



**INDIAN OVERSEAS BANK**

**NOTICE INVITING TENDER FOR**

**DESIGN, MANUFACTURE, SUPPLY, ERECTION, TESTING AND COMMISSIONING  
INCLUDING WARRANTY, OPERATION & MAINTENANCE OF GRID CONNECTED  
ROOFTOP SOLAR PHOTOVOLTAIC PLANT UNDER RESCO MODEL FOR A PERIOD OF 25  
YEARS**

**INDIAN OVERSEAS BANK**

**NIT REFERENCE NUMBER: CO/GAD/2020-21/01**

**DATED: 30.12.2020**

**GENERAL ADMINISTRATION DEPARTMENT, CENTRAL OFFICE  
INDIAN OVERSEAS BANK  
763, ANNA SALAI ANNEXURE BUILDING  
CHENNAI 600002  
Contact No: 044 2851 9625/9630**

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## INDEX

| S.NO | CONTENTS   | PAGE NO |
|------|--|---------|
| 1    | NOTICE INVITING TENDER INTRODUCTION                                | 3       |
| 2    | DISCLAIMER   | 6       |
| 3    | SCHEDULE OF BIDDING PROCESS  | 7       |
| 4    | EARNEST MONEY DEPOSIT  | 8       |
| 5    | SCOPE OF WORK  | 9       |
| 6    | EVALUATION PROCESS : STAGE I ELIGIBILITY CRITERIA<br>TECHNICAL BID | 12      |
| 7    | STAGE II TECHNICAL BID EVALUATION                                  | 13      |
| 8    | STAGE III TECHNICAL SPECIFICATIONS                                 | 14      |
| 9    | STAGE IV COMMERCIAL BID  | 26      |
| 10   | INSTRUCTIONS TO BIDDERS  | 28      |
| 11   | ANNEXURE I – UNDERTAKING   | 34      |
| 12   | ANNEXURE II – TECHNICAL BID  | 36      |
| 13   | ANNEXURE III – TECHNICAL BID EVALUATION                            | 38      |
| 14   | ANNEXURE IV – POWER PLANT GENERATION                               | 40      |
| 15   | ANNEXURE V – SALVAGE VALUE   | 41      |
| 16   | ANNEXURE VI – PRICE BID FORMAT                                     | 42      |
| 17   | ANNEXURE VII – POWER PURCHASE AGREEMENT                            | 43      |

## **NOTICE INVITING TENDER INTRODUCTION**

### **NAME OF THE WORK: DESIGN, MANUFACTURE, SUPPLY, ERECTION, TESTING AND COMMISSIONING INCLUDING WARRANTY, OPERATION & MAINTENANCE OF GRID CONNECTED ROOFTOP SOLAR PHOTOVOLTAIC PLANT UNDER RESCO MODEL FOR A PERIOD OF 25 YEARS FOR INDIAN OVERSEAS BANK CENTRAL OFFICE CHENNAI**

#### **INTRODUCTION**

1. Indian Overseas Bank, a body corporate constituted under the Banking Companies (Acquisition and Transfer of Undertakings) Act 1970 and having its Central Office at #763, Anna Salai, Chennai 600 002 invites sealed proposals for “Design Manufacture, Supply, Erection, Testing and Commissioning including warranty, operation & maintenance of grid connected rooftop solar photovoltaic plant under RESCO model for a period of 25 years”.

Bidders are invited to submit their proposal in accordance with this Notice Inviting Tender **(NIT)**. E-tenders are invited by the Indian Overseas Bank for “Design Manufacture, Supply, Erection, Testing and Commissioning including warranty, operation & maintenance of grid connected rooftop solar photovoltaic plant under RESCO model for a period of 25 years”.

The contract will be signed with the selected contractor pertaining to the criteria mentioned by INDIAN OVERSEAS BANK, Central Office. The selected contractor should follow the installation practices adhering to the guidelines mentioned by MNRE/Solar Energy Corporation of India (SECI). The selected contractor should sign a power purchase agreement with INDIAN OVERSEAS BANK Central Office to supply power under RESCO model. A sample format of the Power Purchase Agreement is included in this NIT. The same subject to amendment as per mutually agreed terms.

2. The participating contractors should submit their Bids through banks E tender Portal only.
3. Bank in its absolute discretion, but without being under any obligation to do so, can update, amend or supplement the information in this NIT. Such change will be published on the Website ([www.iob.in/tender.aspx/](http://www.iob.in/tender.aspx/) [www.iobtenders.auctiontiger.net](http://www.iobtenders.auctiontiger.net)) and it will become part of NIT.
4. Procurement from Micro, Small & Medium Enterprises (MSME)

Ministry of Micro, Small and Medium Enterprises, Government of India, vide their Public Procurement Policy for MSEs Order, 2012, had advised all Ministries, Departments, Central Public Sector Undertakings (CPSUs) to procure a minimum of 20% share out of the total procurement made by them, from MSEs. Policy details are available on the Government website [www.dcmsme.gov.in](http://www.dcmsme.gov.in).

