt Peak;
- "kWh" shall mean Kilo Watt Hour;
- "MNRE" shall mean Ministry of New and Renewable Energy, Government of India
- "MPPT or Maximum Power Point Tracking" shall mean algorithm that is used for extracting maximum available power from PV module under certain conditions.
- "NTP" means Notice to Proceed;



- "OEM" Original Equipment Manufacturer;
- "PPA" shall mean "Power Purchase Agreement" for sale of energy generated from the project;
- "PPE" means Personal Protective Equipment;
- "Project" shall mean the aggregate of the Grid connected solar PV based rooftop system and injecting the excess power into the grid as per the terms of this RFP;
- "RESCO" shall mean Renewable Energy Service Companies;
- "RMM" shall mean Remote Monitoring Mechanism for Smart Energy Meters;
- "Solar Inverter" shall mean inverters that convert electricity generated from solar PV panels from DC to AC;
- "SI" shall mean System Integrator shall mean the agency who had carried out the Design, Engineering, Supply, Installation, Testing & Commissioning and O&M of Grid connected solar PV based Power Plants;
- "Performance Test" shall mean such tests which establish successful installation, commissioning and operation of system at desired level as per the requirement of issuing authority before the issuance of commissioning certificate;

## **PART C: Scope of Work and Other Terms & Conditions**

## 1. INTRODUCTION

Energy Efficiency Services Limited (EESL) is a Joint Venture of NTPC Limited, Power Grid Corporation of India Limited (PGCIL), Power Finance Corporation Limited (PFC) and Rural Electrification Corporation Limited (REC) to facilitate implementation of energy efficiency projects. EESL intends to establish Solar PV Rooftop Power Plants with a cumulative capacity of approximate 7.5MWp in various Buildings in the Union Territory of Andaman. EESL is in advanced stage of discussion with other States of India as well for implementing such projects.

# 2. Project Scope & Technology Selection

# 2.1 Proposed System

A Grid Connected Rooftop Solar Photo-Voltaic (SPV) power plant consists of Solar PV Modules, Module Mounting Structure, Power Conditioning Unit (PCU) with Maximum Power Point Tracker (MPPT), Inverter(s), Net Meter, necessary Controls & Protections, interconnection cables and switches. PV Array is mounted on a suitable module mounting structure. These Grid tied rooftop SPV system's which are installed without batteries should be designed with necessary features to supplement the grid power during day-time. Components and parts used in the SPV power plants including the PV modules, metallic structures, cables, junction box, switches, PCUs etc., should conform to the BIS or IEC or international specifications, wherever such specifications are available and applicable.

This RfP is limited only to "Design, Engineering, Supply, Construction, Erection, Testing, Commissioning and O&M of grid connected Solar PV Rooftop Power Plants of cumulative capacity of approximate 7.5MWp in various Buildings in the Union territory of Andaman".

The bidder shall be responsible for the following items in line with the Supply Schedule (Clause no.2 of SCC) in accordance to the provisions of this RFP document:

- 1. Solar PV modules consisting of required number of Crystalline PV modules.
- 2. Grid interactive Power Conditioning Unit with Remote Monitoring System
- 3. Mounting structures
- 4. Junction Boxes.
- 5. Earthing and lightening protections.
- 6. IR/UV protected PVC Cables, pipes and accessories
- 7. Comprehensive Onsite Maintenance Warranty for a period of 10 years
- 8. Quality assurance checks (Sample Quality Assurance Plan (QAP) has been attached as Annexure-VII)

Bidder/SI shall ensure that supplied material for this package should be in accordance to the technical specification as mentioned in the Annexure-III and further ensure that the system/s shall commissioned successfully on time and operate reliably for the project duration of 10 years.

Rooftop solar PV based projects with a cumulative capacity of approx. 7.5MWp may be taken up for implementation under CAPEX model with 10 years O&M.

This project should be implemented with Domestic Content Requirement (DCR) and should be Make in India compliant.

Signature: Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN User ID: Skumar

**SECTION-4** 

Break-up of Tender Lots is as follows:

Lot No	Region	Total Capacity (kW)	% of total capacity
Lot-1	Northern Andaman	2680	36%
Lot-2	Middle Andaman	4755	64%

Break-up of the solar project capacities is tabulated below:

Solar PV Rooftop System Package Capacity	Total Quantity (No.s) Northern Andaman (Lot-1)	Total Quantity (No.s) Middle Andaman (Lot-2)	Maximum Capacity to be Offered (kWp)
5 kWp	47	84	655
10 kWp	30	57	870
15 kWp	143	251	5,910

This is the tentative capacity as arrived by a preliminary survey. Actual capacity may vary. Bidders are advised to conduct their own assessment as per the list of buildings enclosed in Annexure-V.

#### Note:

- The capacity offered under each lot/package may vary depending on the open roof area and conditions at location. EESL reserves right to change the capacity under different lots/packages. The capacity under each lot/package may be adjusted accordingly in order to fulfil the entire rooftop solar capacity.
- EESL also reserves rights to divert the quantity to different districts / states. However, if there is change in location to another state, the additional transportation charges shall be agreed upon mutually by EESL and successful bidder.
- The capacity of each project going to be developed under each lot/package should be as per the above table. However, a variation of  $(\pm 20\%)$  of the capacity may be allowed to be installed at any of the project sites depending on the open /vacant /shadow free area available.

The Bidder / SI has to provide the complete design document justifying the necessary AC/DC ratio. The maximum acceptable AC to DC ratio is 1:1.20.

## 2.2 Key Elements

**Key elements in grid connected solar powered rooftop system:** Following are the key Components of a rooftop solar PV system

- Solar PV Array
- Grid Tie String Inverters
- Metering System
- Data acquisition system / plant monitoring

## a. Solar PV Array

Solar PV arrays are made up of solar PV modules which are mounted on a stable mounting structure which are secured to the rooftop/ground. The solar array consists of individual solar modules which in turn are made up of numerous solar cells. The Solar Module, in general, shall be made up of crystalline silicon cells which convert sunlight into electricity.

## b. Grid Tie String Inverter

The Inverter shall convert the low voltage DC from Solar PV modules to AC to operate. Solar power inverters should have built in MPPT (Maximum Power Point Tracking) feature. Since

Signature: Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN
MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN
USer ID: p. kumar

the voltage generated by Solar Panel varies depending on the solar insolation, MPPT enables solar inverters to draw maximum power from the solar panels. It's recommended that grid tie string inverter shall have a feature to show gross generation.

## c. Metering System

As specified in clause 2.1 proposed system requires the use of a net meter—that records the net energy export to the grid and import from the grid. All approvals/NOC/CEIG (if applicable) including net metering procedure for the plant are to be obtained by the bidder/SI. Building owner will provide necessary documents as required for the approvals/NOC and shall bear all associated costs towards approvals/permits for installation.

However, bidder/SI shall provide the net meter as per the technical specs as mentioned in **Annexure-VIII**.

Apart from the net meter, Bidder has to calculate the gross energy generation from the project by taking into account the losses Eg. DC side line loss, conversion losses etc. by solar energy generation meter as detailed below.

## Solar Energy Generation Meter

- i. The SI shall install a Solar Energy Generation Meter immediately after the AC output of each solar grid inverter to measure the solar energy generation.
- ii. The Solar Energy Generation Meter shall be installed in an easily accessible location.
- iii. If a number of solar grid inverters that are part of a GCRTS system are connected to a common solar grid inverter AC distribution board, the Solar Energy Generation Meter may be connected immediately after the output of this common solar grid inverter AC distribution board so that the total of energy generation by all solar grid inverters is recorded by a single energy meter.
- iv. The Solar Energy Generation Meter shall be of the direct reading type for solar grid inverters.
- **v.** The solar energy produced shall be measured with a solar energy generation meter, which shall be connected closed to the solar grid tied inverter and shall be connected in the AC output circuit of the inverter.
- vi. The direct reading Solar Energy Generation Meters shall be of accuracy class 1.0 as per IS13779-1999. The indirect reading Solar Energy Generation Meters shall be of accuracy class 0.5 as per IS14697-1999.
- vii. The Solar Energy Generation Meters shall be of the bidirectional digital type with a liquid crystal display.
- **viii.** The display parameters of the Solar Energy Generation Meters shall be as given below:

Andaman/202109016 Dated: 22-09-2020

## Auto-scroll display mode:

S.No.	Three digit OBIS code	Parameter description
1	0.9.2.	Date [dd-mm-yyyy]
2	0.9.1.	Time [hh:mm:ss]
3	1.8.0.	Active energy import (+A) [kWh]
4	2.8.0.	Active energy export (-A) [kWh]
5	16.8.0.	Active energy net ( +A  -  -A ) [kWh]
6	1.6.0.	Maximum demand – active energy import (+A) [kW]
7	1.6.0.	Maximum demand – active energy import, date of occurrence [dd-mm-yyyy]
8	1.6.0	Maximum demand – active energy import, time of occurrence [hh:mm]
9	2.6.0.	Maximum demand - active energy export (-A) [kW]
10	2.6.0.	Maximum demand – active energy export, date of occurrence [dd-mm-yyyy]
11	2.6.0.	Maximum demand – active energy export, time of occurrence [hh:mm]
12	13.5.0.	Last average power factor import (+A/+S)
13	84.5.0.	Last average power factor export (-A/-S)
14	1.7.0.	Instantaneous active power import (+A) [kW]
15	2.7.0.	Instantaneous active power export (+A) [kW]

## Manual scroll display mode:

The above mentioned auto-scroll parameters and additional parameters as may be specified by EESL shall be included in the manual scroll display mode.

- i. The AC output of the solar grid inverter shall be connected to the incoming (source) side of the Solar Energy Generation Meter terminal block. The interconnection with the building's electrical system shall be connected to the outgoing (load) side of the Solar Energy Generation Meter terminal block.
- ii. For the purpose of Guaranteed Energy Generation in accordance to section 3(iv), EESL will use the active energy net reading (OBIS code 16.8.0) so that self-consumption by the GCRTS system, if any, is taken into account and deducted from the solar energy generation to be paid for.
- iii. The Solar Energy Generation Meters shall have a remote reading facility enabled by a communication system and protocol that will be specified by EESL. The parameters that shall be remote readable must include the auto-scroll display parameters as given in clause viii above.
- iv. It is the responsibility of the SI to maintain the Solar Energy Generation Meters as may be directed by EESL. Solar Energy Generation Meters shall not be disconnected, removed or replaced without prior approval by EESL.
- v. Solar energy generation as may be recorded and displayed by the solar grid inverter shall not be used for the purpose of energy generation guarantee. Only the readings of the Solar Energy Generation Meter shall be used for calculating the guaranteed energy generation.

#### d. Remote Monitoring System

Andaman/202109016 Dated: 22-09-2020

i. The System Integrator shall ensure that all GCRTS system are with Remote Monitoring Systems (RMS) enabled. The data from such RMS enabled projects would be monitored

- or analysed remotely by EESL independently or at its centralized monitoring centre, to ensure desired level of performance.
- **ii.** The SI shall have no objection to provide access to RMS for data acquisition and monitoring the performance of GCRTS system by EESL
- **iii.** The SI shall support EESL in establishing technical handshake between the RMS and the Centralized Monitoring System being established by EESL or its appointed agency
- **iv.** The SI shall ensure that the connectivity of the project with Centralised Monitoring System of EESL is uninterrupted at all times during O&M period and shall make all necessary arrangements for the same.
- v. EESL or its authorized agency reserves the right to validate the authenticity of such data for which SI has to extend full access and cooperation.

## e. Data acquisition system / plant monitoring

- i. A data acquisition system shall be provided for each of the GCRTS systems.
- **ii.** A data logging provision to be given for plant control and monitoring, time and date stamped system data logs for analysis with a high quality, suitable computer. Metering and instrumentation for display of system parameters and status indication to be provided.
- **iii.** Solar Irradiance: a pyranometer / solar cell based irradiation sensor (along with calibration certificate) to be provided to measure the PR at the time of commissioning.
- **iv.** Temperature: Temperature probes for recording the solar PV module back surface and ambient temperature to be provided complete with readouts integrated with the data logging system **at the time of commissioning.**
- **v.** The following parameters are accessible via the operating interface display in real time separately for solar power plant:
  - a) AC Voltage.
  - b) AC Output current.
  - c) Output Power
  - d) Power factor.
  - e) DC Input Voltage.
  - f) DC Input Current.
  - g) Time active.
  - h) Time disabled.
  - i) Time Idle.
  - j) Power produced
  - k) Protective function limits (e.g.: AC over-voltage, AC under-voltage, over-frequency, under-frequency)
- vi. Computerized DC string/ array monitoring and AC output monitoring shall be provided as part of the inverter and/or string/array combiner box or separately.
- vii. 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) shall be monitored.
- viii. Computerized AC energy monitoring shall be in addition to the Solar Energy Generation Meter.
- **ix.** The data shall be recorded in a common work sheet chronologically date wise. The data file shall be MS Excel compatible. The data shall be represented in both tabular and graphical form.
- **x.** All instantaneous data shall be shown on the computer screen.
- **xi.** Software shall be provided for USB download and analysis of DC and AC parametric data for individual plant.
- **xii.** Provision for instantaneous internet monitoring and download of historical data shall be also incorporated.

Andaman/202109016 Dated: 22-09-2020

- **xiii.** Remote server and software for centralized internet monitoring system shall be also provided for download and analysis of cumulative data of all the plants and the data of the solar radiation and temperature monitoring system.
- **xiv.** Simultaneous monitoring of DC and AC electrical voltage, current, power, energy and other data of the plant for correlation with solar and environment data shall be provided.
- **xv.** Remote monitoring and data acquisition through remote monitoring system software at the owner / EESL 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 System Integrator.
- **xvi.** The SI shall be obligated to push real-time plant monitoring data at specified intervals (e.g. 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 SI's.
- xvii. Grid Outage data shall be provided.

## 3. Scope of work

The scope of this RfP in brief is as follows:

Survey, Design, Engineering, Supply, Construction, Erection, Testing & Commissioning including Comprehensive Onsite Maintenance for 10 years of Grid Connected Solar PV based Rooftop Power Plants of cumulative capacity of 7.5MWp in various Buildings in the Union Territory of Andaman, on turnkey basis. System Integrator shall have to take approval of the engineering documents, Bill of Materials from EESL prior to commencement of the work. Comprehensive maintenance includes 10 years unconditional onsite warrantee for trouble free running of the system after successful commissioning and proper handing over. SI to provide adequate training to building owner for operating and maintaining the system.

## Solar PV modules

Solar PV modules as per the technical specifications given in **Annexure-III** 

## **Grid-tie String Inverter**

Grid-tie String Inverter as per the technical specifications given in **Annexure-III** 

Broadly, System Integrator's (SI) scope of work shall include the following:

#### i. Site survey

SI will be responsible for carrying out site survey activities (not limited to);

- Carrying out the site survey as per pre-feasibility report format enclosed in Annexure IV.
- Identify shadow free area and submit site clearance report to EESL
- A layout plan of the site clearly indicating the identified location for installation of SPV Modules, and other BoS
- An array layout that shows how the solar panels will be installed/mounted

SI shall estimate the BoS required for the complete system installation including synchronization with grid and trouble free operation. BoS shall include items such as (not limited to):

- Module Mounting Structure (MMS)
- Grid –tie inverter of suitable capacity
- Array Junction Box (AJB), Combiner box, MC4 connectors as per requirement
- All approvals/NOC for the plant are to be obtained by the system integrator. Rooftop Owner may only provide necessary documents as required for the approvals/NOC.
- Protection devices such as Surge Protection Devices (SPD) on both DC and AC sides including inverter, lighting arrestors etc.

Signature: -Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN User ID: p. kumar

NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-RooftopAndaman/202109016 Dated: 22-09-2020

SECTION-4
(Technical & SCC)
78

- Grounding, Earthing arrangement as required
- Complete civil work
- Cables, Cable housing/Conduits, ACDB (if any), junction boxes, nut- bolts etc. as per requirement

SI shall submit all engineering documents/drawing including Bill of Material (BoM) to EESL/DISCOM.

## ii. Supply, Installation & Commissioning

SI shall be responsible for supplying all the necessary items not limited to serial no. i of Clause 3. SI shall also be responsible for carrying out coordination with DISCOM and for:

- Arranging all necessary permits/approvals for Installation/Synchronization/ Commissioning.
- Submission and approval of all necessary documents/drawings to DISCOM
- Installation and Commissioning of complete system as per schedule given in RfP

## iii. Performance Guarantee (PG) test/ Trial run

SI shall carry out PG test/ trial run in presence of EESL and DISCOM and submit Project Completion report (as per Annexure VI) to EESL. Based on satisfactory performance of the system, EESL will issue a commissioning certificate to the SI. Issuance of commissioning certificate to the SI may be treated as completion of system.

## iv. Comprehensive onsite maintenance warranty for a period of 10 years

SI shall provide comprehensive onsite maintenance warranty for a minimum period of ten (10) years and will be the nodal point between Building Owner, EESL and DISCOM for this project.

SI will be responsible for day to day operation and maintenance of systems for a period of 10 years and will submit Monthly/Quarterly/Half yearly reports to EESL. The formats / templates of the reports will be given to the SI separately. SI will be responsible to identify, report any sort of error/operational issues to EESL/Suppliers and troubleshooting of the system during O&M period.

It's the responsibility of the SI to get the modules cleaned during O&M period.

SI shall be responsible for making any fee/charges etc. during the O&M period for smooth and un-interrupted operation of the Grid connected solar PV based rooftop system.

During the warrantee period, the Bidder/SI shall ensure proper functioning of the systems and complaint, if any, raised to the Bidder/SI against the system, will have to be attended within 48 hours of receiving of such complaints in any form.

Bidder shall provide a contact no. to the building owner/EESL for reporting of complaints.

In case of any short fall in the guaranteed energy units by the Bidder /SI due to any of the reasons then penalty as per clause sl no. LD of Part - D shall be imposed.

If the Bidder/SI still does not attend the complaint within the above, mentioned period then the Bidder/SI may be blacklisted by EESL and a legal proceeding may be initiated against the Bidder/SI for breach of the agreement.

The Bidder/SI shall affirm as per standards for quality that anything to be furnished shall be new, free from all defects and faults in material, workmanship and manufacture, shall be of the highest grade and consistent with established and generally accepted standards for material

of the type ordered, shall be in full conformity with the specifications, drawing or samples, if any and shall if operable, operate properly.

The Bidder/SI shall be responsible for the water proofing of the roof disturb/pierced during installation of the project or during O&M period. The Bidder/SI should immediately take necessary action to repair any damage to the water proofing. However, in such situations, the Bidder/SI shall pay any loss or damage to the project and rectify the same within reasonable time frame. If the Bidder/SI fails to carry out required water proofing within 15 days from the date of identification of issue, the Rooftop Owner/EESL may rectify the same at the prevailing market rate and the Bidder/SI shall reimburse the same with PMC (@15%) charges to the Rooftop Owner/EESL with 30 days from date of submission of invoice. If the Bidder/SI fails to reimburse the expense to the Rooftop Owner/EESL, then such expenses shall be adjusted by the EESL from the O&M payment.

# GCRTS systems performance evaluation

The Bidder/SI shall be required to meet a minimum guarantee solar energy generation with a minimum Performance Ratio (PR) of 75% at the time of commissioning.

GCRTS systems with a Performance Ratio (PR) of less than 75% shall not be considered for declaration of Commercial Operation Date.

## **Guaranteed Energy Generation**

• Minimum number of units generated by each system in the first year is tabulated below:

System Capacity (kWp)	1
kWh per annum (in the first year)	1,226

- The System performance will be evaluated through number of units (kWh) generated in any year from the project.
- The guaranteed energy generation per annum shall be calculated based on the pro rata basis based on the total installed capacity (kWp) by the Bidder / SI.
- The annual guaranteed energy generation is calculated for 12 months from the date of COD. The annual guaranteed energy generation from solar projects shall be calculated after deducting the auxiliary power consumption (including imports for power plants, if any)
- The minimum annual guaranteed energy generation may be adjusted against the period for which the DISCOM's grid is not available (shall be counted from 8:00 AM to 6:00 PM shall be counted). The SI shall make the necessary arrangements to keep the record of Energy Generation, Plant Outages and Grid unavailability period. The loss of energy due to faults from the plant side shall not be considered for the estimating the annual energy generation. The grid unavailability period shall be duly certified by the Rooftop Owner and EESL officials. The grid unavailability report shall be submitted by Bidder/SI to Rooftop Owner and EESL on monthly basis.
- During O&M contract, the system performance will be evaluated based on guaranteed energy generation. Second year onwards a linear degradation of the solar module output (i.e., 0.75% per year) may be considered for the project period.
- Bidders are expected to make their own study of solar radiation profile and other related
  parameters of the area & make sound commercial judgment about the guaranteed energy
  generation. It shall be the responsibility of the Bidder to assess the corresponding solar
  insolation values and related factors of solar plant along with expected grid availability.
- The Bidder / SI may deploy string or central type grid tie invertors.
- During the project period, the SI shall operate and maintain the solar plant with full reliability and up keep.

Signature: -Subject: C'N=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN User ID: S. kumar • The final tests to prove the guaranteed performance parameters shall be conducted at site by the SI in presence of the EESL/Rooftop Owner. The SI's Engineer shall make the solar plant ready to conduct all necessary tests. The Performance Guarantee Tests (PG tests) shall be commenced, within a period of one (1) month after successful Commissioning. 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.

## v. Bidder/SI further will be responsible for (but not limited):

- a. To prepare a Quality Assurance (QA) and Quality Control (QC) Plan with the approval of the EESL
- b. Field quality inspection of ongoing/completed works
- c. PDI (along with representative of EESL) of material at manufacturers facility on sample basis.
- d. Bidder shall submit the weekly/monthly reports including joint meter reading statements.
- vi. Risk liability of all personnel associated with implementation and realization of the project will be bidder's scope.
- vii. SI will also be responsible for providing trainings to Rooftop Owner /EESL on various aspects of design and for operating and maintaining the system after commissioning of the project. The schedule of training programs and the number of participants will be informed later to the SI.

SI shall furnish all necessary information to EESL for complete system including Warrantee, Do & Don'ts etc. so as to avoid further misunderstandings and disputes. Bidder/SI shall ensure detailed planning for time bound smooth execution of the project.

Bidder shall consolidate all the User Manuals from Solar PV module supplier, Inverter supplier, and other items including BoS and submit the consolidated copy to EESL/beneficiary.

## 4. Operation and Maintenance (O&M)

The Bidder/ SI shall be entrusted to carry out the total O&M activities of the Solar Power Generating System(s) upto the interconnection point as per the scope of work for the 10 (Ten) years with immediate effect from the date of operational acceptance.