Accordingly, our Bank, being a Nationalized Bank / Public Sector Bank, shall procure 20% of all procurements of Bank from MSEs. Out of this 20%, 4% is earmarked for procurement from MSEs owned by Scheduled Caste (SC) / Scheduled Tribes (ST)

entrepreneurs. However, in the event of failure of such MSEs to participate in tender process or meet tender requirements and L1 price, 4% sub-target for procurement earmarked for MSEs owned by SC / ST entrepreneurs shall be met from other MSEs.

#### **5. Purchase Preference:**

In a tender, participating MSEs quoting price within band of L1+15% shall also be allowed to supply a portion of requirements by bringing down their price to L1 price in a situation where L1 price is from someone other than an MSE. Such MSEs shall be allowed to supply up to 20% of total tendered value. In case of more than one such MSE, the supply shall be shared proportionately (to tendered quantity).

#### **6. Preference to Domestically Manufactured Product**

Department of Industrial Policy & Planning vide their circular ref: P-45021/2/2017-B.E.-II dated 15.06.2017 has notified guidelines to be followed for providing preference to Domestic Manufactures under "Make in India" initiatives. The guidelines are read in conjugation with Rule 153 (iii) of General Financial Rules & Rule 1.10.5 of Manual of Public Procurement both issued by Department of Expenditures, Ministry of Finance. Pursuant to the above, Bank shall provide preference to the domestic manufactures for the products as notified and revised time to time by the Ministry of Finance, Department of Financial Services (Current guideline as per File No.12/1/2019-BO. II dated 22.01.2019).

The criteria shall be as follows:

1. The local supplier at the time of tender, bidding or solicitation shall be required to provide self-certification that the item offered meets the minimum local content and shall give details of the location(s) at which the local value addition is made.
2. In case of procurement for a value in excess of Rs.10 Crores, the local supplier shall be required to provide a certificate from the statutory auditor or cost auditor of the company (in case of companies) giving the percentage of local content.

The following procedure shall be followed:

- i) Among all qualified bids, the lowest bid will be termed as L1. If L1 is from a local supplier, the contract will be awarded to L1.
- ii) If L1 is not from a local supplier, the lowest bidder among the local supplier, will be invited to match the L1 price subject to local supplier's quoted price falling within the margin of purchase preference (i.e. 20%) and the contract shall be awarded to such local supplier subject to matching the L1 price.

- iii) In case such lowest eligible local supplier fails to match the L1 price, the local supplier with the next higher bid within the margin of purchase preference shall be invited to match the L1 price and so on and the contract shall be awarded accordingly. In case none of local suppliers within the margin of purchase preference matches the L1 price, then the contract may be awarded to the L1 bidder.

GENERAL MANAGER

General Administration Department

## **DISCLAIMER**

The information contained in this Notice Inviting Tender (“NIT”) document or information provided subsequently to bidders or applicants whether verbally or in documentary form by or on behalf of Indian Overseas Bank (or Bank), is provided to the bidder(s) on the terms and conditions set out in this NIT document and all other terms and conditions subject to which such information is provided.

This NIT document is not an agreement and is not an offer or invitation by the Bank to any parties other than the applicants who are qualified to submit the bids (hereinafter individually and collectively referred to as “Bidder” or “Bidders” respectively). The purpose of this NIT is to provide the Bidders with information to assist the formulation of their proposals.

This NIT does not claim to contain all the information where each Bidder requires. Each Bidder may conduct their own independent investigations and analysis and are free to check the accuracy, reliability and completeness of the information in this NIT. The Bank makes no representation or warranty and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this NIT. The information contained in the NIT document is selective and is subject to updating, expansion, revision and amendment. It does not purport to contain all the information that a Bidder require.

Bank in its absolute discretion, but without being under any obligation to do so, can update, amend or supplement the information in this NIT. Such change will be published on the Website ([www.iobtenders.auctiontiger.net](http://www.iobtenders.auctiontiger.net)) and it will become part of NIT. Indian Overseas Bank reserves the right to reject any or all the proposals received in response to this NIT document at any stage without assigning any reason whatsoever. The decision of the Bank shall be final, conclusive and binding on all the parties. Bank reserves the right to cancel the entire bid at any point of time, or disqualify any particular bidder, if it finds that fair play is not maintained by the bidder.

## **SCHEDULE OF BIDDING PROCESS**

| S.No | Description   | Important dates/ information  |
|------|---|---|
| 1    | Tender Reference Number   | CO/GAD/2020-21/01   |
| 2    | Tender issuing date   | 30.12.2020  |
| 3    | Pre Bid meeting   | 07.01.2021  |
| 4    | Last Date of Submission of E tender   | 20.01.2021  |
| 5    | Bid submission mode   | <a href="https://iobtenders.auctiontiger.net/EPROC/">https://iobtenders.auctiontiger.net/EPROC/</a><br>Through e-tendering portal (Class II or Class III Digital Certificate with both Signing & Encryption is required for tender participation) |
| 6    | Last Date and Time for submission of bids along with supporting documents through the above e-tendering portal.                         | 20.01.2021 on or before 15.00 hours. (End time for submission will be as per e-tendering service provider server time).   |
| 7    | Date, time and venue for opening the Technical BID through e-tendering portal.  | 20.01.2021 at 16:00 hours at the Bank's Information Technology Department, Chennai.   |
| 8    | Date, time and venue for opening the Price bid  | Shall be intimated to the technically qualified bidders in due course.  |
| 9    | Support person and phone number for e-tender service provider for any help in accessing the website and uploading the tender documents. | e-Procurement Technologies Limited<br>079-68136824<br>Jainam: 6354919566<br>jainam@eptl.in<br>Ekta Maharaj-9510813197<br>ekta.m@eptl.in<br>Nisarg Thakkar<br>nisarg.thakkar@auctiontiger.net  |
| 10   | Tender application fee  | Rs.2000/- to be paid by Way of NEFT. The details of the NEFT (UTR Number and Date) shall be furnished along with the along with the Technical Bid.  |
| 11   | Earnest Money Deposit/ Security Deposit   | The participating contractors must submit an EMD of Rs.50,000/- (Rupees Fifty Thousand Only). EMD to be paid by way of NEFT. The details of the NEFT (UTR Number and Date) shall be furnished along with the along with the Technical Bid.        |
| 13   | Validity of Tender  | 90 days from the date of awarding of the tender   |

## **EARNEST MONEY DEPOSIT (EMD) CUM SECURITY DEPOSIT.**

- (a) The participating contractors must submit an EMD of Rs.50,000/- (Rupees Fifty Thousand Only) by way of NEFT to the below account number. The details of the NEFT (UTR Number and Date) shall be furnished along with the along with the Technical Bid.

**Account Number: 901102000641125**

**IFSC: IOBA0009011**

**Name of the Account:Utility Payment Account**

- (b) The EMD would be returned to unsuccessful contractors on completion of the tender process without any interest.
- (c) The EMD of selected contractor shall be converted into Security Deposit.
- (d) The EMD/ Security Deposit held with the Bank will be released within 30 working days from date of completion of tender process or contract period after adjusting dues to the Bank (if any).
- (e) In case, the contract with the contractor is extended by the Bank, the Security Deposit kept with Bank will also be extended automatically. If the contractor refuses to accept the work order (or) fails to carry out obligations mentioned in the contract (or) the contract is terminated by the Bank due to unsatisfactory performance (or) the contract is terminated by the contractor without giving written notice of two months to the Bank, the Security Deposit held with the Bank shall be forfeited.
- (f) The agencies registered under Single Point Registration Scheme of NSIC, which are eligible to get the benefits under Public Procurement Policy for Micro & Small Enterprises (MSEs) as notified by NSIC, Ministry of Micro Small & Medium Enterprises (MSME), Government of India, New Delhi shall be exempted from payment of Tender Application Fee & Earnest Money Deposit (EMD) for participating in the Tender.**
- (g) However, the exemption for payment of Tender Fee & Earnest Money Deposit (EMD) for qualifying in the Technical Bid shall be subjected to submission of current and valid Registration Certificate from NSIC, Ministry of MSME, GoI, UDYOG AADHAR/UDHYAM**
- (h) The agencies which are exempted for submission of Earnest Money Deposit (EMD) for participating in the Tender, will have to deposit Security Deposit Rs.50,000/- (Rupees Fifty Thousand Only) within 15 days in case they are adjudged L1 and selected for entering into the agreement. The same shall be paid by Demand Draft drawn in favor of INDIAN OVERSEAS BANK issued by any Commercial Bank payable at Chennai. Further, the offer given to L1 shall be



cancelled and given to L2 or later in case the L1 Bidder fails to deposit the security deposit within 15 days from the date of intimation regarding Bidder adjudicated as L1.

## **SCOPE OF WORK**

- a) The scope of work involves design, supply, installation, testing and commissioning of complete Solar PV system as per BOQ and these specifications. The drawings along with detailed design and equipment datasheet shall be submitted for approval before starting the work. The work shall be carried out as per designs approved by the General Administration Department. The contractor shall submit the design of SOLAR PV system for each building immediately after the award of work. The contractor need to identify potential areas to install solar rooftop system in INDIAN OVERSEAS BANK, Central Office 763, Anna Salai, Chennai 600002 premises and cordially work with the GAD team to finalize the areas.
- b) The tentative capacity of Solar PV system is given below for guidance. **The power generated is intended to be used in Annex building of Indian Overseas Bank Central Office Chennai.** The LT Power Cabling shall be laid from the respective buildings till the Annex building and connect the output to the Annex building's feeder. However, the contractors are advised to visit the site to perform a detailed site visit to assess the suitable capacity to be installed on the available roof area.

|  | <b>DC capacity kWp</b> | <b>AC inverter capacity kVA</b> |
|--|------------------------|---------------------------------|
| <b>Total</b>   | <b>80</b>              | <b>70</b>                       |
| <b>Note: The minimum plant capacity should be 80kWp +/- 5%</b> |                        |                                 |

- c) To design a suitable system to maximize the generation of the solar rooftop system and supply the power to the bank based on which the bank will pay the contractor on the consumed units on monthly basis.
- d) To maintain the system and ensure the deliverance of the stipulated optimum power till the duration of the power purchase agreement.
- e) The proposed system should have a performance ratio of 75%.
- f) All associated activities required for necessary clearances / permissions / approvals / licenses from concerned Electrical authorities so their Govt / strategy / Local bodies are in the scope of contractor including CEIG approval.