- a) The Turnkey Bidder/ SI shall be responsible for all the required activities for the successful construction, running, guaranteed energy generation & maintenance of the Solar Power Generating Systems covering:
  - i. Deputation of qualified and experienced engineers Supervisors & Technicians.
  - ii. Successful running of Solar Power Plant for guaranteed energy generation.
  - iii. Co-ordination with Rooftop Owner/Building Owner as per the requirement on behalf of EESL for Joint Metering Report (JMR), furnishing generations schedules as per requirement, revising schedules as necessary and complying with grid requirements updated time to time.
  - iv. Monitoring, controlling, troubleshooting maintaining of logs & records, registers.
  - v. Supply of all spares, consumables and fixing / application as required.
  - vi. Supply & use of spares, consumables, tools, logistics and skilled manpower throughout the maintenance period as per recommendations of the equipment

- manufacturers and requirement of the Plant & other associated infrastructure developed under the scope of EPC works.
- vii. Conducting periodical checking, testing, overhauling, preventive and corrective action.
- viii. Up keeping of all equipment, Solar PV modules, inverters etc.
- ix. Arranging & updating any licenses/permits required for successful operation of plant (s).
- x. Submission of periodical reports to EESL on the energy generation & operating conditions of the power plant.
- xi. Furnishing generation data monthly to EESL/Rooftop Owner by 3<sup>rd</sup> of every month.
- xii. The Bidder/SI shall be responsible for making all the payments towards renewal of all the permits / clearances etc. (if required) to the Government bodies /DISCOM for smooth operation of the project.
- xiii. Periodic cleaning of solar modules as per the recommendations of OEM & existing site conditions.
- xiv. Repair & replacement of components of SPGS including all other associated infrastructure developed as a part of EPC Works which has gone faulty or worn-out components including those which has become inefficient.
- b) Continuous monitoring the performance of the Solar Power Generating Systems and regular maintenance of the whole system including Modules, PCU's, outdoor/indoor panels/ kiosks and other infrastructure developed as a part of EPC works in order to extract & maintain maximum energy output from the SPGS & serviceability from the associated infrastructure.
  - i. Preventive and corrective maintenance of the complete Solar Power Plant and associated infrastructure developed as a Part of EPC work, including supply of spares, consumables, repair & replacement of wear and tear, overhauling, replacement of damaged modules, invertors, PCU's and insurance covering all risks (Fire & allied perils, earth quake, terrorists, burglary, power output warranty of solar PV modules for 25 years and others) as required, for a period of 10(Ten) years from the date of start of O&M of the project.
  - ii. The period of Operation and Maintenance will be deemed to commence from the date of Operational acceptance. EESL may extend the O&M period beyond the project duration at mutually agreed terms and conditions.
  - iii. All the equipment required for Testing, Commissioning and O&M for the healthy operation of the SPGS must be calibrated, time to time, from the NABL accredited labs and the certificate of calibration must be provided prior to its deployment.

#### c) Operation and Performance Monitoring

- i. Operation part consists of deputing necessary manpower required to operate the Solar Power Generating System (s) at the full capacity. Standard Operation procedures (SOPs) such as preparation to starting, running, routine operations with safety precautions, monitoring etc., shall be carried out as per the manufacturer's instructions & best engineering practices to have trouble free & optimum operation of the complete system with maximum possible energy generation.
- ii. Daily work of the operation and maintenance in the Solar Power Generating System (s) involves periodic cleaning of Modules, logging the voltage, current, power factor, power and energy output of the Plant at different levels along with fault/breakdown log. The operator shall also note down time/failures, interruption in supply and tripping of different relays, reason for such tripping, duration of such interruption etc. The operator shall record monthly energy output, down time (due to solar power plant and grid), fault logs & their Root Cause Analysis reports etc. The Bidder/ SI shall get

Signature: =
Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN
MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN
ILEGELD: O BURDER

NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-Andaman/202109016 Dated: 22-09-2020

SECTION-4 (Technical & SCC)

78

the plant outage and grid outage periods certified by Rooftop/Building Owner on monthly basis along with JMR.

#### d) Maintenance

- The Bidder/ SI shall carry out the periodical plant maintenance as given in the manufacturer's service manual and perform operations to achieve committed generation.
- ii. Earth resistivity of plant as well as individual earth pit is to be measured and recorded every month. If the earth resistance is high, suitable action is to be taken to bring down the same to required level.
- iii. A maintenance record is to be submitted to operation/engineer-in-charge to record the regular maintenance work carried out as well as any breakdown maintenance along with the date of maintenance reasons for the breakdowns steps have taken to attend the breakdown duration of the breakdown including action taken to avoid the same in future.
- iv. The Schedules will be drawn such that some of the jobs other than breakdown, which may require comparatively long stoppage of the power plant, shall be carried out preferably during the non-sunny days/night. An information shall be provided to Engineer-in-charge for such operation prior to start.
- v. The Bidder / SI will attend to any breakdown jobs immediately for repair/replacement /adjustments and complete it at the earliest working round the clock. During breakdowns (not attributable to normal wear and tear) at O&M period, the Bidder / SI shall immediately report the accidents, if any, to the Engineer In-charge showing the circumstances under which it happened and the extent of damage and or injury caused.
- vi. If negligence / mal-operation of the contractor's operator results in failure of equipment such equipment should be repaired replaced by contractor at free of cost.

## e) Quality Spares & Consumables

In order to ensure longevity and safety of the core equipment and optimum performance of the system the contractor should use only genuine spares of high quality standards.

## f) Required Documentation:

Complete documentation shall be provided for the design, manufacturing/assembling, testing, installation, commissioning, start-up, operation, maintenance, repair and disposal of the solar power generating system components.

The bidder shall provide the following minimum documentation:

- 1. Project design document containing detailed engineering calculations, losses, drawings, array layouts, simulation reports, performance guarantee etc.
- 2. Technical data sheets
- 3. Test reports and commissioning protocols
- 4. Installation, operation and maintenance manual

# 5. Bill of Quantity

The equipment and the material for GCRTS systems shall include, but not limited to the following

Item Details (along with make & specifications)	Unit
Solar PV modules	Nos.
Module Mounting Structures including fasteners and clamps	Set
Main Junction Boxes with monitoring capabilities	Lot
Solar module array to Junction box Interconnection cable (Cu), MC4 Connectors	RM
Junction box to Inverter Interconnection Cable (Cu/ Al)	RM
Connection accessories – lugs, ferrules, glands, terminations etc.	Lot
AC Cable (LT/ HT) of appropriate sizes	RM
Power Conditioning Units/ Inverters	Nos.
Remote monitoring system	Set
Required Circuit breakers	Set
AC & DC distribution panels/ boards, PDB, LDB etc.	Lot
Control and Relay Panel	Lot
Lightning Arresters of suitable ratings	Nos.
Control and power cables	Lot
Surge Protection devices and Fuses	Set
Earth cables, flats and earthing pits	Lot
Cable for power evacuation with suitable support system.	Lot
Signboards	Lot
Danger sign plates, anti-climbing etc.	Lot

All the information above her is indicative only and may vary as per design and planning by the Bidder/SI. The Bidder/SI must provide the BOM of the plant as per the design along with invoice of the supply order after delivery.

## 6. Minimum Local Content Requirement

Bidder shall comply with the minimum local content requirement for Grid Connected Solar Power Projects notified by Ministry of New and Renewable Energy (Govt of India) vide Office Memorandum Number F. No. 146/57/2018-P&C dated: 11-12-2018 for "Implementation of Public Procurement (Preference to Make in India) order for renewable energy sector – reg"

The notified minimum percentage of local content is as follows:

Renewable Energy Technology	Minimum percentage of Local Content Required for the renewable energy products
Grid Connected Solar Power Projects	Solar Modules : 100 Other components like inverter etc : 40

Bidder shall submit a certificate stating the minimum percentage of local content as per the format given in **Attachment-14 of Section-6 of Tender Document**. The certificate shall be from the statutory auditor or cost auditor of the company (in case of companies) or from a practicing cost accountant or practicing chartered accountant (in respect of suppliers other than companies) giving the percentage of local content. It is mandatory to mention UDIN No in the certificate.

NOTE: False declarations will be in breach of the code of integrity under Rule 175(1)(i)(h) of the General Financial rules for which a bidder or its successors can be debarred for up to 2 years as per Rule 151(iii) of the General Financial rules along with such other actions as may be permissible under law.

Only those bidders who comply with the minimum local content requirement as mentioned above shall be eligible to bid.

# 7. Qualifying Requirements:

In addition to the satisfactory fulfillment of requirements stipulated under section ITB, the following shall also apply:

Sr No. (A)	Criteria (B)	Documents to be submitted (C)
1	The bidder should be:	Photocopy of Certificate of Incorporation issued by the Registrar of Companies
	A firm registered/ incorporated under Companies Act, 1956 or Companies Act, 2013, and further amendment (s)	AND Memorandum of Association, Article of Association needs to be attached along with the bid. The bidder should also highlight the relevant provision/ article number which highlights the objects relating to the business fields mentioned in the previous column.
	OR	OR
	A registered partnership firm (registered under section 59 of the Partnership Act, 1932)	A Registered partnership deed
	OR	OR
	A limited liability partnership (under the Limited Liability Partnership Act, 2002)	LLP Registration Certificate issued by competent Govt. Authority
	(No Consortium is allowed in this tender except NSIC consortium as mentioned below)	All the bidders shall also provide Copy of GST Registration Certificate and PAN Card.
2	The bidder should be minimum three (03) years old as on date of publication of	Photocopy of Certificate of Incorporation issued by the Registrar of Companies
	tender .	OR
		A Registered partnership deed
		OR
	Signature :-	LLP Registration Certificate issued by competent Govt. Authority (As applicable)

Signature: Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN
MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN
USer ID: p. kumar

Bidder shall provide Copy of all the claimed 3 Bidder should have successfully completed 'similar work' of following Work/ Purchase Orders/ Supply Orders/ cumulative capacity within the last five Contracts/ LOAs (05) years (as on date of publication of Along with tender): Material Receipt Certificates/ Work Completion (A) For participation in Lot-1 Certificates/ Payment Receipts/ Client's Letter regarding release of Security Deposit/ CPG on • One work order of cumulative successful completion of Order are required to be capacity of at least 2.1MWp submitted in order to justify completion of work mentioned in Work Order. Two work orders of cumulative capacity of at least 1.3MWp each. The submitted proof must clearly mention value OR (in MW) of work executed as asked in the Three Work orders of cumulative qualifying criteria. Completion certificates must capacity of at least 1MWp each. have the reference no of original work order. (B) For participation in Lot-2 Work Orders/ LoAs should be from any • One work order of cumulative Government/ PSUs/ ULBs/ DISCOM only. capacity of at least 3.8MWp OR All bidders must submit the above mentioned Two work orders of cumulative documents in line with 'Similar Works' defined capacity of at least 2.3MWp each. in previous column. OR Three Work orders of cumulative capacity of at least 1.9MWp each. 'Similar Works' means - Design, Supply, Erection, Testing and Commissioning of grid connected solar rooftop PV power plants In case bidder is participating for more than one Lot, then cumulative sum of the Experience required Past criteria mentioned above against each Lot shall be considered. For Example, if a bidder is participating for Lot-1 and Lot-2, then the past experience of the bidder shall be: One work order of at least 5.9MWp. OR Two work orders of at least 3.6MWp each. OR Three work orders of at least 2.9MWp each. Bidder shall submit Satisfactory Client/Owner Letter from confirming performance of 50 kW or above Plant satisfactory performance of 50 kW or above Plant since last six months calculated since last six months calculated (backward) from (backward) from the date of publication the date of publication of NIT/RfP. *Client/Owner* of NIT/RfP. shall be any Government Dept./ PSUs/ ULBs/ DISCOM only. Duty/GST The bidder(s) shall be a manufacturer of of Excise Registration Copy Certificate as a 'Manufacturer' and Factory inverters or solar modules or EPC or SI. License under the Indian Factories Act, 1948.

		The submitted document shall clearly justify the manufacturer status of the bidder. In case above mentioned documents are not clarifying the Manufacturer status, then relevant document issued by competent Govt. body/authority shall be submitted by the bidder.
		In case of EPC/SI, the bidder shall submit an undertaking from module manufacturer confirming the supply of modules if tender is awarded to the bidder.
		[NOTE: Module manufacturer giving such undertaking to EPC/SI bidder, shall NOT participate as individual bidder in this tender]
6	Bidders should have following Average Annual Turnover (ATO) for immediately preceding last three financial years i.e. 2016-2017, 2017-18 & 2018-19	Duly authorized copy of audited annual report is to be submitted by respondent along with CA certificate.
	<ul> <li>For participating in Lot-1: ₹ 4.96         Crores     </li> <li>For participating in Lot-2: ₹ 8.8         Crores     </li> </ul>	
	Turnover means revenue from operations (excluding other income)	
	In case bidder is participating for more than one lot, then cumulative sum of the required turnover criteria mentioned above against each lot shall be considered. For Example, if a bidder is participating for Lot-1 and Lot-2, then the required annual ATO requirement shall be $( \ 3.96 \ \text{Cr} + \ 3.8 \ \text{Cr} ) = \ 3.76 \ \text{Crores}$	
7	The Bidder should be profitable (net profit) in any of the two previous financial years out of last three completed financial years	Duly authorized copy of audited annual report is to be submitted by respondent along with CA certificate.
	Profitability means: Profit after tax	The bidder shall submit last 3 years' audited financial statements i.e. FY 2016-17, FY 2017-18 & FY2018-19.
8	The Net worth of bidder as on the last day of preceding financial year (2018-19) shall not be less than 100% of the paidup share capital.	Duly authorized copy of audited annual report is to be submitted along with a practicing CA's certificate.
	Net worth implies to the sum total of the paid-up share capital and free reserves. Free reserves means all reserves credited out of the profits and share premium account but does not include reserves credited out of the revaluation of the assets, write back of depreciation provision and amalgamation. Further,	The bidder shall submit last 3 years' audited financial statements i.e. FY 2016-17, FY 2017-18 & FY2018-19.

any debit balance of Profit and Loss account and miscellaneous expenses to the extent not adjusted or written off, if any, shall be reduced from reserves and surplus.

In case of LLP firm, closing capital of previous year (2018-19) should not be less than opening capital of same period (2018-19). It will be considered as negative net worth and vice versa.

9 The bidder should have office setup in Andaman.

In case a bidder is not having an office setup in Andaman, then in such a case an undertaking shall be provided by the bidder on its letter head to setup an office in Andaman within 30 days of issuance of LoA.

Photocopy of any of the following:

• Valid shops and establishment registration certificate from the local municipality/state/UT

#### AND/OR

 Notary attested photocopy of duly registered rent/lease agreements copy along with rent paid receipt not older than 3 months from date of tender

#### AND/OR

 Utility bill (water, electricity, landline, telephone or postpaid mobile phone or gas bill) not older than last three months from the date of tender.

#### OR

Undertaking on Letter Head to setup office in Andaman within 30 days of issuance of LoA.

# **Important Points:**

- EESL reserves the right not to seek any deficient document/clarifications from the bidders after opening of techno-commercial bid. If any bid is found to be in non-conformance to the tender conditions or deviating from the tender, EESL reserves the right to out rightly reject such bid without seeking any clarification. Bidder to take cognizance of the same and submit their bid accordingly.
- EESL reserves the right to use in-house available data, if required, to evaluate the tender including data/documents submitted by the vendor in their previous tender(s). however, this should not be understood that relevant documents/certificates or any other requirement as required in the instant RfP is not to be provided by any vendor participating in the tender who has earlier participated in any of the earlier tenders by EESL.

## Note:

- All the required documents must be properly annexed and submitted as mentioned above.
- "Holding Company "and "Subsidiary "shall have the meaning ascribed to them as per Companies Act, 1956 or, in vogue.
- In case of holding company, the holding-subsidiary relationship should be in existence for at least one year as on the date of submission of bids.
- In case bidder is not able to furnish its audited financial statements on standalone entity basis, the unaudited unconsolidated financial statements of the bidder can be considered acceptable provided the bidder furnishes the following further documents on substantiation of its qualification:
  - (i) Copies of the unaudited unconsolidated financial statements of the Bidder along with copies of the audited consolidated financial statements of the Holding Company with

signature: -Subject: CN-PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O-ENERGY EFFICIENCY SERVICES LIMITED, C=IN User ID: p. kumar

NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-RooftopAndaman/202109016 Dated: 22-09-2020

SECTION-4
(Technical & SCC)
78

- a letter of undertaking from holding company supported by Board pledging unconditional and financial support. Irrevocable in the format enclosed in Attachment-9 of Section-6, Forms & Procedures.
- (ii) A Certificate from the CEO/CFO of the Holding Company, stating that the unaudited unconsolidated financial statements form part of the Consolidated Annual Report of the Company.
- In case a bidder does not satisfy the financial criteria, the holding company would be required to meet the stipulated turn over requirements, provided that the net worth of such holding company as on the last day of the preceding financial year is at least equal to or more than the paid-up share capital of the holding company. In such an event, the bidder would be required to furnish along with its bid, a letter of Undertaking from the holding company, supported by the Board Resolution, as per the format enclosed in the bid documents (Attachment-9 of Section-6, Forms & Procedures), pledging unconditional and irrevocable financial support for the execution of the Contract by the bidders in case of award.
- In case the Bidder meets the requirement of Net worth based on the strength of its Subsidiary(ies) and/or Holding Company and/or Subsidiaries of its Holding Companies wherever applicable, the Net worth of the Bidder and its Subsidiary(ies) and/or Holding Company and/or Subsidiary(ies) of the Holding Company, in combined manner should not be less than 100% of their total paid up share capital. However individually, their Net worth should not be less than 75% of their respective paid up share capitals.
- In case bidder, has been found to be defaulting on the delivery period (in each LoA issued) as per assessment (supply, installation etc.) will be liable to be rejected. Bidder have to provide the quantity (Nos. & Percentage) supplied and installed against each LoA awarded by EESL at the date of submission of bid.
- Other income shall not be considered for arriving at annual turnover.
- The supporting documents in support of above Qualification Requirement should be submitted along with tender document, otherwise Techno-commercial offer submitted by the bidder is liable to be considered as non-responsive.
- All the required documents must be properly annexed and submitted as mentioned above with necessary details in brief.

## **Conditions for NSIC Consortium:**

- No Consortium is allowed in this tender except NSIC Consortium.
- NSIC Consortium shall consist of maximum Three members including NSIC as lead member.
- In case a group of MSMEs registered with NSIC (under single point registration scheme) form a consortium under NSIC, the Consortium needs to provide an authorization letter from NSIC accepting the terms and conditions of tender (except for those terms and conditions in which NSIC consortia are given special status as per Government of India Policy for the Government Purchase Program) and also provide details of Consortium members, their manufacturing capacities, the share-out of quantities with schedule of supplies as per EESL tender schedule. Further, NSIC consortium mandatorily submits their service tax, pan card and other relevant documents.
- In this tender, only one bid from NSIC Consortium will be accepted.
- In case of Consortium of NSIC, the lead members/ partners in the consortium shall not separately participate as independent bidder or as members of any other consortium in this bidding process. All bids in contravention of this shall be rejected. NSIC consortium members should be from relevant industry only as mentioned in QR.
- Further, MSMEs are also eligible to participate in tender directly provided they meet all QRs in their individual capacities and are not part of NSIC Consortium or any other Consortium.

NOTE: The supporting documents in support of above Qualification Requirement should be submitted along with tender document, otherwise tender will rejected.

If bidder is not meeting any Qualification Requirement as defined above, it should clearly intimate the same in deviation form or on its letter head.

EESL reserves the right to reject a bidder if their past supply/installation track record has been unsatisfactory and if bidder is engaged in a current project but is unable to keep up with the project schedule in quantity/ quality as prescribed by Project In-charge and if EESL has sufficient reason to believe that the Bidder is unsuitable for taking up a project in this tender.

78

## SPECIAL CONDITIONS OF CONTRACT (SCC)

Special conditions will prevail upon the instruction to Bidders and other terms and conditions

## 1. Terms of Payment:

Payment towards Design, Engineering, Supply, Construction, Erection, Testing, Commissioning and O&M of grid connected Solar PV Rooftop Power Plants of cumulative capacity of approximate 7.5MWp in various Buildings in in the Union Territory of Andaman shall be made in the following manner to successful system integrators.

- a. 60% of the supply + installation and commissioning value (i.e. Part A1 or A2 or A3 as per Price Bid) after delivery & acceptance of material at site duly certified/verified by EIC of EESL.
- b. 30% of the supply + installation and commissioning value (i.e. Part A1 or A2 or A3 as per Price Bid) after satisfactory commissioning with net-metering and completion certificate by EESL/concerned government department.
- c. 10% of the supply + installation and commissioning value (i.e. Part A1 or A2 or A3 as per Price Bid) after one year of reliable and trouble free operation and demonstrations of the guaranteed Energy generation by the GCRTS system as per RfP from the date of commissioning

# Payment during O&M Period (1st year to 10th year)

Successful bidder(s) shall be paid O&M value (i.e. Part B1 or B2 or B3 as per Price Bid) for 10 years on yearly basis as per the awarded contract value.

Please note that in price-bid table of each lot, cost of O&M (Part B i.e. B1 or B2 or B3) should not be less than 12% of the respective total cost of Part A + Part B (i.e. Part A1+B1 or A2+B2 or A3+B3) of the price bid table of quoted lot. This amount will be released in equal installments during the O&M period at the end of each year (for 10 years) of satisfactory performance. In case, quoted price for Part B (i.e. B1 or B2 or B3) of Price bid for each lot is less than 12% of respective total cost of Part A + Part B (i.e. Part A1+B1 or A2+B2 or A3+B3) then in LoA/LoI, cost of Part B (i.e. B1 or B2 or B3) shall be fixed at 12% of respective total cost of Part A + Part B (i.e. Part A1+B1 or A2+B2 or A3+B3) and cost of respective Part A (i.e. A1 or A2 or A3) shall be reduced proportionately keeping total of respective Part A + Part B (i.e. Part A1+B1 or A2+B2 or A3+B3) equal to cost quoted in price bid.

The payment(s) shall be processed upon receipt of the following:

- i. Acceptance of LoA and signing of Contract Agreement.
- ii. Submission of required Contract Performance Guarantee (CPG) as per the CPG Clause.

Note: The Price will remain firm till the execution of the contract.

## Other terms and conditions related to payment terms:

- At the time of payment of bills, the income tax, if any, shall be deducted at source as per Government rules and guidelines as may be prevailing at the time of payment. Further, for availing the benefit of lower income tax rates supplied from outside the Purchaser's country, Supplier shall provide Income Tax Clearance Certificate (ITCC)/ Tax Residency Certificate or any other relevant document/certificate as per prevailing law, from concerned tax authorities for claiming lower tax deduction, if any.
- All the invoices shall be submitted to EESL for payment, once in a month only. Payment will be made to the bidder within 30 Days after submission of Invoice complete in all respect i.e.

Signature: :-Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN User ID: p. kumar

- with all the required documents and compliance of relevant terms & conditions of LOA duly accepted & certified by EIC, EESL
- ➤ If the invoice is incomplete in any respect or if there is any non-compliance with relevant Terms & Conditions of LOA, counting of 30 days due date shall start from the date of submission of all necessary documents provided relevant terms & conditions of LOA have been fulfilled.

## 2. Completion Time

Scope	Details	
Contract Period (in years)	10 years from the COD of the Project	
Issuance of Notice to Proceed for Supply,	Within One year from the date of issuance of	
Installation, Testing, Commissioning,	LoA	
Synchronization etc		

Entire material to be delivered and complete system integration as per this RFP document is to be completed as per the below project timelines

The time lines for Completion of the EPC Works is 90 days from the date of issue of NTP (Notice to Proceed).

## I. Site Survey:

S.No.	Activity	Milestone Date	Remarks
1.	List of project sites by EESL	Zero Date (D)	
2.	Site Survey	D+17 days	Signing of MoM with Rooftop Owner, EESL. Submission of array layout, site survey report by Bidder / SI

## **II. Implementation Schedule of Solar Power Plants:**

The date of handover of site (s) to the contractor for implementation of Grid connected solar rooftop project shall be treated as Zero date. The contractor shall submit the detailed execution plan within one week (07 days) from the date of issuance of NTP. The project shall be commissioned in 90 days from the date of NTP.

S.No.	Activity	Milestone Date
1.	Issue of NTP / site handover letter	Zero Date (D)
2.	Commissioning of Solar Power Plant	D+90 days

The commercial operation day (COD) shall be the date declared by the Bidder/SI and approved by EESL on which the GCRTS system has been, synchronized with the gird and verified for its designs specification and performance evaluation requirements and for which all the necessary documentation provided to DISCOM for net-metering along with submission of project completion report as per Section IV.

In case of any delay in net-metering approval after installation and submission of necessary documents to DISCOM for net-metering, then the successful bidder shall not be penalized for the delay period.