**CONTRACTORS ARE ADVISED TO VISIT THE SITE BEFORE QUOTING THE RATES. OTHERWISE IT WILL BE ASSUMED THAT THE PARTY HAS ALREADY VISITED THE SITE BEFORE QUOTING THE TENDER.**

**CONFIDENTIALITY:** This document is meant for the specific use by the company/ person(s) interested to participate in the current tendering process. This document in its entirety is subject to Copyright Laws. INDIAN OVERSEAS BANK expects the bidders or any person acting on behalf of the bidders to strictly adhere to the instructions given in the document and maintain confidentiality of information. The bidders will be held responsible for any misuse of the information contained in the document and liable to be prosecuted by the Bank in the event of such a circumstance is brought to the notice of the Bank. By downloading the document, the interested party is subject to confidentiality clauses.

**SUBMISSION OF BIDS THROUGH E-TENDER:**

Bidders satisfying the terms and conditions in this NIT and ready to provide the said Services, may submit their bid through Bank's e-tendering service provider website <https://iobtenders.auctiontiger.net> on or before the time line stipulated in the NIT.

Bank's e-tendering website will not allow any bids to be submitted after the deadline for submission of bids. In the event of the specified date and time for the submission of bids, being declared a holiday for the Bank, e-tendering website will receive the bids up to the appointed time on the next working day. Extension / advancement of submission date and time will be at the sole discretion of the Bank.

1. Bank has decided to determine L1 through bids submitted on bank's E-Tendering website <https://iobtenders.auctiontiger.net>. Bidders shall bear the cost of registration on the Bank's e-tendering portal. Rules for web portal access are as follows:
2. Bidder should be in possession of CLASS II or CLASS III-Digital Certificate in the name of company/bidder with capability of signing and encryption for participating in the e-tender. Bidders are advised to verify their digital certificates with the service provider at least two days before due date of submission and confirm back to bank.
3. Bidders at their own responsibility are advised to conduct a mock drill by coordinating with the e-tender service provider before the submission of the technical bids.
4. E-Tendering will be conducted on a specific web portal as detailed schedule of bidding process of this NIT meant for this purpose with the help of the Service Provider identified by the Bank
5. Bidders will be participating in E-Tendering event from their own office / place of their choice. Internet connectivity /browser settings and other paraphernalia requirements shall have to be ensured by Bidder themselves.
6. In the event of failure of their internet connectivity (due to any reason whatsoever it may be) the service provider or bank is not responsible.

7. In order to ward-off such contingent situation, Bidders are advised to make all the necessary arrangements / alternatives such as back –up power supply, connectivity whatever required so that they are able to circumvent such situation and still be able to participate in the E-Tendering Auction successfully.
8. However, the vendors are requested to not to wait till the last moment to quote their bids to avoid any such complex situations.
9. Failure of power at the premises of bidders during the E-Tendering cannot be the cause for not participating in the E-Tendering.
10. On account of this the time for the E-Tendering cannot be extended and BANK is not responsible for such eventualities.
11. Bank and / or Service Provider will not have any liability to Bidders for any interruption or delay in access to site of E-Tendering irrespective of the cause.
12. Bank's e-tendering website will not allow any bids to be submitted after the deadline for submission of bids. In the event of the specified date and time for the submission of bids, being declared a holiday for the Bank, e-tendering website will receive the bids up to the appointed time on the next working day. Extension / advancement of submission date and time will be at the sole discretion of the Bank.
13. During the submission of bid, if any bidder faces technical issues and was unable to submit the bid, in such case the Bank reserves its right to grant extension for bid submission by verifying the merits of the case and after checking necessary details from Service provider.
14. Utmost care has been taken to reduce discrepancy between the information contained in e-tendering portal and this tender document. However, in event of any such discrepancy, the terms and conditions contained in this tender document shall take precedence.
15. Bidders should attach all eligibility criteria documents with the Annexures in the technical bid.

## **EVALUATION PROCESS:**

The offers received from various bidders shall be evaluated in four stages:-

### **STAGE-1: ELIGIBILITY CRITERIA (TECHNICAL BID)**

This will involve checking of Tender documents as per Annexure I & II. Incomplete Tender or offers not accompanied by mandatory documents, cost of application, EMD, copy of GST, documents not serially numbered and Page No. under reference for the specific eligibility criteria is not correctly marked/ linked in the Annexures - II & III shall be rejected. It is Bidders responsibility to submit proof of valid documents duly stamped and signed as listed below. The bidder should have experience in the similar field for the last **3 years as on 31.03.2020** for which the necessary documents needs to be provided. The bidders should comply with the following Eligibility criteria and should produce the self-attested documentary proof for the same. The bids of those bidders who fails to comply with the Eligibility criteria will be rejected on grounds of ineligibility.

| <b>S.No</b> | <b>Eligibility Criteria</b>  | <b>Doc/copy to be enclosed</b>                        |
|-------------|--|---|
| 1           | Cost of Application Rs.2000/- (Rupees Two Thousand only)   | NEFT Details  |
| 2           | EMD Amount of Rs.50,000/- (Rupees Fifty Thousand Only)   | NEFT Details  |
| 3           | Annexure - I to be submitted as per format given in NIT  | Annexure – I  |
| 4           | Relevant work experience   | Work experience documents                             |
| 5           | Turnover for the past three FY   | PAN and IT returns for the last 3 FY, GST certificate |
| 6           | The contractor should have a local office in Chennai registered under Shop and Establishment Act   | Registration Certificate                              |
| 7           | The contractor should have Empanelled by SECI/MNRE for Implementing Roof top Solar PV System under RESCO Model in the state of Tamilnadu.                  | Letter of Award                                       |
| 8           | The contractor should have registered for GST.   | Registration Certificate                              |
| 9           | The contractor should have registered under EPF and Miscellaneous Provisions Act 1952.   | Registration Certificate                              |
| 10          | Copy of the NIT issued by the Bank with each page duly signed and stamped by the competent authority having agreed to terms and conditions for the tender. | Copy of NIT.  |

## **STAGE-II: TECHNICAL BID EVALUATION**

Offers meeting eligibility criteria will be awarded “**Points**” based on technical parameters and valid documentary proof submitted by the contractors. Towards this, the bidder shall submit a self-assessment sheet as per Annexure-III and criteria as listed below. Further, the offer is liable to be rejected if self-assessment is found to be incorrect as per documents attached and / or site inspection.

**The points secured by the bidders shall be used for finalization of L1 bidder, if there is a tie in the price bids offered by bidders. The bidder who secured highest marks in the Technical bid evaluation shall be awarded the contract if two or more bidders had quoted the same price in commercial bid.**

| Technical Parameters  | Documentary evidence                                   | Para Code | Points                                       |                |              |                |
|---|--|-----------|--|----------------|--------------|----------------|
|   |  |           | 2.5  | 5.0            | 7.5          | 10             |
| Average Turnover for last 3 years (in lakhs)  | Certificate from CA & Copy of Profit & Loss Statements | A         | Up to 12 lakhs                               | Up to 24 lakhs | Up to 40Laks | Above 40 Lakhs |
| 1 work of 80% of the / Estimate Plant Size- grid connected system   | Agreements and Work orders                             | B         | Upto 1                                       | Upto 2         | Upto 3       | Above 3        |
| OR) 2 works of 50% of the Estimate Plant Size - grid connected system   | Agreements and Work orders                             | C         |  |                |              |                |
| (OR) 3 works of 40% of the Estimate Plant Size - grid connected system  | Agreements and Work orders                             | D         |  |                |              |                |
| Experience of similar RESCO model projects to clients within India with Single plant size of 70 KWP and above– grid connected systems | Agreements and Work orders                             | E         | Upto 1                                       | Upto2          | Upto3        | Above 3        |
| Experience with banks and Governmental organizations  | Agreements and Work orders                             | F         | Up to 1                                      | Upto2          | Upto3        | Above 3        |
| Office setup in Chennai for operation and maintenance   | Registration Certificate                               | G         | 10 points for having office setup in Chennai |                |              |                |

|  |                            |   |                               |              |              |               |
|--|----------------------------|---|-------------------------------|--------------|--------------|---------------|
| of the plant   |                            |   |                               |              |              |               |
| Number of business years in solar rooftop business   | Agreements and Work orders | H | Upto 3                        | Upto 5       | Upto 10      | Above 10      |
| Proposed plant capacity at our site as per the survey carried out by the prospective bidders | Survey Report              | I | Upto 80 KWP                   | Upto 100 KWP | Upto 120 KWP | Above 120 KWP |
| ISO 9001 certification   | Certificates               | J | 5 Marks for ISO Certification |              |              |               |

**Note:** Points to be awarded subject to meeting criteria as mentioned above. For example: **2.5 Points** for Turnover up to 12 lakhs, **5 Points** for Turnover above 12 lakhs & up to 24 lakhs, **7.5 Points** for Turn Over above 24 lakhs & up to 40 lakhs and **10 Points** for Turnover above 40 lakhs. Further, the assessment of “Technical Bid Evaluation” shall be undertaken only in case the bidder is meeting eligibility criteria and statutory requirements as mentioned in the NIT.