## **3. Part Commissioning** – Part Commissioning is NOT allowed.

Signature: Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN USER ID: p.kumar,		
NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-	SECTION-4	Page 25 of
Andaman/202109016 Dated: 22-09-2020	(Technical & SCC)	78

## 4. New technology / upgradation

The Bidder is responsible for replacement of equipment (if any) during the O&M period at free of cost. The Bidder is free to use the commercially established new technology(ies)/ upgrade the existing equipment used in the solar power project during the O&M period. In such a case, the Bidder has to plan the activities in a manner without effecting the minimum guaranteed energy generation from the solar power project(s).

#### 5. Warranty

Warranty herein means Comprehensive Onsite Maintenance Warranty for 10 years. Refer above serial no. (iv) of clause no. 4 of Operation and Maintenance (O&M).

Warranty shall also include:

- The mechanical structures and solar PV modules of the grid connected solar PV based rooftop system must be warranted for a minimum of 25 years.
- The SI must ensure that the goods supplied under the Contract are new, unused and of most recent or current models and incorporate all recent improvements in design and materials unless provided otherwise in the Contract.
- During the period of Warranty / Guarantee the SI shall remain liable to replace any defective
  parts, that becomes defective in the Plant, of its own manufacture or that of its sub-SIs, under
  the conditions provided for by the Contract under and arising solely from faulty design,
  materials, workmanship or any reason attributable to works carried out by the SI, provided
  such defective parts are not repairable at Site. After replacement, the defective parts shall be
  returned to the SIs works at the expense of the SI unless otherwise arranged.
- During the Operation & Maintenance and guarantee period, the SI shall be responsible for
  any defects in the work due to faulty workmanship or due to use of sub-standard materials
  in the work. Any defects in the work during the guarantee period shall therefore, be rectified
  by the SI without any extra cost to the EESL/Rooftop Owner within a reasonable time as
  may be considered from the date of receipt of such intimation from the EESL/ Rooftop
  Owner failing which the EESL reserves the right to take up rectification work at the risk and
  cost of the SI.

Warranty certificate issued by the manufactures shall be submitted and individual factory test report of manufactures shall also to be submitted along with invoice of the supply order after delivery. Every item should bear serial number provided during the manufacturing process. These serial numbers should be mentioned by manufacturer in all the following documents, while submission of bills after delivery of the order items:-

- a. Invoice
- b. Factory test report (In house test report generated during manufacturing)
- c. Warranty certificate

If SI do not rectify/supply the said problem after written notices than the defected equipment as per BOM noticed shall be rectified/purchased through CPG amount of SI deposited in EESL.

# 6. Purchase Preference as per 'Public Procurement (Preference to Make in India), Order 2017' (Latest Amendment Dated:04-Jun-2020)

As per revised order No: P-45021/2/2017-PP (BE-II) dated: 04-Jun-2020 of Department of Promotion of Industry and Internal Trade-

- a) Only 'Class-I Local Suppliers' and 'Class-II Local Suppliers' are eligible to bid in this tender subject to fulfillment of 'Local Content Requirement' clause as mentioned above.
- b) Margin of purchase preference applicable to 'Class I Local Supplier' is 20%.

Note: Bidder shall carefully go through the above mentioned order in order to understand the whole process and definition of various terms (e.g. Class-I Local supplier, Local content etc) pertaining to the said order which have also been used under 'Evaluation Criteria' clause of the tender.

#### 7. Evaluation Criteria

- There are a total of 2 Lots in the Tender i.e. Lot-1 (Northern Andaman) and Lot-2 (Middle Andaman).
- Bidders can participate in either any or all lots if they can manage to accomplish the suggested timeline as per the Scope of Work and bidders meet the cumulative qualifying requirements for participated lots. Bidders need to submit an undertaking mentioning the lot for which they are participating in the format given at **Attachment-11 of Section-6**.
- Lot-1 to Lot-2 consist of 6 line items (i.e. A1, B1, A2, B2, A3, B3). For Lot-1 to Lot-2 bidder has to quote for all line items mandatorily as projected in the price bid.
- Tender shall be evaluated for complete scope of work. Selection of bidder will be done on the technically acceptable, lowest evaluated cost basis of Price-Bid.
- Each lot shall be evaluated individually and the evaluation will be done considering the prices inclusive of GST rates (i.e. Total landed cost of Part A1+B1+A2+B2+A3+B3 of price bid of each lot under column 6 of price bid).
- Price bid should be unconditional, failing which the bid shall be summarily rejected. The price
  to be quoted as per the prescribed format of price bid. Price shall remain firm till the execution
  of the contract.
- Eligibility of the participating bidder shall be determined separately for each lot as set in qualification criteria.
- Among all qualified bids, the lowest bid will be termed as L1.
- If L1 is 'Class-I Local Supplier', the contract for full quantity will be awarded to L1.
- If L1 bid is not a 'Class-I Local Supplier', 50% of order quantity shall be awarded to L1. Thereafter, the lowest bidder among 'Class-I local supplier' will be invited to match the L1 price for the remaining 50% quantity subject to the Class-I local supplier's quoted price falling within the margin of purchase preference, and contract for that quantity shall be awarded to such 'Class-I Local Supplier' subject to matching the L1 price. In case, such lowest eligible 'Class-I local supplier' fails to match the L1 price or accepts less than the offered quantity, the next higher 'Class-I Local Supplier' within the margin of purchase preference shall be invited to match the L1 price for remaining quantity and so on, and contract shall be awarded accordingly. In case some quantity is still left uncovered on Class-I local suppliers, then such balance quantity may also be ordered on L1 bidder.
- Further, in case a party is not able to supply quantity allocated to them as per scheduled timelines, EESL reserves the right to shift the part/full quantity to other bidder, who has matched the price.
- In the event of tie in prices between two or more bidders, the bidder with higher turnover will be given preference in ranking and award. Average of last two financial years shall be considered for arriving at turnover for comparison in such cases to break the tie.
- EESL reserves the right to divert the awarded quantity of successful bidder if the bidder does not perform within first two weeks as per the schedule.
- EESL reserves the right of reverse bidding on the prospective L-1 price in each Work/Supply package. In case the discovered L-1 price of any package is higher than the EESL-estimated cost or higher than the prevailing market price, EESL at its own discretion may go for reverse bidding among the 60% of participant bidders of that package in order of L-1, L-2, ...., L-7 subject to a maximum seven nos of bidders.
- The terms and conditions pertaining to MSEs shall be referred at clause 2.4 of section II of this tender and shall be applied accordingly [Refer to Important Note Given below].
- If any other unforeseen situation/s arise apart from those mentioned above, decision of EESL should be binding on the Bidders.

- However, bidder has to ensure that the project completion period for the awarded work as per the RfP timelines. If any other unforeseen situation/s arise apart from those mentioned above, decision of EESL shall be binding on the Bidders.
- However irrespective of the qty. awarded, bidder has to ensure that the project completion period is per the timelines of the tender.
- In case of any conflict in award of work arising between MSE bidder and 'Class-I local supplier' or any other conflict arising on account of following Public Procurement (Preference to Make in India), Order 2017 (Latest Amendment Dated:04-Jun-2020) and Public Procurement Policy for MSE, award of work shall be made in accordance with Public Procurement (Preference to Make in India), Order 2017 (Latest Amendment Dated:04-Jun-2020).

## **IMPORTANT NOTE:**

The benefits to MSEs as mentioned in Section 2, shall be available only for Goods/Services produced & provided by MSEs.

Bidder shall carefully go through the revised criteria for classification of MSEs as per Gazette ID Number CG-DL-E-01062020-219680 dated: 01-06-2020 and notifications/orders issued by Ministry of MSME from time to time.

As per answer to FAQ no. 18 circulated vide Office Memorandum F. No. 22(1)/2012-MA dated 24.10.2016 "Policy is meant for procurement of goods produced and services rendered by MSEs. However, traders are excluded from the purview of Public Procurement Policy."

MSEs seeking exemption and benefits should enclose an attested/self-certified copy of registration certificate as a part of their bid in Envelope-1, giving details such as stores/services, validity (if applicable) etc. failing which they run the risk of their bid being passed over as ineligible for the benefits applicable to MSEs.

Bidder may refer to Notes Point (c) and (g) at Page 16 of Section-2 and shall carefully go through all the guidelines mentioned in Section-2 and ensure fulfillment of all the requirements for seeking exemptions and benefits applicable to MSEs.

In case of submission of Udyog Aadhar Memorandum/Udyam Registration to claim benefits applicable to MSEs, NIC (National Industrial Classification) code mentioned below at serial no 1 along with any one of the NIC codes mentioned at serial no 2 and 3 below shall be acceptable as a proof of the fact that the bidder is registered as MSE for the tendered item.

Sr. No	5 Digit NIC Code	Description	
1	35105	Electric power generation using solar energy	
2	42201	Construction and maintenance of power plants	
3	42202	Construction/erection and maintenance of power, telecommunication and transmission lines	

Note: If NIC codes as mentioned above are not found in the submitted Udyog Aadhar Memorandum/Udyam Registration, then in such a case the benefits applicable to MSEs shall NOT be given to the bidder.

## 8. Action by EESL if L1 backs out

After opening of price bid, if L1 bidder backs out, the bidder will be put on holiday list of EESL for a period of one year. During this tenure, the bidder will be barred from participation in EESL tendering process. However, bidder has to continue the unexecuted work of the other prevailing work if any under the current running contracts. Simultaneously, the EMD submitted by such bidder against the subject tender will be forfeited. If bidder is exempted from submission of EMD, SUBJECT, CHAPASHANT KUMAR, ST. DELHI, OID.2.5.4.17-110003, OU-SUPPLY CHAIN

NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-Andaman/202109016 Dated: 22-09-2020 SECTION-4 Page 28 of (Technical & SCC) 78 then the EMD amount will be adjusted from the payments due to the contractor against other running contracts. If there is no running contract of the bidder/no payment dues of the bidder then EESL reserves the right to take any legal remedy as deemed fit to recover the penalty equivalent to EMD amount through legal means.

# 9. Liquidated Damages and Penalties

In case of any delay in the execution of the SUPPLIES AND INSTALLATION, beyond the stipulated time schedule including any extension permitted in writing, EESL reserves the right to recover from the SI for the loss incurred due to delay in commissioning as tabulated below subject to a maximum of 10% of the total value of the contract. However, the LD will not be applicable for the period if delay is not on the part of Successful Bidder.

Delay Period	Penalty (Liquidated Damages)
Upto 7 days	1.2 x Avg No. of units generated for 7 days (calculated on pro rate basis as
	per sl no. (iv) of clause 3 of scope of work (Guaranteed Energy Generation)
	of scope of work) X Rs. 5/ kWh
From 7-15 days	1.25 x Avg No. of units generated for 15 days (calculated on pro rate basis
	as per sl no. (iv) of clause 3 of scope of work (Guaranteed Energy
	Generation) of scope of work) X Rs. 5/ kWh
From 16-60 days	1.30 x Avg No. of units generated for 60 days (calculated on pro rate basis
	as per sl no. (iv) of clause 3 of scope of work (Guaranteed Energy
	Generation) of scope of work) X Rs. 5/ kWh

<sup>\*</sup>If there is any delay in commissioning of project beyond 60 days, EESL reserves the right to terminate the SI and the SI shall reimburse the loss incurred by EESL due to the project.

Alternatively, EESL reserves the right to purchase of the material and completion of the works from elsewhere at the sole risk and cost of the successful bidder/ SI and recover all such extra cost incurred by EESL in procuring the material from resources available including EMD/Bid security/ encashment of the bank guarantee or any other sources etc. Further, if any extra cost is incurred by EESL due to delay in work completion by the party beyond the completion time as per PO/LOA, the same shall be recovered from the party's Invoice/EMD/BG etc.

In addition to above, penalty will be applied as follows which shall be over and above the LD Provisions:

## Penalty for deviation in Number of units generated:

In case the SI is not able to meet the number of units generated as mentioned in sl no. (iv) of clause 3 of scope of work in any year, then the SI shall pay the penalty as per below mentioned formula:

1.2 x No. of units shortfall (No. of kWh shortfall in a year X INR 5/kWh)

For the purpose of system performance evaluation, the grid availability, adjusted capacity utilization factor (CUF) of each GCRTS system will be arrived at by taking into account average daytime grid availability. For this purpose, the system monitoring equipment of the GCRTS must include measurement of daytime (08:00 AM - 06:00 PM) grid availability at the solar grid inverter AC terminals.

**Penalty for non-availability of Remote Monitoring Systems (RMS):** The Bidder/SI shall ensure that the connectivity of the GCRST system if the monitoring system of the EESL or its partner (appointed agency) is functional at all times. The system should have an ability to send data such that the data is not lost due to performance and load issue. The information should be shared with trusted systems only and should not be available to any unknown system. The Bidder/SI must ensure the availability and connectivity of the RMS to be at least 98%. EESL may impose a penalty

Signature: :-Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN User ID: p. kumar of INR 100/day/GCRTS for first 3 days and INR 500/day/GCRTS thereafter for not meeting the requirements of RMS.

## 10. Adjudicator:

Adjudicator under the contract shall be appointed by the Appointing Authority i.e. MD (EESL). If the bidder does not accept the Adjudicator proposed by EESL, it should so state in its bid form and make a counter proposal of an adjudicator. If on the day the contract agreement is signed, the EESL and contractor have not agreed on the appointment of adjudicator, the adjudicator shall be appointed, at the request of either party, by the appointing authority specified.

## 11. Arbitration:

Arbitration shall be carried out as per Arbitration Act 1996 and its subsequent amendment. The Contract shall be governed by and interpreted in accordance with the laws in force in India. The courts of Delhi shall have exclusive jurisdiction in all matters arising under the contract.

## 12. Contract Performance Guarantee

Successful bidder shall furnish the CPG in the form of Demand Draft/ Pay Order or Bank Guarantee initially for the value equivalent to 10% of the contract value of lot size of 0.5 MWp within 28 days from the date of issuance of LoA. Performance security for the next lot of 0.5MWp (equivalent to 10% of the contract value of lot size of 0.5MWp) shall be submitted within 15 days of issuance of Notice to Proceed (NTP) of site beyond initial lot size of 0.5MWp. The CPG for the remaining awarded quantity shall be submitted by the Bidder/SI in further lot sizes of 0.5MWp (equivalent to 10% of the contract value of lot size of 0.5MWp) within 15 days from the date of NTP. The Bank Guarantee must be valid to cover Delivery Period (90 Days) + O&M Period (10 Years) + Three Months Claim Period.

In case bidder provides Contract Performance Guarantee for a shorter duration, it shall be for a minimum period of 3.5 years + 3 months claim period and EESL reserves the right to invoke Performance Security in case extender Performance Security is not furnished at least 90 days prior to expiry of original Performance Security.

Any delay in submission of SD/CPG shall be deemed as accruing of financial benefit to the supplier and EESL may take necessary interest penalty recovery action (interest @ SBI's MCLR  $\pm$  2%) from the payments due to the supplier for the period of delay. However, this provision does not bind EESL in any way from proceeding against the supplier (including forfeiture of EMD, cancellation of the empanelment/LOA, etc.) for non-compliance towards non-submission of the SD/CPG.

Bank guarantee shall be from any Nationalized Banks/other scheduled private banks as per list given in RfP. EESL shall at his discretion have recourse to the said Bank Guarantee for the recovery of any or all amount due from the bidder in connection with the contract including of guarantee obligations.

Failure of the Successful Bidder to comply with the requirements of IFB/RFP shall constitute sufficient grounds for the annulment of the award and forfeiture of the Contract Performance Guarantee.

This Bank Guarantee shall be effective only when BG issuance message is transmitted by issuing bank through SFMS to

IDFC Bank Ltd.

IFSC code: IDFB0020101

Branch Name: Soodh Birla Towers, Barakhamba Road new Delhi- 110001

The Message code to be used by the bank will be the following: -

Code	Purpose	
IFN 760	Confirmation of Bank Guarantee	
IFN 767	Amendment in Bank Guarantee	

# 13. Quality Control / Inspection by EESL

- I. The successful bidder shall be wholly responsible for the quality and performance of the product as per the tendered technical specifications.
- II. EESL reserves the right to visit the manufacturing site or the supply chain for quality inspection at any time. EESL at its discretion may order the testing of random samples (upto 5 times during the supply phase) either at the successful bidder's premises (if an NABL/ILAC-accredited Testing Laboratory is available) or at any other third-party NABL/ILAC-accredited laboratory at cost of the implementation partner(s).
- III. After testing, if product is found not matching the specifications at given test parameters, EESL at its discretion may order for cancellation of complete order or cancellation of the complete lot of product. The complete loss shall be to the account of the supplier.
- IV. The items will be supplied in proper packing (as per relevant IS, if any) to avoid any damage during transit, storage and delivery. The successful bidder shall be responsible to transport and insure the items till their delivery at project site.
- V. Inspection / Checking / Testing

## Inspection

All materials/equipment manufactured by the bidder against the Letter of Award (LOA) shall be subject to inspection, check and/or test by the EESL or its authorized representative at all stages and place, before, during and after the manufacture.

If upon delivery, the material / equipment does not meet the specifications, the material / equipment shall be rejected and returned to the supplier for repairs / modification, etc. or for replacement. In such cases, all expenses including the to-and-fro freight, repacking charges, any other costs, etc. shall be to the account of the implementation partner.

All tests shall be carried out as per IS 16444 with latest amendment, and the implementation partner shall submit the relevant test reports.

#### **Tests**

The item(s) being supplied should be as per the standard mentioned in the RfP.

During the tender duration, EESL at successful bidder's cost shall conduct additional type tests at NABL-accredited (implementation partner(s)-owned/third party) laboratory to maintain check on the supplied product. The random sample for such tests would be identified by EESL and can be from the manufacturing/supply chain/ customer facility.

## **Pre-dispatch Inspection Tests(PDI)**

Quality assurance team under SCM dept. shall carry out inspection of manufacturing plant and only after all test are clear as per EESL tender specs MD CC shall be issued to vendor for dispatch of material. The successful bidder shall maintain and provide statutory test certificates for each supplied batch, confirming compliance to the technical specifications and other tender/LOA requirements.

The Test Certificate needs to be transmitted electronically to EESL at least 48 hours in advance of dispatch date.

## **Documentation along with supply of items**

The bidder(s) shall provide the following documents (both hard copy and soft copy) to EESL for reference:

- Manual / Guide: User Manuals, FAQ, OEM Functional Manuals and Installation Guides, Business Process Guides and Troubleshooting Guides
- Certificates: Meter Warranty, Insurance, NABL/ILAC meter test

The above-mentioned documents shall be provided in the word format to provide flexibility for customization, if required.

# 14. Earnest Money Deposit (EMD)/Bid Security

Amount of Bid Security - As mentioned in Section-1

The bidder shall furnish, as part of its bid, a bid security in a separate envelope. The bid security shall, at the bidder's option, be in the form of a Banker's cheque, Demand Draft in favor of "Energy Efficiency Services Limited" or a bank guarantee as per format at Attachment 2 of Section-6. Bid security/EMD shall remain valid for a period of 45 days beyond the original bid validity period of 180 days, i.e. 225 days from date of bid opening. If there is any extension in bid validity period, then EESL may ask the bidder to extend the validity of bid security. The details of EMD instrument has to be submitted in relevant field/column of online module. Tenders without Earnest Money Deposit is liable to be rejected. It should be ensured by the bidder that the original DD/BG is received by EESL before opening time of techno-commercial bids for verification of the details of DD given online by the bidders. The tender submission, tender closing and opening will be done electronically and online. EESL will not be responsible for any delay, loss or non-receipt of Tender Document Cost sent by post/courier. The instrument should reach in original to EESL office before the Bid Opening date. Bids not accompanied with the requisite tender document cost may not be opened. The bid securities of unsuccessful bidders will be returned as promptly as possible after the award is made to lowest evaluated technically acceptable bidder. The bid security of the successful bidder will be returned when the bidder has signed the contract agreement, and has furnished the required performance security/CPG/BG to EESL.

Alternately, EMD/Bid Security may also be submitted through RTGS to EESL. The details of RTGS is as mentioned below:

Account Name	Account No.	Bank Name	Branch Name	RTGS DETAIL
EESL	10000001816	IDFC Bank	New Delhi	IFSC CODE: IDFB0020101 MICR Code: 110751001 BRANCH: Barakhamba Road ADDRESS: Sodh & Birlatowers, 4th Floor East Tower & Lgf West Tower, Barakhamba Road, New Delhi -110001

Note: Bidders submitting EMD/Bid Security through RTGS shall upload the receipt of transfer of amount in Envelope-I which shall clearly mention the details of transaction made. Participation of bidder shall be subject to confirmation of amount transferred through RTGS. The details mentioned in the document uploaded as proof of transfer of amount shall only be considered for verification purpose.

The bid security may be forfeited if:

- a) If the bidder withdraws its bid during the period of bid validity as specified in the bid.
- b) If the bidder does not accept computational/arithmetical error correction made by EESL and as explained in "Financial Evaluation" section of the Bid/RFP document.
- c) If the bidder does not accept assumptions, estimations etc. used for evaluation of bids as specified by EESL in tender documents and revision of his bid accordingly, in case other assumptions are used. If the bidder does not accept the sharing as specified in the bid.
- d) If the Bidder refuses to withdraw, without any cost to the EESL, any deviation not listed in Attachment-5 of Section-6 but found elsewhere in the bid;

or

In the case of successful bidder, if the bidder fails within the specified time limit:

- To sign the contract agreement within 15 days of placement of LoA.
- To furnish the required performance guarantee, in accordance with the tender document.
- **15.** EESL reserve the right for quantity variation up to +/-20%. However, amendment shall be given prior to supply of the material or execution of work.
- 16. Successful bidder, on whom letter of award is placed, is to ensure all safety guidelines, rules and regulations, labour laws etc. Successful bidder is to indemnify EESL for any accident, injury met by its labour, employee or any other person working for him. Any compensation sought by its labour, employee or any other person working for him shall be paid by successful bidder as per settlement solely. EESL has no role to play in this matter.
- 17. Successful bidder is to submit interchangeability certificate for its product supplied for replacement during warranty and maintenance period and even when it is purchased from open market. In case due to change in technology, the supplied product is not available during warranty/ maintenance period than the improved version of product can be used in warranty/ maintenance period with same or improved technical parameters or the combination thereof after written communication of Engineer in Charge at same cost& terms and conditions. Successful Bidder, on whom letter of award has been placed, has also to confirm that the price of improved version of product is not lesser than the original product or its parts in comparison.
- 18. The Bidder shall be deemed to have examined the Bid document, to have obtained his own information in all matters whatsoever that might affect carrying out the Works in line with the Scope of Work specified in the document at the offered rates and to have satisfied himself to the sufficiency of his Bid. The bidder shall be deemed to know the scope, nature and magnitude of the work and requirement of materials, equipment, tools and labour involved, wage structures and as to what all works he has to complete in accordance with the Bid documents irrespective of any defects, omissions or errors that may be found in the Bid documents.

#### 19. Insurance:

The Successful Bidder(s) shall take an insurance policy for transit-cum- storage-cum-erection for all the materials to cover all risks and liabilities for supply of materials on site basis, storage of materials at site, erection, testing and commissioning. The Bidder shall also take appropriate insurance during the operation and maintenance period.

#### 20. Transportation, Demurrage Wharfage, Etc.:

SI is required under the Contract to transport the Goods to place of destination defined as Site. Transport to such place of destination in India including insurance, as shall be specified in the Contract, shall be arranged by the SI, and the related cost shall be included in the Contract Price.