### **STAGE –III: TECHNICAL SPECIFICATIONS**

The proposed project shall be commissioned as per the technical specifications given below. Any shortcomings will lead to cancelation of the project/ (subsidy/incentive) in full or part as decided by INDIAN OVERSEAS BANK & Competent Authority’s decision will be final and binding on the bidder. (Bidder should make eligible himself regarding the system component use for availing the incentive /subsidy as per concerned guidelines of MNRE/SECI). **Relevant data sheets for the below mentioned components must be enclosed along with the technical bid.**

### **DEFINITION**

A Grid Tied Solar Rooftop Photo Voltaic (SPV) power plant consists of SPV array, Module Mounting Structure, Power Conditioning Unit (PCU) consisting of Maximum Power Point Tracker (MPPT), Inverter, and Controls & Protections, interconnect cables and switches. PV Array is mounted on a suitable structure. Grid tied SPV system is without battery and 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, as specified herein or otherwise wherever such specifications are available and applicable. Solar PV system shall consist of following equipment / components.

- Solar PV modules consisting of required number of crystalline PV cells
- Grid interactive Power Conditioning Unit with Remote Monitoring System
- Mounting structures

- Junction Boxes.
- Earthing and lightning protections
- IR/UV protected PVC Cables, pipes & accessories

## **SOLAR PHOTOVOLTAIC MODULES**

- The PV modules used should be PID (Potential Induced Degradation) resistant and tested for PID as per IEC 62804.
  - The PV modules used should be made in India
  - Solar PV offset boxes must be used to mitigate effect of PID on Solar PV modules.
  - The PV modules used must qualify to the latest edition of IEC PV module qualification test or equivalent BIS standards Crystalline Silicon Solar Cell Modules IE 61215/IS14286. In addition, the modules must conform to IEC 61730 Part-1 requirements for construction & Part 2 – requirements for testing, for safety qualification or equivalent IS.
- a) For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC 61701
  - b) The total solar PV array capacity should not be less than allocated capacity (kWp) and should comprise of solar crystalline modules of minimum 350 Wp and above wattage. Module capacity less than minimum 350 watts shall not be accepted.
  - c) Monocrystalline modules to be used
  - d) Protective devices against surges at the PV module shall be provided. Low voltage drop bypass diodes shall be provided.
  - e) PV modules must be tested and approved by one of the IEC authorized test centres.
  - f) The module frame shall be made of corrosion resistant materials, preferably having anodized aluminium.
  - g) The bidder shall carefully design & accommodate requisite numbers of the modules
  - h) Other general requirement for the PV modules and subsystems shall be the Following:
    - The rated output power of any supplied module shall have tolerance of  $\pm 3\%$ .
    - The peak-power point voltage and the peak-power point current of any supplied module and/or any module string (series connected modules) shall not vary by more than 2 (two) per cent from the respective arithmetic means for all modules and/or for all module strings, as the case may be.
    - The module shall be provided with a junction box with either provision of external screw terminal connection or sealed type and with arrangement for provision of by-pass diode. The box shall have hinged, weather proof lid with captive screws and cable gland entry points or may be of sealed type and IP-65 rated.

- I-V (Current–Voltage) curves at STC (standard test conditions) should be provided by bidder.

Modules deployed must use a RF (Radio frequency) 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).

- Name of the manufacturer of the PV module
- Name of the manufacturer of Solar Cells.
- Month & year of the manufacture (separate for solar cells and modules)
- Country of origin (separately for solar cells and module)
- I-V curve for the module at STC (1000 w/m<sup>2</sup>, AM 1.5, 250C), I<sub>max</sub>, V<sub>max</sub> and FF
- (Fill Factor) for the module
- Unique Serial No and Model No of the module
- Date and year of obtaining IEC PV module qualification certificate.
- Name of the test lab issuing IEC certificate.
- Other relevant information on traceability of solar cells and module as per ISO 9001 and ISO 14001
- Site owners would be required to maintain accessibility to the list of Module IDs along with the above parametric data for each module.

## **WARRANTIES**

### **Material Warranty**

Material Warranty is defined as: The manufacturer should warrant the Solar

- Module(s) to be free from the defects and/or failures specified below for a period
- not less than five (05) years from the date of sale to the original customer
- ("Customer")
- Defects and/or failures due to manufacturing,
- Defects and/or failures due to quality of materials,
- Non conformity to specifications due to faulty manufacturing and/or inspection
- processes. If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the Owners sole option,

### **Performance Warranty**

- The predicted electrical degradation of power generated not exceeding 20% of the minimum rated power over the 25 year period and not more than 10% for first ten years period of the full rated original output.