Subject: ON-PRASHANT KUMAR, ST=DEHI, OID.2.5.4.17.—110003. OU-SUPPLY CHAIN

MANAGEMENT, OS-BATT KUMAR, ST=DEHI, OID.2.5.4.17.—110003. OU-SUPPLY CHAIN

NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-Andaman/202109016 Dated: 22-09-2020 SECTION-4 Page 33 of (Technical & SCC) 78

- 21. Subsequent to an order being placed against your quotation, received in response to this 'enquiry', if it is found that the materials supplied are not of the right quality or not in accordance with our specifications (required by us) or received in damaged or broken conditions, not satisfactory owing to any reason of which we shall be the sole judge, we shall be entitled to reject the materials, cancel the contract and buy our requirement from the open market / other sources and recover the loss, if any, from the supplier reserving to ourselves the right to forfeit the security deposit, furnished by the supplier against the contract. The supplier will make his own arrangements to remove the rejected material within a fortnight of instruction to do so. Thereafter material will lie entirely at the supplier's risk and responsibility and storage charges, along with any other charges applicable, will be recoverable from the supplier.
- **22.** We reserve the right to accept or reject any bid in full or in part without assigning any reason thereof. We also reserve the right to split and place order on more than one suppliers.
- 23. The bidder should not have been black-listed by any Central / State Government or Public Sector Undertakings. If at any stage of tendering process or during the currency of the contract, any suppression / falsification of such information is brought to the knowledge, EESL shall have the right to reject the proposal or terminate the contract, as the case may be, without any compensation to the tenderer & forfeiture of bid security/EMD/CPG.

# 24. <u>Correspondence</u>: Post award, all correspondence by successful bidder shall be addressed to as brought out below:

- <u>CGM (SCM)</u> for all issues pertaining to clarifications w.r.t contractual and commercial issues or requiring amendments on the terms and conditions of LOA in general.
- Engineer-In-Charge (EIC) all the activities pertaining to execution of the works at site, as per the provisions under the terms of the LOA, on behalf of EESL.

### 22. Compliance with all Statutory Regulations:

- a. Compliance of all the statutory requirements as may be required w.r.t the activities to be performed to execute the scope of work under the subject LOA including the requirements under Contract Labor Acts, safety of the workmen deployed, etc., shall be the responsibility of the successful bidder including all the expenditure incurred for the same. This includes all the requirements w.r.t the workmen under Sub-contractor(s) also. The successful bidder shall submit the documentation to EESL, on monthly basis, as required under the applicable statutory requirements.
- **b.** Successful bidder shall indemnify EESL for any accident, injury met by its labor, employee or any other person working for him. Any compensation sought by its labour, employee or any other person working for him shall be paid by successful bidder as per settlement solely. EESL has no role to play in this matter.
- **c.** Disposal of failed BOQ items shall be arranged by the successful bidder, at their own cost, as per the relevant provisions of various acts/regulation in force from time to time.
- **d.** Vendor to provide/ submit PF and ESI compliance documents to EESL on monthly basis during the contract term. Further, please make sure to have the stipulation that "if vendor do not provide PF and/or ESI or document demanded by EESL within the stipulated time lines, then EESL reserves the right to terminate the contract at vendor's risk and cost".
- **e.** Vendor to ensure that the team deployed at site is equipped with proper safety gears such as safety shoes, reflective jackets, helmets, harness etc. The team must have proper Identity card.
- **23.** <u>Documentation:</u> File names of all the documents submitted in soft form shall contain the topic of the subject document.

: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN SEMENT. O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN

#### 24. SAFETY COMPLIANCE:

- a. Successful bidder, on whom letter of award is placed, is to ensure all safety guidelines, rules and regulations, labour laws etc.
- b. Successful bidder(s) to indemnify EESL for any accident, injury met by its labour, employee or any other person working for him. Any compensation sought by its labour, employee or successful bidder as per settlement shall pay any other person working for him solely. *EESL has no role to play in this matter*.
- c. The Bidder is advised to take out insurance for the period of the Contract, on the terms specified in the Special Conditions, including, but not limited to, the following:
  - Professional liability insurance;
  - Personal liability insurance;
  - Equipment insurance covering loss of or physical damage to all equipment acquired, used, provided or paid for by the Employer within the context of this Contract; and
  - Motor vehicle third party liability insurance and motor vehicle comprehensive insurance for the vehicles acquired in connection with this Contract.
- d. EESL will not be responsible in case any accident/ mis-happenings with consultant employee or contract person and for any equipment damage or theft occurs and in no case EESL shall pay for it.
- e. During the period of installation, successful bidder should ensure implementation of SAFETY measures to ensure SAFETY of working personnel, as per all applicable laws in general and with special focus in the following.
  - Working at heights
  - Working on/in the vicinity of power supply lines.
  - Working during night time on roads with proper signage.
- f. Suitable work instructions/procedures shall be prepared for each type of work location (Height or type of pole / supply network configuration) and a competent person possessing valid certificate w.r.t SAFETY issues shall train the working personnel at regular intervals. A safety inspector as coordinator shall be nominated and his details provided to EESL Registered Office.
- g. All the working personnel shall be provided with appropriate Personnel Protection Equipment such as Safety harness for working at heights, safety helmets, earthing rods, body chains, gloves, gum boots, etc. and other accessories such as Road Safety Cone, Flag, Safety jacket, Signage's etc. whenever and wherever required.
- h. Successful bidder shall arrange to carryout safety Audit at regular intervals by a competent person possessing valid certificate w.r.t SAFETY issues and suitable remedial measures shall be taken based on the findings/recommendation of the Safety Audit. M/s EESL would not be hold responsible for any incidental accidents and has right to take appropriate actions, at the sole risk and cost of vendor if the above mentioned safety measures are not taken by the bidder. If any Lineman/Man power deployed at Site found without safety equipment's and valid Identity Card, then a fine of Rs. 1,00,000 (INR One Lakh only) will be deducted from the Vendor/Contractor's monthly payment.

#### 25. Labour Laws to be adhered by Successful Bidder:

LOA to the contractors clearly specify that they shall ensure compliance of Labour Laws and shall indemnify EESL against the liability arising out of any injury to their workers deployed.

Advise the contractors, at various sites, to ensure compliance under the following basic Labour Acts and provisions there under on a priority basis:

- Employees Provident Fund and Miscellaneous Provisions Act, 1952 (providing for PF contributions, Employee pension and Deposit Link Insurance)
- Employees State Insurance Act, 1948 (providing for medical, disablement, dependent benefits)
- Employees Compensation Act, 1923 (providing for Compensation against injury due to and during the course of employment)

Signature: 
Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN User ID: S. kumar

NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-RooftopAndaman/202109016 Dated: 22-09-2020

SECTION-4
(Technical & SCC)
78

• Minimum wages Act, 1948 (providing for minimum wages for various employments)

Further, other social security provisions have also to be complied with.

<u>Note:</u> The norms and measures mentioned are indicative and any other law/safety norms related to safety of the labour may also be adhered to.

#### 26. Period of Validity of Bid:

Bids shall remain valid for a period of 180 days after the closing date prescribed by the EESL for the receipt of bids. A bid valid for a shorter period may be rejected by the EESL as being non-responsive. In exceptional circumstances, the EESL may solicit the bidder's consent to an extension of the bid validity period. The request and response thereto shall be made in writing thro' letters/ e-mails. If the bidder accepts to prolong the period of validity, the bid security/EMD shall also be suitably extended. A bidder may refuse the request for Bid Validity Extension without forfeiting its bid security. A bidder granting the request will not be required nor permitted to modify its bid.

#### 27. Bid Price

The Successful Bidder's Bid Price shall remain valid for all GCRTS systems for which EESL has issued implementation approval within one year from the date of signing of the Contract Agreement which may be extended up to year on mutual consent.

#### 28. Pre-Bid Conference

- The official representative of the Bidders may attend the pre-bid conference. The schedule of the meeting shall be as mentioned in Section-1.
- The purpose of the meeting will be to clarify any issues regarding the bid process.
- Record notes of the meeting including the text of the questions raised and responses given will be transmitted to all the bidders who were present at the meeting and will also be put on the website. The clarifications that could not be furnished during pre-bid conference will be separately communicated to all the purchasers of the RFP.
- Non-attendance at the pre-bid meeting will not be a cause for rejection of a Bidder.
- Based on the discussion in pre bid meeting, EESL reserved the right for modification in RFP.
- Bidder(s) are requested to send the queries **till 5<sup>th</sup> working day after floating the tender** to the contact points mentioned in Section 1 in the following format (**excel or word editable file**). No queries shall be entertained after the deadline of submission of query is over.

Name of Te	nder			
Tender No.				
Tender ID				
Bid Openin	g Date			
Bidder's Na	ime			
_	son from Bidder with nail and Contact No.			
	Section No.	Description as	Queries/ Clarification	
Sr. No.	Page No.	Per RFP	of the bidder	Remarks
	Para No/ Clause No.	TCI KIT	of the blader	
1	Section No.			
1.	Page No.			

DIGNATURE :-SUBJECT: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN USER ID: p. kumar

Serial No.: 11D14AS		
NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-	SECTION-4	Page 36 of
Andaman/202109016 Dated: 22-09-2020	(Technical & SCC)	78

	Para No/ Clause No.		
	Section No.		
2.	Page No.		
	Para No/ Clause No.		
	Section No.		
3.	Page No.		
	Para No/ Clause No.		

Dated: 22-09-2020

### **PRICE BID FORMAT**

Price Bid is to be filled Online Only. This format is for illustration purpose only

NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-Andaman/202109016

Name of Work: Design, Engineering, Supply, Construction, Erection, Testing, Commissioning and O&M of grid connected Solar PV Rooftop Power Plants of cumulative capacity of approximate 7.5MWp in various Buildings in the Union Territory of Andaman as per scope defined in this document.

### 1. Lot – 1 (Northern Andaman) – Cumulative Capacity of 2.68MW

Sr. No	Part	Description	Unit of Measur ement (UOM)	Total Quant ity (in numb ers)	Base price per UOM (INR)	GST (IGST/ CGST/ SGST/ UTGST ) applica ble in %	Unit Rate inclusive of GST (IGST/CGST/SGST/UTGST) (In INR.)	Total Price inclusive of GST (IGST/CGST/SGST/UTGST) (In Figures)	Total Price inclusive of GST (IGST/CGST/SGST/UTGST) (In Words)
				1	2	3	4=(2+3% 2)	5=4*1	6
1	A1	Solar System Package of 5KW: Supply of material including transportation and Complete civil works and General works including erection, commissioning, testing, synchronization etc. of entire system (Grid Connected Solar PV based rooftop system)	Per System	47					
2	B1	Solar System Package of 5KW: Comprehensive Onsite Operation & Maintenance for Ten Years							
3	A2	Solar System Package of 10KW: Supply of material including transportation and Complete civil works and General works including erection, commissioning, testing, synchronization etc. of entire system (Grid Connected Solar PV based rooftop system)	Per System	30					
4	B2	Solar System Package of 10KW: Comprehensive Onsite Operation & Maintenance for Ten Years							

Signature :-Subject : CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN User ID : D. kumar

NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-	SECTION-4	Page 38 of
Andaman/202109016 Dated: 22-09-2020	(Technical & SCC)	78

5	A3	Solar System Package of 15KW: Supply of material	Per	143			
		including transportation and Complete civil works and	System				
		General works including erection, commissioning, testing,					
		synchronization etc. of entire system (Grid Connected Solar					
		PV based rooftop system)					
6	В3	Solar System Package of 15KW: Comprehensive Onsite					
		Operation & Maintenance for <b>Ten Years</b>					
	Grand Total (A1+B1+A2+B2+A3+B3)						

# 2. Lot – 2 (Middle Andaman) – Cumulative Capacity of 4.755 MW)

Sr. No	Part	Description	Unit of Measur ement (UOM)	Total Quant ity (in numb ers)	Base price per UOM (INR)	GST (IGST/ CGST/ SGST/ UTGST ) applica ble in %	Unit Rate inclusive of GST (IGST/CGST/SGST/UTGST) (In INR.)	Total Price inclusive of GST (IGST/CGST/SGST/UTGST) (In Figures)	Total Price inclusive of GST (IGST/CGST/SGST/UTGST) (In Words)
				1	2	3	4=(2+3% 2)	5=4*1	6
1	A1	Solar System Package of 5KW: Supply of material including transportation and Complete civil works and General works including erection, commissioning, testing, synchronization etc. of entire system (Grid Connected Solar PV based rooftop system)	Per System	84					
2	B1	Solar System Package of 5KW: Comprehensive Onsite Operation & Maintenance for Ten Years							
3	A2	Solar System Package of 10KW: Supply of material including transportation and Complete civil works and General works including erection, commissioning, testing, synchronization etc. of entire system (Grid Connected Solar PV based rooftop system)	Per System	57					
4	B2 Signature	Solar System Package of 10KW: Comprehensive Onsite Operation & Maintenance for Ten Years							

NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-RooftopAndaman/202109016 Dated: 22-09-2020

NIT/Bid Document No.: Testing the state of the state o

5	A3	Solar System Package of 15KW: Supply of material	Per	251				
		including transportation and Complete civil works and	System					
		General works including erection, commissioning, testing,						
		synchronization etc. of entire system (Grid Connected Solar						
		PV based rooftop system)						
6	В3	Solar System Package of 15KW: Comprehensive Onsite						
		Operation & Maintenance for <b>Ten Years</b>						
	Grand Total (A1+B1+A2+B2+A3+B3)							

#### Note:

- 3. The Bidder/SI shall declare necessary HSN/SAC code applicable to GST rate (%) for items projected in the price bid of Annexure-I during submission of Bid. HSC code shall remain the same for the entire contract duration. The Bidder/SI submit declaration in the format attached at Attachment-15 of Section-6 on Bidder/SI Letter head. The Bidder/SI shall submit the Attachment-15 of Section-6 in the Envelope 1 itself.
- **4.** The GST rates (%) mentioned in the declaration shall be included in the price bid also and there should not be any deviation between GST declared and GST mentioned in the price bid. In case of deviation in rates mentioned in the said declaration and that mentioned in the price bid, then GST rates as submitted in the declaration shall prevail.
- 5. If the Bidder/SI changes its HSN/SAC code during execution of contract (except the government mandate) then the tax rates those are beneficial to EESL, shall be considered.
- 6. In price-bid table for each package, cost of O&M (Part B i.e. B1 or B2 or B3) should not be less than 12% of the respective total cost of Part A + Part B (i.e. Part A1+B1 or A2+B2 or A3+B3) of the price bid table of quoted lot. This amount will be released in equal installments during the O&M period at the end of each year (for 10 years) of satisfactory performance. In case, quoted price for Part B (i.e. B1 or B2 or B3) of Price bid for each lot is less than 12% of respective total cost of Part A + Part B (i.e. Part A1+B1 or A2+B2 or A3+B3) then in LoA/LoI, cost of Part B (i.e. B1 or B2 or B3) shall be fixed at 12% of respective total cost of Part A + Part B (i.e. Part A1+B1 or A2+B2 or A3+B3) and cost of respective Part A (i.e. A1 or A2 or A3) shall be reduced proportionately keeping total of respective Part A + Part B (i.e. Part A1+B1 or A2+B2 or A3+B3) equal to cost quoted in price bid.
- 7. Evaluation will be done on Grand Total of prices (i.e. A1+B1+A2+B2+A3+B3) quoted for all solar system packages in the price bid table of each lot (inclusive of GST).
- 8. It is mandatory to quote for all line items (i.e. A1, B1, A2, B2, A3, B3) of a particular lot.
- 9. Base price per unit (INR) shall be the price excluding GST.

#### Other terms and conditions

- 1. The Bidder shall indicate in the Price Bid, the unit prices in ₹(INR) and total Bid prices of the Goods & Services in the prescribed format only. Bidders shall quote for the complete requirement of Goods and Services specified under the Contract on a single responsibility basis, failing which such Bids will not be taken into account for evaluation and will not be considered for award.
- 2. The bidder should compulsorily quote for all heads (i.e. A1, B1, A2, B2, A3, B3) in the participating lot as mentioned in the price-bid format for which separate analysis/ reasonable estimation of all heads should be done by the bidder before quoting the rates in the financial bid. Any contravention may lead to rejection of offer submitted.
- 3. Any other item as required for commissioning the system for reliable and efficient operation to be provided within the quoted price.
- 4. Successful bidder should mandatorily register itself under GST act in respective state, where the goods/services will be rendered.
- 5. Please note that selection of the bidder will be done on the technically acceptable and L-1 (Lowest One) price basis as per the total landed cost (i.e. A1+ B1+A2+B2+A3+B3) inclusive of GST for each lot. Bidder should quote for complete scope of work as defined above.
- 6. Prices will remain firm till the execution of the contract.
- 7. The bidder shall quote the price on FOR Destination basis.
- 8. In case of difference in figures and words, price mentioned in words shall prevail.

I/We have read all the terms and conditions of the RFP/IFB/NIT and the Annexure(s) thereto and agree to accept and abide by the same in toto. The above quotation has been prepared after taking into account all the terms and conditions of the RFP/IFB/NIT.

(SEAL)	
,	Tenderer or
•	rized Representative:
	& Address of Tenderer:
Phone No: _	
_	
Fax no.:	

	Signature of Tenderer or
	Their Authorized Representative:
Dated:	Name & Address of Tenderer:
	Phone No:
	Fax no.:
	E Moil:

NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-**SECTION-4** Page 41 of Andaman/202109016 Dated: 22-09-2020 (Technical & SCC) 78

Page 42 of

78

SECTION-4

(Technical & SCC)

SPECIFIC CONFIRMATION BY BIDDER  Note: Please submit the table below duly filled, signed and stamped along with Techno- Commercial Bid on your Letter Head.				
Description	Remarks			
In case more than one bidder gets qualified based on the Techno-commercial Bid, then the bidder quoting the lowest total price for Grid connected solar PV based rooftop system including warranty cost and all other costs defined in price-bid table will qualify as the successful bidder.	Agreed.			
Bidders should have financial and technical capabilities to execute the Scope of Work as specified in the RFP.	Vendor to give their acceptance along with supporting documents			
Payment Terms—as per SCC Clause No. 1.0.	Agreed.			
Test Reports as per Annexure-III	Agreed.			
For the purpose of this Tender, the successful bidder needs to provide name, address, mobile no., email addresses, designations of at least 3 Senior Nodal Officers (Regular Employees of their organization), nominated by their top management, who are reachable through any means of modern communication and who shall be accountable to deliver the product and associated services to EESL as per the tender.	Bidder to provide information on letterhead pad			
Any entity which has been barred by the Central/State Government or PSUs, from participating in any bid, and the bar subsists as on the Bid Due date, would not be eligible to submit a Bid. Necessary declaration to this effect has to be given by the bidder as per format in the tender form.	Bidder to give a declaration on its letterhead pad.			
EESL reserves the right for quantity variation up to +/- 20%. Further EESL reserves the right to place a repeat order in case of urgency for part quantity in the Letter of Award for similar work on same prices, terms and conditions. Also, EESL reserves the right to ask the successful bidder to deliver the part quantity placed on them anywhere in territory of India on same prices, terms and conditions.	Agreed.			
It will be the sole discretion of EESL to award the quantity irrespective of the quantity mentioned by the bidder	e Agreed.			
Documents as per Clause No. 3 and Annexure-III	Agreed.			
Undertaking by authorized signatory that all Central/State duties, cess, etc. shall be complied with by the supplier.	Undertaking to be provided. To be provided on company Letterhead			
HSN/SAC code for respective items have been provided at the time of tender submission as per Attachment-15 of Section-6 of RfP	Agreed.			

#### Note:

All the required documents must be properly annexed and submitted with the confirmation as mentioned above.

daman/202109016 Dated: 22-09-2020

#### **Technical Specifications & Standards for Solar PV Modules**

- All the components shall be in accordance with technical specifications given in relevant IS/IEC standards. Use of PV modules with higher power output is preferred.
- PV module (s) containing crystalline silicon should be used.
- Each of the Solar PV module shall be rated for a minimum of 325 Watts peak with 72 cells. The Solar PV modules shall have a positive power tolerance.
- The efficiency of the PV modules should be minimum 16% and fill factor should be more than 75%.
- Power Output Warranty: PV modules must be warranted for output wattage, which should not be less than 90% at the end of 12 years and 80 % at the end of 25 years.
- Termination boxes used in the project shall be UV resistant with IP65
- Any damage/rejection should be made good or replaced immediately without any extra cost or loss to EESL.
- The PV modules shall be supplied with the suitable Aluminium frame. The terminal box on the module should have a provision for "Opening" for replacing the cable, if required.
- The Contractor shall obtain the approval of the Quality plan prior to manufacturing/ inspection call. The cells used for module making shall be free from all defects like edge chipping, breakages, printing defects, discoloration of top surface etc. Only Class A solar cells shall be used. The modules shall be uniformly laminated without any lamination defects. Modules have to grouped and rated as per the below table:

Power Output of the solar PV modules	Minimum Rated power output of the Modules (Rating sticker)
325 – 329.99 Wp	325 Wp
330 – 334.99 Wp	330 Wp

Note: Grouping of any of the modules (as per above table or higher wattage) have to be done as per the above order. The band of any of the modules supplied by the contractor shall have to be arranged in a similar manner as per the range mentioned in the above table.

The PV modules used in the grid connected solar power projects must qualify to the latest edition of the following IEC or BIS qualification test or standards.

Sl No.	Code/Standard	Description				
1	IEC 61215/IS 14286	Crystalline silicon terrestrial photovoltaic (PV) modules – Design qualification and type approval				
2	IEC 61701	Salt mist corrosion testing of photovoltaic (PV) modules				
3	IEC 61853- Part 1/ IS 16170	Part 1 for Photovoltaic (PV) module performance testing and energy rating. Irradiance and temperature performance measurements and power rating				
4	IEC 62716	Photovoltaic (PV) Modules – Ammonia (NH3) Corrosion Testing				
5	IEC 61730 Photovoltaic (PV) Module Safety Qualification –	Modules must qualify to Part 1: Requirements for Construction, Part 2: Requirements for Testing				
6	IEC 62804	test methods for detection of PID (potential-induced degradation)				

<sup>\*</sup>In case of expiration of standards or inapplicability, local standards and regulation may apply.

Signature :-Subject : CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN

<sup>\*</sup>Bidder must submit valid Construction Data Form (CDF) in support of Bill of Material (BoM).



<sup>\*</sup>Supplier to submit all the above requisite latest test certificates of solar PV modules at the time of submission of the bid.

<sup>\*</sup>Four bus bar or better technology solar PV modules to be used.

The Solar PV module shall be free of potential induced degradation (PID). The PID test of module, the system voltage will be subject to a conditioning of three cycles at 85 deg.C and 85% RH for a period of 96 hours.

In case of expiration of standards or inapplicability, local standards and regulations may apply.

**Note-** Equivalent standards may be used. In case of clarification following person/agencies may be contacted.

- Ministry of New and Renewable Energy/NABL accredited Labs
- National Institute of Solar Energy (NISE)
- The Energy & Resources Institute (TERI)
- UL

#### **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)

- i. Name of the manufacturer of PV Module
- ii. Name of the Manufacturer of Solar cells
- iii. Month and year of the manufacture (separately for solar cells and module)
- iv. Country of origin (separately for solar cells and module)
- v. I-V curve for the module at Standard Test Condition (1000 W/m2, AM 1.5, 250C)
- vi. Wattage, Im, Vm and FF for the module
- vii. Unique Serial No. and Model No. of the module
- viii. Date and year of obtaining IEC PV module qualification certificate
- ix. Name of the test lab issuing IEC certificate
- x. Other relevant information on traceability of solar cells and module as per ISO 9000
- xi. EESL Logo including a disclaimer note of "Government Supply, Not for sale in retail market" Color coding of the modules, Anti-theft mechanism etc. The instructions to successful bidder(s) shall be provided by the EESL at the later stage

#### **Required Testing**

#### **Factory Acceptance Tests (FAT)**

The Quality Plan/ test program for the Factory Acceptance Tests (FAT) shall be submitted to EESL for approval at least 4 weeks prior commencing of tests. The test report shall be submitted prior to shipment of material.

EESL reserves the right to visit the PV module factory at any time during manufacturing process to assess quality and production scheduling status.

#### **Additional Independent Test**

Additional independent certified Third Party testing of the PV modules may be carried out by EESL. The bidder shall propose a list of Third Party testing laboratories for EESL approval. The bidder shall organize and facilitate the EESL visit and/or testing in the factory or laboratory, if required.

EESL reserves the right to select PV modules randomly for the following tests:

- Module performance tests
- Module behavior test (irradiation and temperature)
- Module electroluminescence tests
- Module thermography imaging tests
- All testing must be included in the proposal and be supported by the bidder.

#### **Site Tests**

- The PV modules shall be subject to witness testing onsite to ensure their performance.
- The testing should be performed during the following phases of the project:
  - o Pre-commissioning
  - o Commissioning and test on completion
  - o Performance tests

The site tests shall be witnessed by the EESL. The commissioning test program shall be submitted at least 2 weeks prior in advance of any testing.

- 1. Temperature; temperature probes for recording the solar module back surface and ambient temperature to be provided with complete reads outs integrated with the data logging system at the time of commissioning
- 2. Solar irradiance: A pyranometer/solar cell based irradiation sensor (along with calibration certificate) to be provide to measure the PR at the time of commissioning

#### Safe Disposal of Solar PV Modules

The bidder will ensure that all Solar PV modules from their plant after their end of life' (when they become defective/ non-operational/ non-repairable) are disposed in accordance with the "e-waste (Management and Handling) Rules, 2011" notified by the Government and as revised and amended from time to time.

#### **Authorized Test Centers**

The PV modules deployed shall have valid test certificates for their qualification as per above specified IEC/BIS Standards by one of the NABL Accredited Test Centers in India. In case of module types/ equipment for which such Test facilities may not exist in India, test certificates from reputed ILAC Member Labs abroad will be acceptable.

#### **Inspection**

EESL reserves the right to test the Solar PV Modules before the dispatch to confirm their standards to the contract specifications at no extra cost to EESL. If required, the pre dispatch testing of the Solar PV Modules shall be done at the manufacture's place. These tested parameters should match the IEC/ISI/MNRE/BEE standards of tender. If components of the system are not as per the standards, entire lot has to be replaced with new components which shall confirm to the standards mentioned in the tender at Supplier's cost. EESL, reserves the right to verify flash test reports of Solar PV modules.

#### **PV Array Configurations**

The Solar array shall be configured in multiple numbers of sub-arrays, providing optimum DC power to auditable number of sub arrays. The Contractor shall submit their own design indicating configuration of PCU and respective sub arrays and associated bill of material.

- UV resistant Cable-ties (suitable for outdoor application shall be used to hold and guide the cables/wires from the modules to junction boxes or inverters. All the cables were aesthetically tied to module mounting structure.
- In case the string monitoring unit (SMU) is mounted on the module mounting structure, Contractor to take into consideration of the load thus added on the MMS. Accordingly, suitable supporting members for mounting the SMU must be designed and supplied. Separate structure for mounting of SMU can also be proposed.
- Every major Component of the Plant should be suitably named/ numbered & marked for ease of traceability, identification and maintenance.

### **Module Mounting Structure (MMS)**

The metallic structures for mounting the solar PV modules should be of adequate strength, which can withstand the loads of the modules and higher wind velocities.

| Signature := Subject : Chi = PRASHANT KUMAR, ST = DELHI, OID.2.5.4.17 = 110003, OU = SUPPLY CHAIN MANAGEMENT, O = ENERGY EFFCIENCY SERVICES LIMITED, C = IN

NIT Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-A daman/202109016 Dated: 22-09-2020 SECTION-4 Page 45 of (Technical & SCC) 78 The bidder shall carry out necessary studies before designing the MMS for the project.

The MMS should be MS hot dip galvanized iron with minimum 80 micron thickness for mounting of solar PV modules at site. The panel frame structure should be capable of withstanding a minimum wind load of 150 km per hour, after grouting and installation. The bolts, nuts, panel mount clamps, fasteners used for installation should be of suitable Stainless Steel (SS 304).

The foundation for module mounting structure shall be preferably 1:2:4 RCC construction or any other combination based on the local site condition requirement /standard practice for which design details shall be submitted by SI.

Bidder to prepare the design for MMS, frames, foundation etc. and submit to EESL for approval.

#### Solar array fuse

The cables from the array strings to the solar grid tie inverters shall be provided with DC fuse protection. Fuses shall have a voltage rating and current rating as per requirement of the project. The fuse shall have DIN rail mountable fuse holders and shall be housed in thermo plastic IP65 enclosures with transparent covers.

#### Technical Specifications & Standards for Inverters and BoS

### • Grid Tie String Inverters

Total output power (AC)	To match solar PV plant capacity while achieving optimum system efficiency
Input DC voltage gence	i i
Input DC voltage range	As required for solar grid tie inverter DC input
Maximum power point tracking (MPPT)	Shall be incorporated
No of independent MPPT inputs	1 or more
Operating AC voltage	3 phase 415V (+12.5%,-20%)
Operating frequency range	47.5 – 52.5 Hz
Nominal frequency	50 Hz
Power Factor of the inverter	>0.98 at nominal power
Total Harmonic Distortion (THD)	<3%
Built-in protection	AC high/low voltage; AC high/low frequency
Anti-islanding protection	As per VDE 0126-1-1/IEC 60255.5/IEC 60255.27 / IEC 62166
Operating Ambient temperature range	-10 deg C to +60 deg C
Humidity	0 – 95% Rh
Inverter Efficiency	>96%
Inverter weighted Efficiency	>96%
Protection degree	IP65 per outdoor mounting, IP54 per indoor mounting
Communication Interface	RS 485 / RS 232 / as per requirement
Environmental Testing	IEC 60068 – 2 (1,2,14,30)
Safety Compliance	IEC 62109-1, IEC 62109-2
Efficiency Measurement Procedure	IS/IEC 61683
Display Type	LED
Display parameters to be included	DC Voltage (V), DC current (A), DC power (W), AC voltage (V), AC current (A), Apparent AC power (W), Power Factor (Cosφ), Active AC power (W), Reactive AC power (W), Daily energy generation (kWh), Cumulative generation (kWh), Cumulative run time (hours)

#### **Identification and Traceability of Grid Tie String Inverter**

The following information must be mentioned on each string inverter (This can be inside or outside the laminate, but must be able to withstand harsh environmental conditions)

- i. Name of the manufacturer of string inverter
- ii. Month and year of the manufacture
- iii. Country of origin
- iv. Unique Serial No. and Model No. of the string inverter
- v. Name of the test lab issuing IS/IEC certificate
- vi. A disclaimer note of not for sale in retail market / Anti-theft mechanism etc. The instructions to successful bidder(s) shall be provided by the EESL at the later stage.

#### **Required Testing of Grid Tie String Inverter**

#### **Factory Acceptance Tests (FAT)**

The test program for the Factory Acceptance Tests (FAT) shall be submitted to EESL for approval at least 4 weeks prior commencing of tests. The test report shall be submitted prior to shipment of material.

EESL reserves the right to visit the String Inverter factory at any time during manufacturing process to assess quality and production scheduling status.

#### **Site Tests**

- The string inverters shall be subject to witness testing onsite to ensure their performance.
- The testing should be performed during the following phases of the project:
  - o Pre-commissioning
  - Commissioning and test on completion
  - Performance tests

The site tests shall be witnessed by the EESL. The commissioning test program shall be submitted at least 2 weeks prior in advance of any testing.

#### **Safe Disposal of String Inverters**

The bidder will ensure that all string inverters from their plant after their end of life (when they become defective/ non-operational/ non-repairable) are disposed in accordance with the "e-waste (Management and Handling) Rules, 2011" notified by the Government and as revised and amended from time to time.

#### **Authorized Test Centers**

The string inverters deployed shall have valid test certificates for their qualification as per above specified IEC/ BIS Standards by one of the NABL Accredited Test Centers in India. In case of such Test facilities may not exist in India, test certificates from reputed ILAC Member Labs abroad will be acceptable.

EESL reserves the right to select string inverter randomly for the Performance tests in any of the authorized test centers.

#### **Inspection and Testing**

EESL reserves the right to test the various components of string inverters before the dispatch to confirm their standards to the contract specifications at no extra cost to EESL. If required, the pre dispatch testing of the string inverters shall be done at the manufacture's place. These tested parameters should match the IEC/ISI/MNRE/BEE standards of tender. If components of the system are not as per the standards, entire lot has to be replaced with new components which shall confirm to the standards mentioned in the tender at supplier's cost.

#### **Gross Generation Feature**

The string/central inverters deployed shall have a feature of showing a gross generation in kWh.

#### DC combiner box

A DC combiner box shall be used to combine the DC cables of the solar module arrays DC fuse protection for the outgoing DC cables to the DC distribution box.

daman/202109016 Dated: 22-09-2020

#### DC distribution box

A DC distribution box shall be mounted close to the solar grid inverter. The DC distribution box shall be of the thermo plastic IP65 DIN rail mounting type and shall comprise the following components and cable terminations;

- a. In coming positive and negative DC cables from the DC combiner box
- b. DC circuit breaker, 2 pole (the cables from the DC combiner box will be connected to this circuit breaker on the incoming side)
- c. DC Surge Protection Device (SPD) suitable SPD to be provided
- d. Outgoing positive and negative DC cables to the solar grid inverter.

As an alternative to Dc circuit breaker, a DC isolator may be used in side the DC distribution box or in a separate external thermo plastic IP65 enclosure adjacent to DC distribution box.

If the Dc isolator is used instead of DC circuit breaker, a DC fuse shall be installed inside the DC distribution box to protect the DC cable that runs from the DC distribution box to the solar grid inverter.

#### AC distribution box

A DC distribution box shall be mounted close to the solar grid inverter. The AC distribution box shall be of the thermo plastic IP65 DIN rail mounting type and shall comprise the following components and cable terminations;

- a. Incoming 3-core / 5-core (single phase / three phase) cable from solar grid inverter.
- b. AC circuit breaker, 2 pole / 4 pole.
- c. AC Surge Protection Device (SPD) suitable SPD to be provided
- d. Outgoing cable to building electrical distribution board.
- e. Connection to building electric system.

The Ac output of the solar grid inverter shall be connected to the buildings electrical system after the DISCOM's service connection meter and main switch on the load side.

The Solar grid inverter output shall be connected to a dedicated module in the main distribution board of the building. It shall be connected to a nearby load or socket point of the building.

For buildings or loads with diesel generator backup, the wiring of the solar grid inverter shall be such that the solar inverter cannot run in parallel with the diesel generator. This implies that the solar inverter must be connected to a distribution board on the gird side of the automatic or manual change over switch.

#### **Cables**

- All cables shall be supplied conforming to IE 60227/IS 694 & IEC 60502/ IS 1554. Voltage rating: 1,100V AC, 1,1500V DC.
- For the DC cabling, Solar cables with multi standard copper conductor XLPE or XLPO insulated and sheathed with the voltage rating of 1500V DC or higher UV stabilised single core flexible copper cables shall be used. Multi-core cables shall not be used.
- For the AC cabling, PVC or XLPE insulated and PVC sheathed single or multi-core flexible copper cables shall be used. Outdoor AC cables shall have a UV-stabilised outer sheath.
- The total voltage drop on the cable segments from the solar PV modules to the solar grid inverter shall not exceed 2.0%.
- The total voltage drop on the cable segments from the solar grid inverter to the building distribution board shall not exceed 2.0%.

| T | Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-| daman/202109016 Dated: 22-09-2020 | SECTION-4 | Page 49 of (Technical & SCC) | 78

- (HDPE) conduit. The conduit shall not run across the path way of terrace. Flexible corrugated PVC conduits shall not be used.
- Cables and wires used for interconnection of solar PV modules shall be provided with solar PV connectors (MC4) and couplers.
- All cables and conduit pipes shall be clamped to the rooftop, walls and sealings with thermo plastic clamps at intervals not exceeding 50cm. The minimum DC cable size shall be 4mm sq. copper. The minimum AC cable size shall be 16sq mm for above 10kWp/required standard size. In three phase system the size of the neutral wire shall be equal to the size of phase wires. The following colour coding shall be used for cable wires.
  - o DC positive: red (the outer PVC sheath can be black with a red line marking)
  - o DC negative: black
  - o AC three phase: Phases: red, yellow, blue; neutral: black
  - o Earth wires: green
- Cables and conduits that have to pass through walls or ceiling shall be taken through a PVC pipe sleeve.
- Cable conductors shall be terminated with tinned copper end-ferrules to prevent fraying and breaking
  of individual wire strands. The termination of the DC and AC cables at the Solar Grid Inverter shall
  be done as per instructions of the manufacturer, which in most cases will include the use of special
  connectors.
- Cable lugs and end-ferrules for all cable conductor and wire terminations shall be crimped with crimping pilers and end-ferrule pilers.
- All cable ties shall be UV resistant.

#### **Earthing**

- The PV module structure components shall be electrically interconnected and shall be grounded.
- Earthing shall be done in according with IS 3043-1986, provided that earthing conductors shall have a minimum size of 6.0mm 2 copper, 10mm 2 aluminium or 70mm 2 hot dip galvanised steel, Unprotected aluminium copper-clad aluminium conductors shall not be used for final underground connections to earth electrodes.
- A dedicated earth electrode must be used for the earthing of DC side and AC side separately.
- The earth electrodes shall have a percent concrete enclosure with a removable lid for inspection and maintenance. The entire earthing system shall comprise non-corrosive components.

#### Surge protection

- Surge protection shall be provided on both the DC and the AC side of the solar system.
- The DC surge protected devices (SPDs) shall be installed in the DC distribution box adjacent to the solar grid inverter.
- The AC SPDs shall be installed in the AC distribution box adjacent to the solar grid inverter.
- The SPDs earthing terminal shall be connected to earth through the above mentioned dedicated earthing system. The SPDs shall be of type 2 as per IEC 60364-5-53.

#### **Lighting Protection**

Lighting protection as per IS 2309 "Protection of Buildings and Allied structures against Lighting – code of practise" (second version) (1989) shall be provided.

#### **Junction Boxes**

• 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.

Signature: :- CN = PRASHANT KUMAR, ST = DE.HI, OID.2.5.4.17 = 110003, OU = SUPPLY CHAIN MANAGEMENT, O = ENERGY EFFICIENCY SERVICES LIMITED, C = N USER D: C. KUMBAR CONTROL OF THE STREET OF THE STREE

• Cable terminations shall be taken through thermo-plastic cable glands. Cable ferrules shall be fitted at the cable termination points for identification.

#### **Tools, Tackles and Spares**

- The Installer shall keep ready stock of tool, tackles and essential spares that will be needed for the day-to-day maintenance of the solar PV system. This shall include but not be limited to, the following:
- Screw driver suitable for the junction boxes and combiner boxes; Screw driver and / or Allen key suitable for the connectors, power distribution blocks, circuit breaker terminals and surge arrestor terminals:
- Spanners / box spanners suitable for the removal of solar PV modules from the solar PV module support structure;
- Solar panel mounting clamps;
- Cleaning tools for the cleaning of the solar PV modules, spare fuses

#### **Caution Signs**

In addition to the standard caution and danger boards or labels as per Indian Electricity Rules, the AC distribution box near the solar grid inverter and the building distribution board to which the AC output of the solar PV system is connected, shall be provided with a non-corrosive caution label with the following text:

### WARNING -DUAL POWER SOURCE EB & SOLAR

- The size of the caution label shall be 105mm (width) x 20mm (height) with white letters on a red background
- Caution labels as may be prescribed by DISCOM's shall be fixed as per DISCOM's specifications.

#### **Documentation**

The Installer shall supply the following documentation:

- a. System description with working principles.
- b. System single line diagram.
- c. Solar PV array lay-out.
- d. Routing diagram of cables and wires.
- e. Data sheets and user manual.
- f. A system operation and maintenance manual.

ongiacure ..." Subject : CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN

- g. Name, address, mobile number and email address of the service centre to be contacted in case of failure or complaint.
- h. Warranty cards.
- i. Maintenance registers.

#### **Danger Boards**

Danger boards should be provided as and where necessary as per IE Act/IE Rules as amended up to date, as per the instructions of DISOCM & affixed at various appropriate locations.

#### Inspection

EESL reserves the right to test the BoS before the dispatch to confirm their standards to the contract specifications at no extra cost to EESL. If required, the pre dispatch testing of the BoS shall be done at the

bidder/manufacture's place. These tested parameters should match the IEC/ISI/MNRE/BEE standards of tender. If components of the system are not as per the standards, entire lot has to be replaced with new components which shall confirm to the standards mentioned in the tender at Supplier's cost.

The Bidder shall be deemed to have examined the Bid document, to have obtained his own information in all matters whatsoever that might affect carrying out the Works in line with the Scope of Work specified in the document at the offered rates and to have satisfied himself to the sufficiency of his Bid. The bidder shall be deemed to know the scope, nature and magnitude of the work and requirement of materials, equipment, tools and labour involved, wage structures and as to what all works he has to complete in accordance with the bid documents irrespective of any defects, omissions or errors that may be found in the bid documents.

# **ANNEXURE-IV**

# FORMAT FOR PRE-FEASIBILITY REPORT

Submitted By

Consultant Company name, logo and other contact details with date

### **Table of Contents**

	TION-4
Tech	nnical and Special Conditions of Contract
	Part A: General Information
	PART-B: Definitions Error! Bookmark not defined
	PART C: Scope of Work and Other Terms & Conditions
1.	Salient Feature
2.	Background
	2.1 About the Customer
3.	Project Area
	3.1 About project site
	3.2 Accessibility to project site
4.	Array Layout
5.	Photographs
	~ ·

# 1. Salient Features

S No	Particulars	Details
Ι	General	
1	Name of the Building	
2	Complete Address of Building	
3	Contact details	
II	Project details	
4	Contract Demand	
5	Connected Voltage	
6	Service Number	
7	Annual Energy consumption	
8	Tariff	
9	Total shadow free area	
10	Type of Roof	
11	Estimated Project capacity (approx.)	Tin Shed:
		RCC:
12	Proposed capacity as per net metering	
	policy (approx.)	

# 2. Background

Notes

# 2.1 **About the Customer**

Notes

# 3. Project Area

# 3.1 **About project site**

Notes.

S No	Particulars	Details
1	Latitude and longitude	
2	Altitude	
3	Type of roof (RCC, tin shed,	
	asbestos or any other)	
4	Type of power available	
	(Grid, Diesel or any other)	

# 3.2 Accessibility to project site

Signature :-Subject : CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN

Notes

# 4. Array Layout

Notes

# 5. Photographs

# <u>List of Buildings (Tentative)</u>

# 1. Northern Andaman (NA-Education)

# **Demand Aggregation of roofs under Education Department(North Andaman)**

Sl.	Name of the Buildings Inspected	Type of sheet		Feasibility (kW		Total No.	Additional Capacity-	Total Feasible
No.		Tin	RCC	Feasible (Tin)	Feasible RCC	of feasible Buildings	Car Sheds* (kW)	(Tin+RCC +Car Sheds)
1.	Govt. Primary School, Nabagram	2	0	31	0	2	0	31
2.	Govt. Sec. School, Nabagram	1	0	17	0	1	0	17
3.	Govt. Sr. Sec. School, Kalighat	5	0	173	0	5	0	173
4.	Govt. Girls Hostel, Kalighat	0	0		0	0	5	5
5.	Govt. Sec. School, Hostel, Kalighat	1	0	45	0	1	0	45
6.	Govt. Sec. School, Mohanpur-5	2	0	30	0	2	0	30
7.	Govt. Primary School Mohanpur-9	1	0	32	0	1	0	32
8.	Govt. Sec. School, Parangara	2	0	38	0	2	0	38
9.	Govt . Sr. Sec. School, Ram Nagar	5	0	94	0	5	0	94
10.	Govt Primary School Boys Hostel,	1	0	60	0	1	0	60
11.	Govt Primary School, Kalighat	2	0	0	0	0	5	5
12.	Zonal Library, Diglipur	1	0	10	0	1	0	10
13.	Govt. Middle School, Hathilevel	1	0	15	0	1	0	15
14.	Govt. Middle School, Shyam Nagar		0	0	0	0	5	5
15.	Govt. Primary School, Radhanagar, New Block	1	0	31	0	1	0	31
16.	Govt. Primary School, Radhanagar		0	0	0	0	5	5
17.	Govt. Senoir Secondary School, Swaraj Gram	2	0	31	0	2	0	31
18.	Govt. Middle School, Milangram	5	0	12	0	1	0	12
19.	Govt. Secondary School, Laxmipur	1	1	0	18	2	0	18
20.	Govt. Sr. Sec. School New Block Laxmi Pur	2	0	46	0	2	0	46
21.	Govt. Sr. Sec. School, Madhupur	1	1	0	45	2	0	45
22.	Govt. Primary School, VS Pally	1	0	35	0	1	0	35
23.	Govt. Primary School, Ariel Bay, Diglipur	1	0	21	0	1	0	21
24.	Govt. Primary School, Durgapur		1	0	9	1	0	9
25.	Govt. Primary School , Ramakrishna Gram		0	0	0	0	5	5
26.	Govt. Boys Hostel, Near Vivekanada Stadium	1	0	50	0	1	0	50
27.	Govt. Sr. Sec. School, Subash Nagar	2	1	0	105	3	0	105
28.	Govt. Primary School , Subashgram	3	0	50	0	3	0	50
29.	Govt School Girls Hostel, Sitanagar	1	0	13	0	1	0	13
30.	Govt School Boys Hostel, Sitanagar	1	0	20	0	1	0	20
31.	Govt. Middle. Sr. Sec. School, Sitanagar		0	0	0	0	5	5

aignature: – Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN

Carlettian 11D1445		
NIT Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-	SECTION-4	Page 57 of
A daman/202109016 Dated: 22-09-2020	(Technical & SCC)	78

32.	Govt Primary School, Sitanagar	2	0	14	0	2	0	14
33.	Govt Sr. Sec School, Kudirampur	2	0	30	0	2	0	30
34.	Govt Middle School, Kudirampur	2	0	12	0	2	0	12
35.	Govt Primary School, Krishnapur	1	0	23	0	1	0	23
36.	Govt Sr. Sec. School, Madhupur	1	0	6	0	1	0	6
37.	Govt Middle School, Sitanagar	5	0	0	0	0	5	5
38.	Office of the Dy. Eduction Officer Naveen Nagar	1	0	25	0	1	0	25
	Total	60	4	964	177	53	35	1176

# 2. Middle Andaman (MA-Education)

	Demand Aggregation of roofs under Education Department (Middle Andaman)											
		Typ she		Feasibil	Feasibility (kW)		Feasibility (kW)		Feasibility (kW)		Additiona l	Total Feasible
Sl. No.	Name of the Buildings inspected	Tin	RC C	Feasibl e (RCC)	Feasibl e (Tin)	of feasible Buildings	Capacity- Car Sheds* (kW)	Capacity (Tin+RCC+V ehicle Shed)				
1.	Govt. Primary School, Mayabunder	1		0	28	1	0	28				
2.	Govt. Sr. Sec. School, Mayabunder	4		0	142	4	0	142				
3.	Girls Hostel, Mayabunder			0	0		5	5				
4.	Govt. Sr. Sec. School, Karmatang	2		0	24	1	0	24				
5.	Govt. Primary School, Lucknow, Mayabunder	2		0	20	1	0	20				
6.	Office of the the Dy. Education Officer, Mayabunder			0	0		5	5				
7.	Zonal Library, Mayabunder	1		0	61	1	0	61				
8.	Boys Hostel M.G.College, Mayabunder	2		0	27	2	0	27				
9.	Govt.Mahatama Gandhi College, Mayabunder	1		0	20	1	0	20				
10.	Girls Hostel MG college	1		0	58	1	0	58				
11.	Govt. Middle School, South Creek	2		0	20	2	0	20				
12.	Govt. Sr. Sec. School, Oralkatcha	1		0	30	1	0	30				
13.	Govt. Primary School, Katta Khari	2		0	24	2	0	24				
14.	Govt. Middle School, Jarawa Creek	2		0	40	2	0	40				
15.	Govt. Primary School, Rajathgarh, Khattan			0	0		5	5				
16.	Govt. Primary School, Lorozig	1		0	3	1	0	3				
17.	Govt. Secondary School, Adazig	2		0	50	2	0	50				
18.	Govt. Middle School, Lakshmanpur	1		0	41	1	0	41				
19.	Govt. Middle School, Kalsi	1		0	15	1	0	15				
20.	Govt. Sr. Sec. School, Bakuntala	2		0	10	2	0	10				
21.	Govt. Sr. Sec. School,Rangat			0	0	0	10	10				
22.	Govt. Sr. Sec. School,Rangat			0	0	0	10	10				
23.	Govt. Primary School,Rangat	1		0	82	1	0	82				
24.	Govt. Sr. Sec. School ,Rangat	3		0	10	1	0	10				