The successful bidder has to transfer all the Guarantees /Warrantees of the different components to the Owner of the project. The responsibility of operation of Warrantee and Guarantee clauses and Claims/ Settlement of issues arising out of said clauses shall be joint responsibility of the Successful bidder and the owner of the project. INDIAN OVERSEAS BANK will not be responsible in any way for any claims whatsoever on account of the above

## **ARRAY STRUCTURE**



- Aluminum mounting structures may be used for mounting the modules/ panels/arrays. Each structure should have angle of inclination as per the site conditions to take maximum irradiation and same have to be derived from analysis of past years solar irradiation data /shadow analysis. However to accommodate more capacity the angle inclination may be reduced until the plant meets the specified performance ratio requirements.
- The Mounting structure shall be so designed to withstand the speed for the wind zone of the location where a PV system is proposed to be installed. It may be ensured that the design has been certified by a recognized Lab/ Institution in this regard and submit wind loading calculation sheet to INDIAN OVERSEAS BANK. Suitable fastening arrangement such as grouting and clamping should be provided to secure the installation against the specific wind speed.
- The fasteners used should be made up of stainless steel. The structures shall be designed to allow easy replacement of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels. Installation of solar structure should not damage the roof in any way. If any concrete or foundation is required, it should be pre- cast type.
- Regarding civil structures the bidder need to take care of the load bearing capacity of the roof and need arrange suitable structures based on the quality of roof.
- The minimum clearance of the structure from the roof level should be 300 mm.

## **ARRAY JUNCTION BOXES**

- The junction boxes are to be provided in the PV array for termination of connecting cables. The Junction Boxes (JBs) shall be made of GRP/FRP/Powder Coated Aluminium /cast aluminium alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs/terminals, crimped properly and with use of cable glands. The JB's shall be such that input & output termination can be made through suitable cable glands.
- Copper bus bars/terminal blocks housed in the junction box with suitable termination threads Conforming to IP65 standard and IEC 62208:2011 Hinged door with EPDM rubber gasket to prevent water entry with single compression cable glands, provision of earthlings. It should be placed at 5 feet height or above for ease of accessibility.
- Each Junction Box shall have High quality Suitable capacity Metal Oxide Varistors (MOVs) / surge arrestors, suitable Reverse Blocking Diodes. The Junction Boxes shall have suitable arrangement monitoring and disconnection for each of the groups.
- Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification.

## **DC DISTRIBUTION PANEL BOARD (DCDB)**

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

## **AC DISTRIBUTION PANEL BOARD**

- AC Distribution Panel Board (ACDB) shall control the AC power from PCU/ inverter, and should have necessary surge arrestors. Interconnection from ACDB to mains at LT Bus bar while in grid tied mode.
- All switches and the circuit breakers, connectors should conform to IEC 60947, part I, II and III/ IS 60947 part I, II and III.
- The change over switches, cabling work should be undertaken by the bidder as part of the project.
- All the Panel's shall be metal clad, totally enclosed, rigid, floor mounted, air - insulated, cubical type suitable for operation on three phase / single phase, 415 or 230 volts, 50Hz
- The panels shall be designed for minimum expected ambient temperature of 45 degree Celsius, 80 percent humidity and dusty weather.
- All indoor panels will have protection of IP 54 or better. All outdoor panels will have protection of IP65 or better.
- Should conform to Indian Electricity Act and rules (till last amendment).
- All the 415 Volt AC or 230 volts devices / equipment like bus support insulators, circuit breakers, VTs etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions.

## **PCU/ARRAY SIZE RATIO:**

- The combined wattage of all inverters should not be less than rated capacity of power plant under STC (Standard test conditions).
- Maximum power point tracker shall be integrated in the PCU/inverter to maximize energy drawn from the array.

## **PCU/ INVERTER:**

As SPV array produce direct current electricity, it is necessary to convert this direct current into alternating current and adjust the voltage levels to match the grid voltage. Conversion shall be

achieved using an electronic Inverter and the associated control and protection devices. All these components of the system are termed the "Power Conditioning Unit (PCU)". In addition, the PCU shall also house MPPT (Maximum Power Point Tracker), an interface between Solar PV array & the Inverter, to the power conditioning unit/inverter should also be DG set interactive. If necessary inverter output should be compatible with the grid frequency. Typical technical features of the inverter shall be as follows:

- Switching devices : IGBT/MOSFET
- Control : Microprocessor / DSP (Digital Signal Processor)
- Nominal AC output voltage and frequency : 415V, 3 Phase, 50 Hz
- Output frequency : 50 Hz
- Grid Frequency Synchronization range :  $\pm 3$  Hz
- DC link voltage range : 0 to 1000 V
- Ambient temperature considered : -20degC to 50degC
- Humidity : 95 % Non-condensing
- Protection of Enclosure : IP-20(Minimum) for indoor. IP-65(Minimum) for outdoor.
- Grid Frequency Tolerance range :  $\pm 3$  Hz
- Grid Voltage tolerance : - 20% & + 15 %
- No-load losses : Less than 1% of rated power
- Inverter efficiency(minimum) : >93% (In case of 10 kW or above with inbuilt galvanic isolation) >97% (In case of 10 KW or above without inbuilt galvanic isolation)
- THD : < 3%
- PF : > 0.9

a) Three phase PCU/ inverter shall be used with each power plant system (10 kW or above) but in case of less than 10 kW single phase inverter /Three phase PCU/ inverter can be used with consent of INDIAN OVERSEAS BANK.

b) PCU/inverter shall be capable of complete automatic operation including wake-up, synchronization & shutdown.