Signature :-
Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN
MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN
User ID: p. kumar
oser ib . p.kumar

Code INC. 11D1445		
NIT Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-	SECTION-4	Page 58 of
A_daman/202109016 Dated: 22-09-2020	(Technical & SCC)	78

25.	Govt Sr. Sec School, Sabari Junction	2		0	15	2	0	15
26.	Govt Primary School English Medium, Sabari Junction, Rangat	1		0	5	1	0	5
27.	Zonal Library, Sabari Junction	1		0	7	1	0	7
28.	Office of Deputy Education Officer, Rangat	1		0	31	1	0	31
29.	Govt Sec School, Hindi & Bangla Medium, Rangat	2		0	15	2	0	15
30.	Govt Primary School, Amkunj	1		0	35	1	0	35
31.	Govt Primary School, Baratpur	1		0	35	1	0	35
32.	Govt Middle School, Padmanabapuram	3		0	20	2	0	20
33.	Govt Sec School, Pinaki Nagar	4		0	90	4	0	90
34.	Govt Sr. Sec School, Swadesh Nagar			0	0	0	10	10
35.	Govt. Primary School, Picture Nallah	1		0	28	1	0	28
36.	Govt. Primary School, Hari Nagar		1	26	0	1	0	26
37.	Govt Primary School, Pinaki Nagar			0	0	0	5	5
38.	Govt Primary School(E.M), Hari nagar	1		0	20	1	0	20
39.	Govt Primary School Bangla Medium, Korangu Nallah			0	0	0	5	5
40.	Govt. Sec. School, Basantipur	4		0	50	4	0	50
41.	Govt. Sr. Sec. School,Long Island	4		0	10	4	0	10
42.	Govt Middle School, Rangat Bay	2		0	10	2	0	10
43.	Govt. Middle School, Katai Dera, Kadamtala			0	0	0	5	5
44.	Govt. Middle School, Kadamtala			0	0	0	5	5
45.	Govt. Middle School, Kadamtala	1		0	0	0	5	5
46.	Govt. Sr Sec School, Kadamtala	8		0	90	4	0	90
47.	Govt. Primary School, Uttara, Kadamtala	2		0	50	2	0	50
48.	Govt. Primary School , Kadamtala			0	0	0	5	5
49.	Govt. Sr. Sec. School, Long Island	1		0	117	1	0	117
	TOTAL	72	1	26	1333	63	75	1434

# 3. Northern Andaman (NA-Education)

	Demand Aggregation of roofs under Health Department (North Andaman)												
GI.	N 64 D H	SHECE		Total Potential Feasibility		ity (kW)	Total No.	Additional	Total Capacity				
Sl. No.	Name of the Buildings Inspected	Tin	RCC	Capacity to be installed (kW)	Feasible (RCC)	Feasible (Tin)	of feasible Buildings	Capacity- Car Sheds* (kW)	(Tin+RCC+Car Sheds) (kW)				
	Primary Health Centre,			0.2				_	_				
1	Radhapur	3		93	0			5	5				
	Sub Centre Medical,												
2	Millangram	1		10	0	2	1	0	2				
_3_	Sub Centere, Aeriel Bay	1		10	0	10	1	0	10				
	Subject : CN = PRASHANT KUMAR, ST = DELHI, OID. 2.5.4.17 = 110003, OU = SUPPLY CHAIN MANAGEMENT, O = ENERGY EFFICIENCY SERVICES LIMITED, C = IN User ID : D. Kumar												

NIT Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-A daman/202109016 Dated: 22-09-2020 SECTION-4 Page 59 of (Technical & SCC) 78

	Sub Centre Medical,								
4	Sitanagar	1		9	0	9	1	0	9
	Community Health Service,								
5	Diglipur	10		181	0	181	10	0	181
6	Sub Centre Sitanagar	1		5	0	5	1	0	5
	Primary Health Centre,								
7	Kalighat	1		85	0	25	1	0	25
8	Sub Centre, Ramnagar	1		11	0	11	1	0	11
	Primary Health Centre,								
9	Kishoire Nagar	6		108	0			5	5
	Sub Centre Medical,								
10	Nabagram	1		23	0	23	1	0	23
	TOTAL	26	-	568	0	266	17	10	276

# 4. Middle Andaman (MA-Health)

Demand Aggregation of roofs under Health Department(Middle Andaman)													
SI.			pe of neet	Feasibil	ity(kW)	Total No.	Additional Capacity-	Total Feasible Capacity					
No.	Name of the Buildings Inspected	Tin	RCC	Feasible (RCC)	Feasible (Tin)	feasible Buildings	Car Sheds* (kW)	(Tin+RCC+Vehicle Shed)					
1	Health and Wellness Centre, South Creek, Baratang	2	0	0	25	1	0	25					
2	Health and Wellness Centre, Kalsi, Bakultala	1	0	0	10	1	0	10					
3	Sub Centre, Bakultala		1	9	0	1	0	9					
4	Medical, Rampur, Rangat		0	0	0		5	5					
5	Sub Health Centre, Sabri	1	0	0	10	1	0	10					
6	Sub Centre, Nimbutala	1	0	0	10	1	0	10					
7	Sub Centre, Darmapur, Betapur	1	0	0	15	1	0	15					
8	Govt. Hospital, Billiground	1	0	0	69	1	0	69					
9	Health and Wellness Centre, Billiground		0	0	0		5	5					
10	Health and Wellness Centre, Nimbudera	1	0	0	14	1	0	14					
11	Health and Wellness Center, Long Island	2	0	0	0		5	5					
12	Dr. Rajandra Prasad Hospital, Mayabunder	2	0	0	30	2	0	30					
13	Health & Wellness Center, Santanu, Kadamtala	5	0	0	0		5	5					
14	Health & Wellness Center, Katai Dera, Kadamtala	1	0	0	20	1	0	20					
	TOTAL	18	1	9	203	11	20	232					

# 5. Northern Andaman APWD

	Demand Aggrega	tion of	roofs und	er APWD D	epartment (l	North Andar	nan)	
Sl.		Туре	of sheet	Present F (k	-	Total No.	Additional Capacity-	Total Capacity (RCC+Tin+Car
No.	Name of the Buildings inspected		RCC	Feasible (RCC)	Feasible (Tin)	feasible Buildings	Car Sheds* (kW)	Sheds)
1	JE office Radhanaghar, Diglipur	1		0	7	1	0	7
2	Govt. APWD Office Kisori Nagar, Diglipur			0	0		5	5
3	JE APWD office Kisori Nagar, Diglipur	1		0	8	1	0	8
4	Inspection Banglow Subash Nagar, Diglipur	3		0	0		5	5
5	APWD Guest House Subash Gram, Diglipur			0	0		5	5
6	EE Office APWD Construction Division Subash Gram, Diglipur			0	0		5	5
7	JE Office APWD Naveen Nagar, Diglipur	1		0	9	1	0	9
8	JE APWD Office Navin Nagar, Diglipur	1		0	7	1	0	7
9	APWD JE Office CD, Kalighat	1		0	7	1	0	7
10	APWD Guest House, Kalighat	2		0	24	2	0	24
11	APWD JE Office cd Mohanpur	1		0	7	1	0	7
12	APWD Dept, Kalighat		1	7	0	1	0	7
	TOTAL	13	1	7	69	9	20	96

# 6. Middle Andaman APWD

	Demand Aggregation of roofs under APWD Department (Middle Andaman)												
SI.			pe of neet	Feasibility (kW)		Total No.	Additional Capacity-	Total Capacity (BCC+Tin+					
No.	Name of the Buildings inspected		RCC	Feasible (RCC)	Feasible (Tin)	feasible Buildings	Car Sheds* (kW)	(RCC+Tin+ Car Shed)					
1	Inspection Bunglow (APWD Guest House), Baratang	2		0	38	1		38					
2	Office of the AE Sub Division 3 APWD,  Baratang	2		0	12	2		12					
3	Office of the JE (E&M) APWD, Bakultala	4		0	43	4		43					
4	AHW Guest House and Office	1		0	8	1		8					
5	APWD Helipad, Ground Building, Nimbutala		1	10	0	1		10					
6	APWD Pump House, Nimbutala	1		0	10	1		10					
7	Office of the AE CD 1 APWD, Rangat	3		0	75	3		75					
8	Store APWD, Rangat	3		0			5	5					
9	Water Treatent Plant, Pump House, APWD, Rangat			0			5	5					
10	Office of the JE (Worshop), Rangat	3		0			5	5					
11	APWD Godown, Rangat Bay			0			5	5					
12	Office of the AE APWD, Rangat Bay	4	1	53	0	5		53					
13	Office of The AE SB- III, Betapur	2		0	43	2		43					

Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN	ų.
MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN	
User ID: p.kumar	

Code INC. 11D1445		
NIT Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-	SECTION-4	Page 61 of
A_daman/202109016 Dated: 22-09-2020	(Technical & SCC)	78

14	Pump House, APWD, Billiground	1		0	38	1		38
15	Office of the JE APWD Section-IV,Long Island			0	25	1		25
16	APWD Guest House Banglow New, Kadamtala	1		0	35	1		35
17	Water Supply APWD, Kadamtala	1		0	28	1		28
18	APWD guest house & AE Office, Mayabunder	3		0	101	3		101
19	APWD EE office, Mayabunder			0			5	5
20	APWD Workshop, Mayabunder			0			5	5
21	AE (EM) Sub Division, Mayabunder			0			5	5
	TOTAL	38	2	63	456	27	35	554

# 7. Middle and Northern Andaman ALHW

	Demand Aggregation of roofs under ALHW Department(Middle & North Andaman)												
			pe of leet	Feasibil	ity(kW)	Total No.	Additional Capacity -	Total Feasibile					
Sl. No.	Name of the Buildings Inspected		RCC	Feasible (RCC)	Feasible (Tin)	of feasible Buildings	Car Sheds* (kW)	Capacity (RCC+Tin+Car Sheds)					
1	ALHW Guest House and Office, Baratang	1		0	8	1	0	8					
2	Office of the AE (M & S) ALHW, Rangat Bay	1		0	21	1	0	21					
3	Workshop ALHW,Rangat Bay	5		0	94	4	0	94					
4	ALHW (Power house), Rangat Bay		1	8	0	1	0	8					
5	ALHW (Guest House), Rangat Bay		1	22	0	1	0	22					
6	ALHW office EE Civil, Rangat Bay	1	1	63	0	2	0	63					
7	ALHW ,Mayabunder	3	4	116	0	4	0	116					
8	ALHW diglipur Aerial Bay,Diglipur	2	1	30	0	2	0	30					
	TOTAL	13	8	239	123	16	0	362					

# 8. Northern Andaman Veterinary

Demand Aggregation of roofs under Veterinary Department(North Andaman)													
	Type of sheet		Feasibil	ity(kW)	Total No.	Additional	Total Capacity						
Name of the Buildings Inspected	Tin	RCC	Feasible (RCC)	Feasible (Tin)	of feasible Buildings	Capacity - Car Sheds* (kW)	(RCC+Tin+Car Sheds)						
Veterinary Sub Dispensary Milangram	1		0	6	1	0	6						
Department of animal husbandry,Sitanagar	3		0	74	1	0	74						
Veterinary Sub-Dispensary,M/Pur	1		0	9	1	0	9						
Veterinary Sub-Dispensary, Nabagram	1		0	10	1	0	10						
Total	7		0	99	4	0	99						

Page 62 of

78

# 9. Middle Andaman

	Demand Aggregation of roofs under Veterinary Department(Middle Andaman)													
GI.	Name of the Buildings Inspected	Total	Type of sheet		Feasibili	ity(kW)	Total No. of	Additiona l Capacity-	Total Feasible					
Sl. No.		No. of Building s	Tin	RC C	Feasible (RCC)	Feasible (Tin)	feasible Building s	Capacity- Car Sheds* (kW)	Capacity (RCC+Tin+ Car Sheds)					
1	Dept. of Animal Husbandry Vetnary Services, Nilambur, Baratang	1	1		0	10	1	0	10					
2	Veterinary Hospital, Betapur	1	1		0	9	1	0	9					
3	Veterinary Hospital, Betapur	1	1		0	9	1	0	9					
4	Animal Husbandry, Basantipur,Nimbudera	1	1		0	0		5	5					
	Total	11	5		0	28	3	5	33					

# 10. Northern Andaman Agriculture

	Demand Aggregation of roofs under Agriculture Department (North Andaman)													
Sl. No.	Name of the Buildings inspected		Type of sheet To be Installe (kW)		Feasibi	Feasibility(kW)		Additio nal Capacit y - Car Sheds* (kW)	Total feasible capacity (RCC+Tin+ Car sheds)					
		Tin	RC C		Feasible (RCC	Feasible (Tin)	S							
1	Main Store Dept. Agriculture ,Aerial Bay, Diglipur	1	-	30	0	30	1	0	30					
2	Soil Conservation Department Agricuture, VS Palli, Diglipur	1	-	11	0	11	1	0	11					
3	Agriculture Sub- Depot, Subashgram,Diglipur	1	1	10	0	10	1	0	10					
4	Agriculture Sub-Depot, Sitanagar, Diglipur	1	ı	4	0	4	1	0	4					
5	Agriculture Sub-Depot, Nabagram, Diglipur	1	-	11	0	11	1	0	11					
	TOTAL	5	-	95	0	66	5	0	66					

# 11. Middle Andaman Agriculture

	Demand Aggregation of roofs under Agriculture Department (Middle Andaman)										
Sl.	Name of the Buildings Inspected	Type of sheet		Feasibility(kW)		Total No.	Additional Capacity-	Feasible Capacity			
No.		Tin	RCC	Feasible (RCC)	Feasible (Tin)	of feasible Buildings	Car Sheds* (kW)	(RCC+Tin+Car sheds)			
1	Sub Depot Department of Agriculture, Baratang	1		0	10	1	0	10			

	Signature :-
	Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN
- 1	MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN
	User ID: p.kumar

Control - Distanta			
NIT Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-	SECTION-4	Page 63 of	
A daman/202109016 Dated: 22-09-2020	(Technical & SCC)	78	l

2	Spices Demonstration Farm(Agri) Baratang, Adazig	1		0	4	1	0	4
3	Plant Protection Center Bakuntala, Lakshmanpur	1		0	15	1	0	15
4	Dept. of Agri. Sub Depot,Bakuntala	1		0	7	1	0	7
5	Office of Assistant Director Ariculture ,Rangat	1		0	0	0	5	5
6	Zonal Worshop Department of Agriculture ,Rangat	1		0	0	0	5	5
7	Agriculture Office,Rangat Bay			0	0	0	5	5
8	Seed Multiplication Farm (Dept of Agri.),Nimbudera	2		0	45	2	0	45
9	Agriculture,Mayabunder	1	1	28	28	2	0	56
10	Bio control Lab, Nimbudera	2		0	10	2	0	10
	TOTAL	14	1	28	119	10	15	162

# 12. Middle and Northern Andaman Police

	Demand Aggregation of roofs under Police Department (North & Middle Andaman)										
Sl.	Name of the Buildings Inspected		oe of eet	Feasibil	lity(kW)	Total No.	Additional Capacity- Car	Total capacity (RCC+Tin+Car			
No.	Name of the buildings hispected	Tin	RCC	Feasible (RCC)	Feasible (Tin)	feasible Buildings	Sheds* (kW)	Sheds)			
1	Police Radio, Kalighat, Diglipur	1	-	0	18	1	0	18			
2	Police Station, Kalighat, Diglipur	0	0	0	0		5	5			
3	Police outpost, Kishorinagar, Diglipur	1	-	0	35	1	0	35			
4	New Building police station, Subhash Gram,Diglipur	0	-	0	0		5	5			
5	Police Radio, Subhash Gram, Diglipur	1	-	0	12	1	0	12			
6	Police Radio, Mayabunder	2	1	10	0	1	0	10			
7	Police Department, Mayabunder	3	-	0	49	3	0	49			
8	SP Office, Mayabunder	1	-	0	37	1	0	37			
9	Police Radio, Baratang	1	-	0	9	1	0	9			
10	Police Station, Oral Katcha, Baratang	1	-	0	22	1	0	22			
11	Police Radio, Kadamtala	1	-	0	19	1	0	19			
12	Police station, Kadamtala	1	-	0	67	1	0	67			
13	Police station, Bakuntala	1	1	28	0	2	0	28			
14	Police Outpost, Betapur	1	-	0	53	1	0	53			
15	Police station, Billiground	2	-	0	60	2	0	60			
16	Police Outpost, Long Island	1	-	0	67	1	0	67			
17	Office of DYSP, Rangat	5	-	0	60	3	0	60			
	TOTAL	23	2	38	508	21	10	556			

Signature :-	
Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN	
MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN	
User ID: p.kumar	

Code IN C. LIDITAR			
NIT Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-	SECTION-4	Page 64 of	l
A_daman/202109016 Dated: 22-09-2020	(Technical & SCC)	78	ı

### 13. Middle and Northern Andaman Fire Stations

	Demand Aggregation of roofs under Fire Department (North & Middle Andaman)								
Sl. No.	Name of the Buildings Inspected	Type of sheet		Feasibility(kW)		Total No. of feasible Building s	Additional Capacity - Car Sheds* (kW)	Total feasible capacity (RCC+Tin+ Car Sheds)	
		Tin	RC C	Feasible (RCC)	Feasible (Tin)				
1	Fire Station, Diglipur, Subhash Gram	1	-	0	43	1	0	43	
2	Fire Station, Kalighat, Diglipur	1	-	0	32	1	0	32	
3	Fire station, South Creek, Baratang	1	-	0	32	1	0	32	
4	Fire Station, Bakuntala	1	-	0	30	1	0	30	
5	Fire station, Rangat	1	-	0	45	1	0	45	
6	Fire Station, Billiground	1	-	0	0		5	5	
7	Fire station, Kadamtala	2	-	0	40	2	0	40	
	TOTAL	8	-	0	222	7		227	

# 14. Northern Andaman Forests

	Demand Agregati	ion of	roofs ı	ınder Fore	st Departr	nent (North	Andaman)	
Sl.	Name of the Buildings	Type of sheet		Feasibility(kW)		Total No.	Additional Capacity-	Total proposed capacity
No.	Inspected	Tin	RCC	Feasible (RCC)	Feasible (Tin)	feasible buildings	Car Sheds* (kW)	(RCC+Tin+Car Sheds)
1	Forest Range Office, Aerial Bay	1		0	23	1	0	23
2	Forest Range Office, Diglipur	1		0	2	1	0	2
3	Forest Station, Diglipur	1		0	12	1	0	12
4	Forest Guest House, Diglipur	3		0	44	3	0	44
5	DFO Office, Diglipur	3		0	50	3	0	50
6	Range Office, Diglipur	1		0	6	1	0	6
7	Forest Range Office, Kalighat	1		0	7	1	0	7
	Total	16		0	144	11	0	144

# 15. Middle Andaman Forests

	Demand Aggreg	ation of	roofs u	ınder Forest	Departmei	nt (Middle An	daman)	
			of sheet	Feasibil	ity(kW)		Additional	Total Feasible
Sl. No.	Name of the Buildings inspected	Tin	RCC	Feasible (RCC)	Feasible (Tin)	Total No. of feasible Buildings	Capacity- Car Sheds* (kW)	Capacity (RCC+Tin+Car Sheds)
1	Forest Labour Welfare Club,Baratang	1		0	50	1		50
2	Forest Workshop, Krishna Nagar,Baratang	1		0	0		5	5
3	Mangroove Forest Rest House,Baratang	4		0	42	2		42
4	Forest Guest House,Bakultala	1		0	0		5	5
5	Range Office,Bakultala	1		0	24	1		24
6	Range Office, Rampur,Rangat	2		0	40	2		40
7	DFO ,Rangat	2		0	28	1		28
8	Mobile Escort Forest, TV Centre ,Rangat	1		0	17	1		17
9	Govt. Saw Mill,Betapur	7		0	239	4		239
10	Forest Range Office new, Kadamtala	2		0	22	2		22
11	Forest Guest house ,Mayabunder	1		0	19	1		19
12	DFO Office,Mayabunder	5		0	48	4		48
	TOTAL	55		0	529	19	10	539

# 16. Northern Andaman Other

	Demand Aggregation of roofs under Other Department (North Andaman)								
CI			pe of heet	Feasibility(kW)		Total No.	Additional		
Sl. No.	Name of the Buildings Inspected	Tin	RCC	Feasible (RCC)	Feasible (Tin)	feasible Buildings	Capacity (Car Sheds)*	Total Capacity (RCC+Tin+Car Sheds)	
1	Gram panchayat, Radhanagar, Diglipur	1		0	14	1	0	14	
2	Panchayat Community Hall, Sitanagar,Diglipur	1		0	26	1	0	26	
3	Gram Panchyat ,Madhupur,Diglipur	3		0	27	3	0	27	
4	Gram Panchayat Office, Subhash Gram,Diglipur	1		0	25	1	0	25	
5	Gram Panchayat Office, Kalighat,Diglipur	1		0	16	1	0	16	
6	Gram Panchayat Office, Ramakrishna Gram,Diglipur	1		0	25	1	0	25	
7	Gram Panchayat Office, Nabagram,Diglipur	1		0	31	1	0	31	
8	Zilla Parishad, Community Hall,Diglipur	1		0	26	1	0	26	
9	Trun Yuvak, Mondal Club, VS Pally,Diglipur	1		0	6	1	0	6	

Signature: Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN User ID: E. Kumar

Contain 11D1445		
NIT Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-	SECTION-4	Page 66 of
A_daman/202109016 Dated: 22-09-2020	(Technical & SCC)	78

10	Vivek Kendra Youth Club, Durgapur,Diglipur	2		0	6	1	0	6
11	Youth club, Mohanpur, Diglipur	1		0	5	1	0	5
12	Panchayat Community Hall, VS Pally,Diglipur	1		0	14	1	0	14
13	Panchayat Communitity hall, Swaraj Gram,Diglipur	1		0	11	1	0	11
14	Gram Panchayat, Diglipur	1		0	10	1	0	10
15	Open Community Hall,Kalighat,Diglipur	1		0	37	1	0	37
16	Community Hall Shyamnagar- II, Diglipur	1		0	16	1	0	16
17	Community Hall, Kudirampur, Diglipur	1		0	16	1	0	16
18	Anganwadi, Centre Radha Nagar- 1,Diglipur	1		0	4	1	0	4
19	Anganwadi Laxmipur-2,Diglipur	1		0	4	1	0	4
20	Anganwadi Centre, Radha Nagar- 2,Diglipur	1		0	4	1	0	4
21	Anganwadi Centre, Radha Nagar,Diglipur	1		0	6	1	0	6
22	Anganwadi Subashgram	1		0	4	1	0	4
23	Anganwadi, Hathilevel,Diglipur	1		0	4	1	0	4
24	Anganwadi ,Shivpur,Diglipur	1		0	7	1	0	7
25	Anganwadi Centre, Ram Nagar,Diglipur	1		0	6	1	0	6
26	Anganwadi Centre, VS Pally,Diglipur	2		0	15	2	0	15
27	Anganwadi centre, Durgapur,Diglipur	1		0	5	1	0	5
28	Anganwadi centre, Kalighat, Diglipur	1		0	6	1	0	6
29	Anganwadi Sitanagar, Diglipur	1		0	4	1	0	4
30	Anganwadi centre & Sub- centre,Kalighat, Diglipur	1		0	4	1	0	4
31	Angawadi centre,Kalighat- 2,Diglipur	1		0	4	1	0	4
32	Anganwadi, Kudirampur -3, Diglipur	1		0	4	1	0	4
33	Anganwadi, Kudirampur, Diglipur	1		0	5	1	0	5
34	Extension Office Department of Industries, Subashgram, Diglipur	2		0	58	2	0	58
35	Skill Development,DBRAIT, RK Gram, Diglipur	1		0	31	1	0	31
36	Samiti Guest House ,Navin Nagar,Diglipur	1		0	64	1	0	64
37	Multipurpose Hall,Diglipur	1		0	97	1	0	97
38	Vivekananda Stadium, Diglipur	1		0	64	1	0	64
39	Administration Building Block,Diglipur	1		0	63	1	0	63
	TOTAL	48	-	0	774	43	0	774

Signature: "
Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN
MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN
USER ID: 2. kumar

Ver ID: 2. kumar

Contable 1101445		
NIT Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-	SECTION-4	Page 67 of
A daman/202109016 Dated: 22-09-2020	(Technical & SCC)	78

# 17. Middle Andaman Others

Demand Aggregation of roofs under Other Departments (Middle Andaman)								
CLN		Type of sheet		Feasibility(kW)		Total No.	Additional proposed capacity-	Total Feasible
Sl.No.	Name of the Building Inspected		RCC	Feasible RCC	Feasible Tin	feasible Buildings	Car Sheds* (kW)	Capacity (RCC+Tin+ Car Sheds)
1.	Anganwadi Center, Nilambur,Baratang	1		0	6	1	0	6
2.	Anganwadi center, Uttara, Kadamtala	1		0	7	1	0	7
3.	Anganwadi center, Santanu, Kadamtala	1		0	20	1	0	20
4.	Anganwadi,Shantipur,Betapur	2		0	16	2	0	16
5.	Anganvadi center,Katai Dera, Kadamtala	1		0	16	1	0	16
6.	Anganvadi center, Bazaar, Kadamtala	1		0	15	1	0	15
7.	Anganwadi, TV Kulam,Betapur	2		0	9	2	0	9
8.	Anganwadi Center, Rogla Chang,Baratang	1		0	7	1	0	7
9.	Anganwadi Centre, Khattan,Baratang	1		0	7	1	0	7
10.	Anganwadi Center, South Creek,Baratang	1		0	17	1	0	17
11.	Gram Panchayat ,Rangat		1	47	0	1	0	47
12.	Panchayat Bhawan, Harinagar,Billiground	1		0	26	1	0	26
13.	Gram Panchayat Hall,Uttara, Kadamtala	1		0	48	1	0	48
14.	Gram Panchayat , Rampur,Rangat	2		0	37	2	0	37
15.	Gram Panchayat,Bakultala	1		0	24	1	0	24
16.	Office of Panchayat Samiti ,Rangat	1		0	57	1	0	57
17.	Panchayat Community Hall,Bakultala, Urmilapur	1		0	19	1	0	19
18.	Gram Panchayat, Swadesh Nagar,Betapur	1		0	27	1	0	27
19.	Gram Panchayat, Basantipur,Nimbudera	1		0	23	1	0	23
20.	Panchayat community hall ,Rangat	1		0	17	1	0	17
21.	Office of Gram panchayat ,Rangat, Dhasrathpur	1		0	5	1	0	5
22.	Vegetable Market, Gram Panchayat, Basantipur,Nimbudera	1		0	68	1	0	68
23.	Panchayat multipurpose hall, Nimbutala	1	1	52	0	1	0	52

Signature --Subject : On PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN User ID: P. Rumar -

Contain 1101445		
NIT Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-	SECTION-4	Page 68 of
A .daman/202109016 Dated: 22-09-2020	(Technical & SCC)	78

	TOTAL	61	6	223	895	50		1123
45.	Court ,Lucknow,Mayabunder		1	108	0	1	0	108
44.	Tehsildar Office,Mayabunder	1		0	36	1	0	36
43.	DC Office,Mayabunder	2		0	102	2	0	102
42.	Doordarshan ,Kadamtala Bazaar, Kadamtala	1		0	12	1	0	12
41.	Bio Control Lab,Nimbudera	2		0	10	2	0	10
40.	Office of Assistant Labour Commissioner ,Rangat	1		0	13	1	0	13
39.	General Engineering Training Centre, Industries			0			5	5
38.	Passenger Hall ,Baratang	1		0	10	1	0	10
37.	Waiting Hall and Canteen, Gandhighat, Baratang	1		0	11	1	0	11
36.	Passenger hall, Uttara jetty	1		0	21	1	0	21
35.	Child Development Project Officer,Bakultala	2		0	19	2	0	19
34.	ICDS,Nimbutala	1		0	6	1	0	6
33.	Govt. Fish Market, Kadamtala	1		0	18	1	0	18
32.	Office of the Revenue Inspector, Patwari Tehsil, Kadamtala	1		0	10	1	0	10
31.	PMB,Office,Rangat Bay		1	6	0	1	0	6
30.	PMB,Signal Tower office,Rangat Bay		1	10	0	1	0	10
29.	Panchayat Guest House, Nilambur,Baratang	1		0	22	1	0	22
28.	Panchayat Bhavan, Uttara, Kadamtala	1		0	26	1	0	26
27.	Gram Panchayat, Nilambur,Baratang	1		0	26	1	0	26
26.	Community Hall, Adazig, Baratang	1		0	31	1	0	31
25.	Community Hall, Kadamtala	1		0	38	1	0	38
24.	Panchayat Anganwadi,Nimbutala, Ulla Basti	1		0	13	1	0	13

# **Project completion Report for Solar Power Plants** (by the installer)

	(by the installer)	
Sl.No.	Component	Observation
1.	Sanction No & Date	
2.	Category:- Nodal Agency/	
	Channel partner (Name) and Complete Address	
	Site/Location with Complete Address	
	Longitude/Latitude	
3.	Capacity of system installed(kWp)	
4.	Specification on the Modules	
	Type of modules (Multi/mono)	
	Make of Modules and year of manufacturing	
	Wattage and no of modules	
	Module Efficiency	
	No of series & Parallel combinations	
	Tilt Angle of Modules	
4.1	IEC certificate	
	Date of issue	
	Agency	
	Validity	
	Enclose a IEC certificate	
4.2	Whether imported or indigenous.	
4.3	RFID tag is pasted inside or outside	
4.4	Type if RFID	
5.	PCU	
	Make, &rating	
	Type of Charge controller/MPPT	
	Capacity if inverter and year of manufacturing	
	AC Output	
	Whether hybrid or stand alone	
	Whether indigenous or imported	
	Enclose test certificate as per MNRE requirement	
	Input Voltage to Inverter	
6.	Structure	
	Tracking or non tracking	
	Indigenous or imported	
7.	Distribution Box	
	Name	
	Make	
	Certificate	
8.	Earthling and protections	
	Lightening Arrester (Type)	
9.	Date of Commissioning	
10.	Monitoring Mechanism for the installed System	

Signature: Subject: Cn=Prashant Kumar, ST=Delhi, Oid.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN User ID: E. Kumar

Code INC. 11D1445		
NIT Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-	SECTION-4	Page 70 of
A daman/202109016 Dated: 22-09-2020	(Technical & SCC)	78

11.	Technical Person Trained to maintain system	
	Name with Mobile no.	

# **Declaration**

It is to certify that all the components/subsystems and materials including junction boxes, cables, distribution boards. Switches, circuit barkers used are as per MNRE requirement and as per DPR submitted.

Contractor With seal

Date: Place:

# **QUALITY ASSURANCE PLAN (QAP)**

### PHOTOVOLTAIC MODULE FACTORY TEST REPORT -DIMENSIONAL & VISUAL CHECK

Project:

Customer: EESL QTY:

Module

Type: Date:

Quality Plan:

	PV	DIMENSIONAL CHECK			VISUAL CHECK					EES L RE MA RKS	Vendor Clarifica tion/RE MARKS
SL NO.	MOD ULE SERIA L NO:	LENGTH- AS PER DWG. (YES/ NO)	WIDTH -AS PER DWG. (YES/ NO)	HEIGHT -AS PER DWG. (YES/ NO)	Free from cell crac ks/br eaka ges (YES /NO)	Free from air bubbles or delamination: Backsheet bubbles(with air trapping) (YES/NO)	Free from cells overlapping or cells touching the edge frame (YES/NO)	Availability of RFID Tag containing all module data (YES/NO)	EESL (YES /NO )		
1											
2											
3											
4											
5 6											
7											
8											
9											
10											
11											
12											
13											
14									-		
15											
16											
17											
18											
19											
20											
21											
22											
24											
26											

Signature :-Subject : CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN User ID :: Skumar

# PHOTOVOLTAIC MODULE FACTORY TEST REPORT -ELECTRICAL (I-V) CHECK

Project:
Customer

: EESL QTY:

Module Type: Date

Quality Plan:

SL NO	PV MODULE SERIAL NO	OPEN CIRCUIT VOLTAGE (Voc V)	SHORT CIRCUIT CURREN T (Isc A)	VOLTAGE AT PEAK POWER POINT (Vmp V)	CURREN T AT PEAK POWER POINT (Imp A)	MAXIMU M MODULE POWER OUTPUT (Pmax W)	MODULE EFFICIENC Y (in %)	FILL FACTOR (FF)
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								
21								
22								
23								

### PHOTOVOLTAIC MODULE FACTORY TEST REPORT -IR-HV-IR TEST CHECK

Project:

Customer: EESL QTY: Module Type: Date:

Quality Plan:

SL NO.	PV MODULE	IR BEFORE	HV TEST 3KV, 1	IR AFTER	RESULT
	SERIAL NO:	(MΩ)	MIN (μa)	(ΜΩ)	(Pass/Fail)
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					
32					
33					

Page 74 of

78

### PHOTOVOLTAIC MODULE FACTORY TEST REPORT -EL TEST CHECK

Project:

Customer: EESL QTY: Module Type: CRYSTALLINE MODULES Date:

Quality Plan:

SL NO	PV MODULE SERIAL NO	EL TEST (PASS/FAIL)	REMARKS
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

### **Net Meter Specifications**

Three Phase Net Meter: Connection Type-Direct Connected Wiring Configuration-3-phase Bi-directional Meter

### System:

Current Range: 10-60 Amp

Voltage Range: 230/240 V (P-N)/400/415 V (P-P)

Accuracy 1.0 accuracy Class, As per IS 13779

**Measuring Parameters** 

- \_ Active & Apparent Power & Energy in both Import & Export mode
- \_ Net Energy Calculation
- \_ Maximum Demand with Date & Time snap shots
- \_ Power On-Off event logging
- \_ Last 6months Billing Data
- \_ ToU wise Data i.e. upto 8 configurable Tariff Zones
- \_ Daily(midnight) & every 15/30/60Min Load profile Data
- \_ Anti-Tamper and Event logging

True (4-Q) Energy measurement in Three Phase Bi-directional Meter

#### Communication

\_ Galvanically Isolated Optical Port for Communication

# Mechanical

01.	Mounting	Wall/Projection Mounting type 03Nos mounting holes Key type hole at Top (back Side, inaccessible after mounting) & 02Nos at Bottom inside inaccessible once Terminal Cover is sealed
02.	Material	Non-inflammable High Grade Engineering plastic/polycarbonate
03.	Sealing Arrangement	Ultra-Sonically welded Top and Base of the Meter Sealable Optical & Terminal Cover

Lab Testing of these Net Meters, as per DISCOM requirement, shall be in scope of EPC contractor only.

### Annexure-IX

# **Compliance Matrix/Check-List for Bidders**

[To be submitted on Letter Head]

Please ensure these Major Terms & Conditions before submitting your bid in order to avoid REJECTION of your offer

Sr.	Detail/Terms & Conditions	Applicable	Atta	ched	Reasons for non-
No.		For	Yes	No	compliance/remarks
1	Bid Fee (If Applicable)	Indian Bidders			
2	EMD (If Applicable)	Indian Bidders			
3	Bid Fee exempted for being MSE/Start-up	Indian Bidders			
	EMD exempted for being MSE/Start-up	Indian Bidders			
	Relevant Certificate of MSEs/Start-up certificate from DIPP is required to be submitted (registration to be for item tendered)	Indian Bidders			
	In case of Start-up, Business Eligibility certificate (for item tendered) is also required to be submitted (Refer Page 12 of Section-2)	Indian Bidders			
	In case of SC/ST entrepreneurs belonging to MSE, documentary proof to be submitted	Indian Bidders			
	In case of Women entrepreneurs belonging to MSE, documentary proof to be submitted	Indian Bidders			
4	Relevant documents and confirmation towards QR	Indian Bidders			
5	Duly signed and company sealed copy of whole tender document and subsequent amendments (if any)	Indian Bidders			
6	Duly filled up and attached Technical (Unpriced) Bid and all applicable formats of tender document.	Indian Bidders			
7	Separate sheet(s) of deviation If any, from the tender conditions with seal and signature of authorized personnel.	Indian Bidders			
8	Declaration of Lot quoted by the bidder (as per Attachment-11 of Section-6)	Indian Bidders			
9	Certificate regarding Declaration of Local Content (as per Format in Attachment-14)	Indian Bidders			

# NOT TO BE PRINTED ALONG WITH ABOVE TABLE

The above mentioned points are major Terms & Conditions and are indicative in nature. Bidder shall carefully go through the detailed requirements, QR and other terms and conditions for better understanding and submit the bid accordingly.

Page 78 of

78

# Compliance Matrix/Check-List for Bid Evaluation Criteria

[To be submitted on Letter Head]

Please ensure these major Terms & Conditions before submitting your bid in order to avoid REJECTION of your offer

Technical QR	Bidder qualification criteria for as per Tender terms and conditions. The relevant								
		documentary evidence like work order copies, completion certificates etc. are							
	required to be furnished along with technical bid substantiating the qualification								
		perience/technical cri	iteria (Documentary	proof to be attached					
	along with the techn			1					
Order/Award Nos	Order date and	Order/Award	Client Name	Description of					
	completion date	Amount		Order/Award					
Financial QR	Average Annual tur	nover of the bidder sl	hall be as specified in	tender documents in					
	three preceding fina	ncial years. Copy of la	atest audited balance	sheet, profit and loss					
	account and copy of	IT returns required	to be furnished as asl	ked in the tender.					
Financial Year	Annual Turnover	Net Worth	Profit	ability					
Other Mandatory R	Requirements								
Confirmation for Ter	nder Terms and Conditi	ons/EMD [Please tick	() as applicable]						
1	Confirm that your bio	l is valid as per tender							
	terms and conditions	as on the last date of							
	submission of the bid								
2	Confirm your compli	ance to TERMS AND							
	CONDITIONS of bio	lding document							
Note:									
Documentary evidence is attached for experience criteria as per QR is attached along with technical unpriced									
bid.									
•	Non-compliance to any of the QR will lead to outright rejection of the bid without any further reference to the								
bidders.									

# NOT TO BE PRINTED ALONG WITH ABOVE TABLE

The above mentioned points are major Terms & Conditions and are indicative in nature. Bidder shall carefully go through the detailed requirements, QR and other terms and conditions for better understanding and submit the bid accordingly.



# **SECTION 5**

1. Measurement and Verification (M&V)

Not Applicable for this tender

 NIT/Bid
 Document
 No.:
 EESL/06/2020-21/SCM/Solar-Rooftop SECTION - 5 (M & V)
 Page 1 of 1

 Andaman/202109016 Dated: 22-09-2020
 Page 1 of 1
 Page 1 of 1



#### **SECTION-6**

#### Forms & Procedures

**ATTACHMENT – 1** 

#### **BID FORM**

To,

Chief General Manager (SCM) Energy Efficiency Services Limited. (A JV of PSUs of Ministry of Power, Govt. of India) Core-3, 6<sup>th</sup> Floor, SCOPE Complex. Lodhi Road, New Delhi-110003

Subject:- NIT/Bid Document No.: EESL/06/2020-21/SCM/Solar-Rooftop-Andaman/202109016 Dated: 22-09-2020

Dear Sir,

With Reference to your subject IFB/RfP. we are pleased to submit bid for "..." in a sealed cover as detailed below:

Envelope 1: Bid document fee/cost of tender documents [wherever applicable], Bid Security fees/Earnest Money Deposit, Bid Form, Power of attorney, Certificate regarding acceptance of important terms and conditions, Form of acceptance of EESL fraud prevention policy.

Envelope 2: Price Bid

We confirm that we have quoted as per instructions and terms and conditions of tender documents. We have submitted all the four attachments as stated in "Instructions to Bidders"

We declare that the prices left blank in price schedule/price bid will be deemed to have been included in the prices of other items. We confirm that except as otherwise specifically provided, our bid prices include all applicable taxes including service tax, entry tax (if any), duties, levies, charges as may be assessed on us.

We further declare that additional conditions, variations, deviations, if any, found in the proposal other than those listed in Attachment-5 save those pertaining to any rebates offered, shall not be given effect to.

We undertake, if our bid is accepted, we shall commence the work immediately upon your Letter of Intent /Letter of Award to us, to achieve completion of work within the time specified in the bidding documents.

If our bid is accepted, we undertake to provide contract performance securities and securities for Deed(s) of Joint Undertaking (as applicable) in the form and amounts and within the times specified in the bidding documents.

We agree to abide by this bid for a period 180 days from the date of opening of bids as stipulated in the bidding documents and it shall remain binding upon us and may be accepted by you at any time before the expiration of that period. Further, the prices of recommended spares, if asked for; contained in our bid shall re-main valid for the entire project period after placement of LoI/LoA.

Until a formal contract is prepared and executed between us, this bid, together with your written acceptance thereof in the form of your Letter of Intent/ Letter of Award shall constitute a binding contract between us.

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

We, hereby, declare that only the persons or firms interested in this proposal as principals are named here and that no other persons or firms other than those mentioned herein have any interest in this proposal or in the contract to be entered into, if the award is made on us, that this proposal is made without any connection with any other person, firm or party likewise submitting a proposal, is in all respects for and in good faith, without collusion or Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.S.4.17=110003, OL MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN USEr ID: p.kumar Serial No: 11D14A5 raud.

D.,	4 - 4	
Da	tea	 -

N	T	۸	A	Æ	/C	0_	A 1	TT	TT	$\cap$	ומ	rc	$\Gamma$	`	ตา		N	Α.	т	$\cap$	D	IL	C
יו	N A	4	11		/.	$\sim$	A	, ,		. ,,	•	ı. <b>ヽ</b>		,	<b>^</b> I	ı,	IN	-		١,	ĸ	16	🥆

ADDRESS:

MOBILE NO.:

LAND LINE NO.:

# Our correspondence details are:

1	Name of the bidder
2	Address of the bidder
3	Name of the contact person to whom all references shall be made regarding this tender
4	Designation of the person to whom all references shall be made regarding this tender
5	Address of the person to whom all references shall be made regarding this tender
6	Telephone (with STD code)
7	E-Mail of the contact person
8	Fax No. (with STD code)
9	GST No. of the bidder

# Format for submitting BG format in lieu of EMD.

(To be stamped in accordance with Stamp Act, if any, of the country of	of the issuing Bank)
Bank Guarantee No	
То:	
Chief General Manager (SCM) Energy Efficiency Services Limited. (A JV of PSUs of Ministry of Power, Govt. of India) Core-3, 6 <sup>th</sup> Floor, SCOPE Complex, Lodhi Road, New Delhi-110003	
Dear Sir(s),	
In accordance with invitation for bids under no	M/shaving
We, the	guarantee and undertake to ne amount ofwithout any
The Guarantee shall be irrevocable and shall remain valid upto guarantee is required, the same shall be extended to such period (not exfrom(Bidder's Name), on whose behalf g	xceeding one year) on receiving instructions
In witness whereof the bank, through its authorized offic this	
Witness:	
Signature:	Signature:
Name:	Name:
Official address:	Designation with Bank Stamp
	Authorized vide
	Power of Attorney no.
Nome	Date

#### NOTE:

- Bid Security amount shall be as specified in the IFB/ITB.

  Complete mailing address of the Head Office of the Bank to be given. The bank guarantee validity date shall be forty five (45) days after the last date for which the bid is valid.
- The Stamp Paper of appropriate value shall be purchased in the name of guarantee issuing Bank. The Bank Guarantee shall be issued on a stamp paper of value as applicable in the State of the issuing bank in India or the State of Delhi in India or the State of India from where the BG shall be operated, whichever is higher.

White Detries the Bank Guarantee issued; Bidders are required to ensure compliance to the Bank Guarantee Verification Check List. Further, Bidders are required to fill up this Form 16 and enclose the same with the Bank Guarantee.



# **BANK GUARANTEE CHECK LIST**

1	Bank Guarantee No.	
2	Issuing Bank	
3	Nature of BG & No. of Pages	
4	Validity of BG	
5	Package Description	
6	Party & Contracts ref.	Name, Address, Tel, Fax, E-mail
7	Bank Reference	

# CHECK LIST

Sl.No.	Details of Checks	YES / NO
a)	Is the BG on non-judicial Stamp Paper of appropriate value, as per Stamp Act?	
	Whether date, purpose of purchase of stamp paper and name of the purchaser are indicated on the back of Stamp paper under the Signature of Stamp vendor? (The date of	
b)	purchase of stamp paper should be not later than the date of execution of BG and the stamp paper should be purchased either in the name of the executing Bank or the party on whose behalf the BG has been issued. Also the Stamp Paper should not be older than six months from the date of execution of BG)	
c)	In case the BG has been executed on Letter Head of the Bank, whether adhesive Stamp of appropriate value has been affixed thereon?	
d)	Has the executing Officer of BG indicated the name, designation and Power of Attorney No. / Signing Power no. etc., on the BG ?	
e)	Is each page of BG duly signed / initiated by executants and whether stamp of Bank is affixed thereon? Whether the last page is signed with full particulars including two witnesses under seal of Bank as required in the prescribed proforma?	
f)	Does the Bank Guarantees compare verbatim with the proforma prescribed in the bid documents ?	
g)	In case of any changes in contents of text, whether changes are of minor/clerical nature (which in no way limits the right of EESL in any manner)?	
h)	Incase of deviations in text of BG, which materially affect the right of EESL, whether the changes have been agreed based on the opinion by Legal Department or BG I considered acceptable on the basis of opinion of law Department already available on the similar issue.	
i)	Are the factual details such as Bid Document No. NOA/LOA/Contact No., Contract Price, Percentage of Advance, Amount of BG and Validity of BG correctly mentioned in the BG?	
j)	Whether overwriting / cutting if any on the BG have been properly authenticated under signature and seal of executant ?	
k)	Whether the BG has been issued by a Bank in line with the provisions of Bid /Contract documents ?	
1)	In case BG has been issued by a Bank other than those specified of Bid / Contract Documents, is the BG confirmed by a Bank in India acceptable as per Bid / Contract documents?	



Signature: Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN MANAGEMENT, O=ENERGY EFFICIENCY SERVICES LIMITED, C=IN User ID: p. kumar Serial No: 11.014AS

#### ANNEXURE-I

# LIST OF BANKS ACCEPTABLE FOR SUBMISSION OF BANK GUARANTEE FOR BID SECURITY

# SCHEDULED COMMERCIAL BANKS

#### • SBI AND ASSOCIATES

Sl.No.	Name of Banks	Sl.	Name of Banks
		No.	
1.	State Bank of India	5.	State Bank of Mysore
2.	State Bank of Bikaner and Jaipur	6.	State Bank of Patiala
3.	State Bank of Hyderabad	7.	State Bank of Saurashtra
4.	State Bank of Indore	8.	State Bank of Travancore

# • NATIONALISED BANKS

Sl.No.	Name of Banks	Sl.	Name of Banks
		No.	
9.	Allahabad Bank	13.	Canara Bank
10.	Andhra Bank	14.	Central Bank of India
11.	Bank of India	15.	Corporation Bank
12.	Bank of Maharashtra	16	Dena Bank
17.	Indian Bank	18.	Indian Overseas Bank
19.	Oriental Bank of Commerce	20.	Punjab National Bank
21.	Punjab & Sind Bank	22.	Syndicate Bank
23.	Union Bank of India	24.	United Bank of India
25.	UCO Bank	26.	Vijaya Bank
27.	Bank of Baroda		

### • SCHEDULED PRIVATE BANKS (INDIAN BANKS)

Sl.No.	Name of Banks	Sl.	Name of Banks
		No.	
27.	Bank of Rajasthan	41.	Sangli Bank Ltd.
28	Bharat Overseas Bank Ltd.	42.	South Indian Bank Ltd.
29.	Catholic Syrian Bank	43.	Tamilnad Mercantile Bank Ltd.
30.	City Union Bank	44.	United Western Bank Ltd.
31.	Dhanalakshmi Bank	45.	ING Vysya Bank Ltd.
32.	Federal Bank Ltd.	46	UTI Bank Ltd.
33.	Jammu & Kashmir Bank Ltd.	47.	S.B.I. Commercial & International Bank Ltd.
34.	Karnataka Bank Ltd.	48.	Ganesh Bank of Kurundwad Ltd.
35.	KarurVysya Bank Ltd.	49.	INDUSIND Bank Ltd.
36.	Lakshmi Vilas Bank Ltd.	50.	ICICI Bank Ltd.
37.	Lord Krishna Bank Ltd.	51.	HDFC Bank Ltd.
38.	Nainital Bank Ltd.	52.	Centurion Bank of Punjab Limited
39.	Kotak Mahindra Bank	53.	Development Credit Bank Ltd.
40.	Ratnakar Bank Ltd.	54.	Yes Bank

# (D) SCHEDULED PRIVATE BANKS (FOREIGN BANKS)

Sl.No.	Name of Banks	Sl.	Name of Banks
		No.	
55.	Abu Dhabi Commercial Bank Ltd.	71.	Sonali Bank
56.	ABN Amro Bank Ltd.	72.	Standard Chartered Bank
57.	American Express Bank Ltd.	73.	J.P Morgan Chase Bank
58.	Bank of America NA	74.	State Bank of Mauritus
59	Bank of Behrain& Kuwait	75.	Development Bank of Singapore
60.	Subject: CN=PRASHANT KUMAR, ST=DELHI, OID.2.5.4.17=110003, OU=SUPPLY (MAMAGS AT CG = ED ATT KFFICIENCY SERVICES LIMITED, C=IN	<sup>™</sup> 76.	Bank of Ceylon
61.	Bank 100f Nova Scotia	77.	Bank International Indonesia

62.	The Bank of Tokyo-Mitsubishi UFJ	78.	Arab Bangladesh Bank
	Limited.		
63.	Calyon Bank	<b>79.</b>	Cho Hung Bank
64.	BNP Paribas	80.	China Trust Bank
65.	Barclays Bank	81.	MIzuho Corporate Bank Ltd.
66.	Citi Bank	82.	Krung Thai Bank
67.	Deutsche Bank	83.	Antwerp Diamond Bank N.V. Belgium
68.	The Hong Kong and Shanghai Banking	84.	InternationaleNetherlanden Bank N.V.
	Corporation Ltd.		(ING Bank)
69.	Oman International Bank	85.	Bank of China Ltd.
70.	SocieteGenerale		

# (E) PUBLIC SECTOR BANK

Sl.No.	Name of Banks	Sl. No.	Name of Banks
86.	IDBI Ltd.		

Tender Document No/Package No:	Dated:
Package Details	

# **POWER OF ATTORNEY**

# BIDDER TO ATTACH THE POWER OF ATTORNEY IN THEIR OWN FORMAT

Bidder's Name& Address

Dated:

#### (CERTIFICATE REGARDING ACCEPTANCE OF IMPORTANT CONDITIONS)

To, CGM (SCM) Energy Efficiency Services Limited. (A JV of PSUs of Ministry of Power, Govt. of India) Core-3, 6 <sup>th</sup> Floor, SCOPE Complex, Lodhi Road, New Delhi-110003		
Sub:		
1.0 With reference to our bid proposition/ Package no, we hereby confirm that we have r further confirm that notwithstanding anything stated else acceptable to us and we have not taken any deviation to	read the follow	contrary, the stipulation of these clauses are
Governing Laws	-	Clause 7 of ITB
Settlement of Disputes	-	Clause 17 of ITB
Terms of payment	-	Clause 1.0 of SCC
Performance Security	-	Clause 5.9 of ITB
Taxes and Duties	-	Clause 8 of ITB
Completion Time Guarantee	-	Clause 9 of ITB
Defects Liability	-	Clause 10 of ITB
Functional Guarantee	-	Clause 11 of ITB

We further confirm that any deviation to the above clauses found anywhere in our hid proposal

We further confirm that any deviation to the above clauses found anywhere in our bid proposal, implicit or explicit, shall stand unconditionally withdrawn, without any implication to EESL.

Date: Signature:

Place: Printed Name:

Designation:

Clause 2.25 of ITB

Clause 2.27 of ITB

As per Tables in price bid Assumptions

Common Seal

Note: In the absence of this certificate, the bid shall be rejected and shall be returned unopened. Bidder can take a



Patent Indemnity

Limitations of Liability

Project information, Estimation,

and conditions for Evaluation

# **ATTACHMENT - 5**

NAME OF	WORK:	•••••		
BIDDING	DOCUMENT NO			
		(Deviations Sta	atement)	
Bidder's N	ame and Address:			
To,				
Energy Ef (A JV of PSU Core-3, 6 <sup>th</sup> SCOPE C	·	Limited. Govt. of India)		
Dear Sir,				
the bidding variations a in this Atta indicated h for these do of bidding	g documents for IF are exhaustive. We a chment. We shall we erein, failing which eviations and variat documents. Further ocuments other than	B/RfP No are furnishing below ithdraw the deviation our bid may be rejec- tions, the entire work r, we agree that addi-	the cost of withdrawal for the proposed by us in this Atted and bid security may be shall be performed as peritional conditions, variation	ms, conditions and specification of These deviations and the deviations and variations stated tachment at the cost of withdrawal e forfeited. We confirm that except your specifications and conditions and, deviations if any, found in the aining to any rebates offered, shall
Section/	Clause	Page	Statement of	Cost of withdrawal
Part/ Chapter	No.	No.	Deviations/ Variations	
A.	COMMERCIAL	DEVIATIONS :		
В.	TECHNICAL I	DEVIATIONS:		
Date :			(Signature)	
Place :			(Printed Name	)
			(Designation)	
			(Common Seal	)
	Note: Continuati	ons sheets of like	size and format may be	used as per Bidder's requirement.



(On Non – Judicial Stamp Paper of appropriate value and purchased in the name of executing Bank)

PROFORMA OF BANK GUARANTEE FOR CONTRACT PERFORMANCE
Ref.:
To,
Energy Efficiency Services Limited. (A JV of PSUs of Ministry of Power, Govt. of India) Core-3, 6 <sup>th</sup> Floor, SCOPE Complex, Lodhi Road, New Delhi-110003
Dear Sirs,
In consideration of the EESL, (hereinafter referred to as the 'Owner,' which expression shall unless repugnant to the context or meaning thereof include its successors, administrators and assigns) having awarded to M/s
We
The owner shall have the fullest liberty without affecting in any way the liability of the Bank under this guarantee from time to time to extend the time for performance of the Contract by the Contractor. The owner shall have the fullest liberty, without affecting this guarantee, to postpone from time to time the exercise of any powers vested in them or of any right which they to enforce or to forbear to enforce any covenants, contained or implied, in the Contract between the owner and Contractor or any other course of or remedy or security available to the owner. The Bank shall not be released of its obligations under these presents by any exercise by the owner of its liberty with reference to the matters aforesaid on any of other indulgence shown by the owner or by any other matter or thing whatsoever which under law would, but for this provision, have the effect of relieving the Bank.
The Bank also agree that the Owner at its option shall be entitled to enforce this Guarantee against the Bank as a Principal debtor, in the first instance without proceeding against the Contractor and not withstanding any security or other guarantee that the owner may have in relation to the Contractor's liabilities.
Notwithstanding anything contained herein above our liability under this guarantee is restricted to

Witness



Signature:
Subject: CM=PRASHANT KUMAR, ST=RELHI, OID.2.5.4.17=110003, OU=SUPPLY CHAIN
MANAGEMENT, O=ENERGY CALVEST SERVICES LIMITED, C=IN at
Serial No. 11014AS

M/s.....on whose behalf this guarantee has been given.

Signature	Signature
Name	Bank's Rubber Stamp
Official Address	Name
	Designation with Bank Stamp
	Attorney as per power of Attorney Nodated

Note: \*\* Validity of Bank Guarantee should be 90 days in excess of the period for which it is required.

# BANK GUARANTEE CHECK LIST

1	Bank Guarantee No.	
2	Issuing Bank	
	Nature of BG & No. of Pages	
4		
5	Validity of BG	
6	Package Description	
7	Party & Contracts ref.	Name, Address, Tel, Fax, E—mail
8	Bank Reference	

# **CHECK LIST**

S.No.	Details of Checks	YES / NO
a)	Is the BG on non-judicial Stamp Paper of appropriate value, as per Stamp Act?	
b)	Whether date, purpose of purchase of stamp paper and name of the purchaser are	
	indicated on the back of Stamp paper under the Signature of Stamp vendor? (The	
	date of purchase of stamp paper should be not later than the date of execution of BG	
	and the stamp paper should be purchased either in the name of the executing Bank or	
	the party on whose behalf the BG has been issued. Also the Stamp Paper should not	
	be older than six months from the date of execution of BG)	
c)	In case the BG has been executed on Letter Head of the Bank, whether adhesive Stamp	
	of appropriate value has been affixed thereon?	
d)	Has the executing Officer of BG indicated the name, designation and Power of	
	Attorney No./ Signing Power no. etc., on the BG?	
e)	Is each page of BG duly signed / initiated by executants and whether stamp of Bank	
	is affixed thereon? Whether the last page is signed with full particulars including two	
	witnesses under seal of Bank as required in the prescribed proforma?	
f)	Does the Bank Guarantees compare verbatim with the Proforma prescribed in the Bid	
	Documents?	
g)	In case of any changes in contents of text, whether changes are of minor / clerical	
	nature (which in no way limits the right of EESL in any manner)?	
h)	Incase of deviations in text of BG, which materially affect the right of EESL, whether	
	the changes have been agreed based on the opinion by Legal Department or BG I	
	considered acceptable on the basis of opinion of law Department already available on the similar issue.	
i)	Are the factual details such as Bid Document No.NOA/LOA / Contact No., Contract	
,	Price, Percentage of Advance, Amount of BG and Validity of BG correctly mentioned	
	in the BG?	
j)	Whether overwriting / cutting if any on the BG have been properly authenticated	
3/	under signature and seal of executant?	
k)	Whether the BG has been issued by a Bank in line with the provisions of Bid /Contract	
	documents?	
1)	In case BG has been issued by a Bank other than those specified of Bid / Contract	
•	Documents, is the BG confirmed by a Bank in India acceptable as per Bid / Contract	
	documents?	



# LIST OF BANKS ACCEPTABLE FOR SUBMISSION OF BANK GUARANTEES FOR ADVANCE PAYMENTS, PERFORMANCE SECURITIES AND SECURITIES FOR DEED OF JOINT UNDERTAKING

### SCHEDULED COMMERCIAL BANKS

#### • SBI and Associates

Sl.No.	Name of Banks	Sl.	Name of Banks
		No.	
1.	State Bank of India	5.	State Bank of Mysore
2.	State Bank of Bikaner and Jaipur	6.	State Bank of Patiala
3.	State Bank of Hyderabad	7.	State Bank of Saurashtra
4.	State Bank of Indore	8.	State Bank of Travancore

### Nationalised Banks

Sl.No.	Name of Banks	Sl.	Name of Banks
		No.	
9.	Allahabad Bank	18.	Indian Overseas Bank
10.	Bank of India	19.	Oriental Bank of Commerce
11.	Bank of Maharashtra	20.	Punjab National Bank
12.	Canara Bank	21.	Punjab & Sind Bank
13.	Central Bank of India	22.	Syndicate Bank
14.	Corporation Bank	23.	Union Bank of India
15.	Dena Bank	24.	United Bank of India
16.	Indian Bank	25.	UCO Bank
17.	Vijaya Bank	26.	Bank of Baroda

# C. Foreign Banks

Sl.No.	Name of Banks	Sl.	Name of Banks
		No.	
27.	Bank of America NA	34.	Standard Chartered Bank
28.	The Bank of Tokyo-Mitsubishi UFJ	35.	SocieteGenerale
	Limited.		
29.	BNP Paribas	36.	Barclays Bank
30.	Calyon Bank	37.	ABN Amro Bank N. V.
31.	Citi Bank N.A.	38.	Bank of Nova Scotia
32.	Deutsche Bank A. G.	39.	Development Bank of Singapore
33.	The Hong Kong and Shanghai Banking		
	Corporation Ltd.		

### D. SCHEDULED PRIVATE BANKS

Sl.No.	Name of Banks	Sl.	Name of Banks
		No.	
40.	ING Vysya Bank Ltd.	43.	UTI Bank Ltd.
41.	ICICI Bank Ltd.	44.	YES Bank
42.	HDFC Bank Ltd.		

# E. Other Public Sector Banks

Sl.No.	Name of Banks	Sl.	Name of Banks
		No.	
45.	IDBI Ltd.		



# FORM OF ACCEPTANCE OF FRAUD PREVENTION POLICY (On the letter head)

Chief General Manager (SCM) Energy Efficiency Services Limited. (A JV of PSUs of Ministry of Power, Govt. of India) Core-3, 6 <sup>th</sup> Floor, SCOPE Complex, Lodhi Road, New Delhi-110003	
Sub: Letter of Acceptance of EESL Fraud Policy	
Ref: EESL/06/2020-21/SCM/Solar-Rooftop-Andaman/2021	09016 Dated: 22-09-2020
Dear Sir/Madam,	
We have read the contents of the Fraud Prevention Policy of EE/collaborator /sub contractors / sub-vendors / bidders/ service the Fraud Prevention Policy of EESL.	
Thanking You,	Yours faithfully,
	Signature
J	Printed Name
]	Designation
C	Common Seal
Date: Place:	

FOR DETAILED POLICY, PLEASE VISIT OUR WEBSITE www.eeslindia.org



To:

#### PROFORMA OF BANK GUARANTEE FOR ADVANCE PAYMENT

# Not Applicable



### PROFORMA OF LETTER OF UNDERTAKING

### (TO BE FURNISHED ON NON-JUDICIAL STAMP PAPER OF APPROPRIATE VALUE)

[To be executed by the Holding Company Supported by Board Resolution and submitted by the Bidder along with the Bid, in case financial support is being extended by the Holding Company to the Bidder for meeting the stipulated Financial Qualifying]

Ref.:	NIT/Bid Document No.:
Our Ro	eference NoDate:
Bidder	's Name and Address:
То,	
Energy (A JV Core-3 SCOP	General Manager (SCM) y Efficiency Services Limited. of PSUs of Ministry of Power, Govt. of India) 8, 6 <sup>th</sup> Floor, E Complex, Road, New Delhi-110003
Dear S	Sir,
1.0	We, $M/s$ (Name of the Holding Company) declare that we are the holding company of $M/s$ (Name of the Bidder) and have controlling interest therein.
	M/s
2.0	We hereby undertake that we hereby pledge our unconditional & irrevocable financial support for the execution of the said package to M/s
3.0	This undertaking is irrevocable and unconditional, and shall remain in force till the successful



execution and performance of the entire contract and/or till it is discharged by EESL.

	Yours faithfully,	
(1)		
	(Signature of Authorized Signatory)	
	on behalf of the Holding Company	
(2)		
	Name &Designation	
	Name of the Holding Company	
	(Seal of Holding Company)	



Witness:

# REAL TIME GROSS SETTELMENT (RTGS)/ NATIONAL ELECTRONIC FUND TRANASFER (NEFT)

From: M/s	
Sub: RTGS/NEFT Payment	S
	nissible payments through electronic mode viz
RTGS/NEFT. For this, we are provide	ding the requisite information herein below. The
RTGS/NEFT charges for the above	facility may be deducted/Recovered from our
admissible payment.	
Nama Of City	
Name Of City	
Bank Code No.	
Branch Code No.	
Bank's Name	
Branch Address	
Branch Telephone/ Fax No.	
Supplier Account No.	
Type of Account	
IFSC Code for NEFT	
IFSC Code for RTGS	
Supplier's name as per Account	
Telephone No. of Supplier	
Supplier's E-mail ID	
GST No. of the supplier	
A cancelled cheque against ab	ove bank account number is also being enclosed.
Encl: As above:-	
Confirmed by Banker	Signature of supplier
With Seal	Signature of supplier With stamp & Address
will Scal	with stamp & Address



# **ATTACHMENT-11**

# (Declaration/Blanked-Price Bid Sheet for Lot/Cluster/Quantity Quoted by the Bidder)

Cn No	Doolzago No	Cumulativa Canacity	Incort (1) in the Deckage
that I/We,	have quoted for the follow	ing quantities in the above-r	referred tender.
			) hereby admit
· ·		Quoted by Bidder in the T	·
C1-	)   4   4   ( - )	O4-1 b D:11:4b-7	P J J D-1! D!- J
Lodhi Roa	d, New Delhi-110003		
SCOPE Co	± ′		
Core-3, 6 <sup>th</sup>	Floor,		
`	SUs of Ministry of Power,	Govt. of India)	
Energy Eff	ficiency Services Limited.		
Chief Gene	eral Manager (SCM)		
То,			
{Des	cription:		}}
	_		
Ref N	NIT/BID Document No:		

	Sr. No	Package No	<b>Cumulative Capacity</b>	Insert (√) in the Package where you have applied
Ī	1	Lot – 1	2.68 MWp	
		(Northern Andaman)		
ſ	2	Lot – 2	2.755 MWp	
		(Middle Andaman)		

Signature of Bidder With Stamp & Address

(\*Bidder has to mandatorily submit the declaration as above. The bid shall be evaluated on the basis of this declaration. Providing false declaration may lead to technically non-responsiveness of the bid)



# CERTIFICATE REGARDING COMPLIANCE OF MeitY NOTIFICATION VIDE FILE NO. 1(10)/2017-CLES dt. 02.07.18

(On the letter head)

To,	
Chief General Manager (SCM)	
Energy Efficiency Services Limited.	
(A JV of PSUs of Ministry of Power, Gove	
5 <sup>th</sup> & 6 <sup>th</sup> Floor, CORE –III, Scope Comple	ex, Lodhi Road, New Delhi 110003
Sub: Compliance of MeitY notification	on vide File No. 1(10)/2017-CLES dt. 02.07.18
Ref: NIT/RFP No: <b>EESL/06/2020-21/S</b> 0 22-09-2020	CM/Solar-Rooftop-Andaman/202109016 Dated:
M/smanufactured/produced <b>Cyber Security 1</b>	ems being offered/ quoted against ref. RfP by meet the definition of domestically <b>Products</b> as per Para 4 of MeitY notification vide d the bidder shall strictly abide by all provisions of
Thanking You,	Yours faithfully,
	Signature (Statutory Auditor or Cost Auditor)
	Printed Name
Date:	Seal
Place:	

P.S. In case any complaint is received at EESL end against the bidder regarding supply of domestically manufactured/produced Cyber Security Products, the same shall be refereed to STQC, an attached office of MeitY.



### CERTFICATE REGARDING DECLARATION OF LOCAL CONTENT

### [On the Letter Head]

To,
Chief General Manager (SCM)
Energy Efficiency Services Limited.
(A JV of PSUs of Ministry of Power, Govt. of India)
5th & 6th Floor, CORE -III, Scope Complex, Lodhi Road, New Delhi 110003

Sub: Sub: Declaration of Local Content as per Order No: P-45021/2/2017-PP (BE-II) dated: 04-Jun-2020 of Department of Promotion of Industry and Internal Trade and Compliance of Minimum Local Content Requirement as mentioned in MNRE Office Memorandum No. F. No. 146/57/2018-P&C dated: 11-12-2018

Ref: NIT/Bid Document No: EESL/06/2020-21/SCM/Solar-Rooftop-Andaman/202109016 Dated: 22-09-2020

Dear Sir/Madam,

This is to certify	that follow	ving is the local co	ontent percen	tage in the Goods, S	Services and	other
components	being	offered/quoted	against	aforementioned	tender	by
M/s				., the same is in comp	pliance with (	Order
No: P-45021/2/20	)17-PP (BE	-II) dated: 04-Jun-	2020 of Dep	artment of Promotio	n of Industry	and
Internal Trade and	I MNRE Of	fice Memorandum	No. F. No. 14	46/57/2018-P&C date	ed: 11-12-201	8 and
the bidder shall str	rictly abide	by all provisions of	the subject n	otification.		

Sr. No	Item	Percentage of Local Content	Detail of location(s) at which the local value addition is made
1	Solar PV Modules		
2	Other components like inverter etc		
3	Overall Solar System Package along with Services etc. (Balance of System)		

hanl		

Yours faithfully,

Signature (Statutory Auditor/ Cost Auditor/ Practising CA As applicable)
Printed Name
Seal
LIDIN No



#### **ATTACHMENT-15**

### <u>Declaration of GST Rates applicable</u> [On bidder's letterhead]

<u>Subject:</u> Name of the Work: Design, Engineering, Supply, Construction, Erection, Testing, Commissioning and O&M of grid connected Solar PV Rooftop Power Plants of cumulative capacity of approximate 7.5 MWp in various Buildings in the Union Territory of Andaman

NIT/Bid Document No : EESL/06/2020-21/SCM/Solar-Rooftop-Andaman/202109016 Dated: 22-09-2020				
For the purpose of sub	mission of bids for subject matter work, I	(Name of the representative		
of Bidder)	(Designation of the representative)	of		
(Name of the bidder)	hereby declare the GST rates as mentioned in the be	low Table for all participated lots as		
declared in Attachmer	t No 11 of Section-6:			

Part	Description	Unit of Measu rement (UOM)	HSN/ SAC Code	GST (IGST/C GST/SG ST/UTG ST ) applicabl e in %
		1	2	3
A1	Solar System Package of 5KW: Supply of material including transportation and Complete civil works and General works including erection, commissioning, testing, synchronization etc. of entire system (Grid Connected Solar PV based rooftop system)	Per System		
B1	Solar System Package of 5KW : Comprehensive Onsite Operation & Maintenance for Ten Years			
A2	Solar System Package of 10KW: Supply of material including transportation and Complete civil works and General works including erection, commissioning, testing, synchronization etc. of entire system (Grid Connected Solar PV based rooftop system)	Per System		
B2	Solar System Package of 10KW : Comprehensive Onsite Operation & Maintenance for Ten Years			
A3	Solar System Package of 15KW: Supply of material including transportation and Complete civil works and General works including erection, commissioning, testing, synchronization etc. of entire system (Grid Connected Solar PV based rooftop system)	Per System		
В3	Solar System Package of 15KW : Comprehensive Onsite Operation & Maintenance for Ten Years			

#### I also declare:

- 1. that HSN codes mentioned in the above table shall remain firm during the contract duration.
- 2. In case of deviation in rates mentioned in the said declaration and that mentioned in the price bid, then GST rates as submitted in the declaration shall prevail.

Submitted.

Signature of representative