c) The output of power factor of PCU inverter is suitable for all voltage ranges or sink of reactive power; inverter should have internal protection arrangement against any sustainable fault in feeder line and against the lightning on feeder.

d) Built-in meter and data logger to monitor plant performance through external computer shall be provided.

e) Anti-islanding (protecting against islanding of grid): The PCU shall have anti-islanding protection in conformity to IEEE1547/UL 1741/IEC 621116 or equivalent BIS standard. Successful Bidders shall be responsible for galvanic isolation of solar roof top power plant (>100kW) with electrical grid or LT panel.

f) In PCU/Inverter, there shall be a direct current isolation provided at the output by means of a suitable isolating transformer. If Isolation Transformer is not incorporated with PCU/Inverter, there shall be a separate Isolation Transformer of suitable rating provided at the output side of PCU/PCU units for capacity more than 100 kW.

g) The PCU/ inverter generated harmonics, flicker, DC injection limits, Voltage Range, Frequency Range and Anti-Islanding measures at the point of connection to the utility services should follow the latest CEA (Technical Standards for Connectivity Distribution Generation Resources) Guidelines.

h) The power conditioning units / inverters should comply with applicable IEC/ equivalent BIS standard for efficiency measurements and environmental tests as per standard codes IEC 61683/IS 61683 and IEC 60068-2(1,2,14,30) / Equivalent BIS Std.

i) The charge controller/ MPPT units environmental testing should qualify IEC 600682(1, 2, 14, 30)/Equivalent BIS standard. The junction boxes/ enclosures should be IP 65 (for outdoor)/ IP 54 (indoor) and as per IEC

j) The PCU/ inverters should be tested from the MNRE approved test centres / NABL /BIS /IEC accredited testing- calibration laboratories. In case of imported power conditioning units, these should be approved by international test houses.

k) The charge controller/ MPPT units environmental testing should qualify IEC 60068- 2(1, 2, 14, 30)/Equivalent BIS standard. The junction boxes/ enclosures should be IP65 (for outdoor)/ IP 54 (indoor) and as per IEC 529 specifications.

## **INTEGRATION OF PV POWER WITH GRID:**

The output power from SPV would be fed to the inverters which converts DC produced by SPV array to AC and feeds it into the main electricity grid of the Annex building after synchronization. In case of grid failure, or low or high voltage, solar PV system shall be out of synchronization and shall be disconnected from the grid. Once the DG set comes into service PV system shall again be synchronized with DG supply and load requirement would be met to the extent of availability of power. 4 pole isolation of inverter output with respect to the grid/ DG power connection need to be provided.

## **DATA ACQUISITION SYSTEM / PLANT MONITORING**

### **A. Data Acquisition System**

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

ii. Data Logging Provision for plant control and monitoring, time and date stamped system data logs for analysis with the high quality, suitable PC. Metering and Instrumentation for display of systems parameters and status indication to be provided.

iii. Solar Irradiance: An integrating Pyranometer (Class II or better, along with calibration certificate) provided, with the sensor mounted in the plane of the array readout integrated with data logging system.

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

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 (viz. AC Over voltage, AC Under voltage, over frequency, under frequency, ground fault, PV starting voltage, PV stopping voltage, over current, short circuit etc.

vi. All major parameters available on the digital bus and logging facility for energy auditing through the internal microprocessor and read on the digital front panel at any time) and logging facility (the current values, previous values for up to a month and the average values) should be made available for energy auditing through the internal microprocessor and should be read on the digital front panel.

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

viii. 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.

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

x. The time interval between two sets of data shall not be more than 15 minutes. (A min. of 4 samples of data shall be recorded per hour)

xi. Data Acquisition System shall have real time clock, internal reliable battery backup (2 hours) and data storage capacity to record data round the clock for a period of min. 1 year.

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

xiii. 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.

xiv. All instantaneous data shall be shown on the computer screen on the PC provided by INDIAN OVERSEAS BANK, Central Office Chennai

xv. Software shall be provided for USB download and analysis of DC and AC parametric data for individual plant.

- xvi. Provision for Internet monitoring and download of data shall be also incorporated.
- xvii. 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 environment monitoring system in the central location.
- xviii. The bidders shall be obligated to push real-time plant monitoring data on a specified intervals (say 15 minute) through open protocol at receiver location (cloud server) in XML/JSON format, preferably. Suitable provision in this regard will be intimated to the bidders.
- xix. The SPV BIDDERS must install necessary equipment to continuously measure solar radiation on module plane, ambient temperature, wind speed and other weather parameters and simultaneously measure the generation of DC power as well as AC power generated from the plant. They will be required to submit this data to INDIAN OVERSEAS BANK and/ or through a report on regular basis every month for the entire lifetime of the Project.
- xx. All data shall be made available as mentioned above for the entire lifespan of the project.
- xxi. The plant SCADA should be Open Platform Communications (OPC) compliant with standard DNP3 and Modbus control interfaces over TCP/ IP having the provision to add protocol converters to implement custom and secure communications protocol standard for providing real time online data (including but not limited to irradiance, plant generation (instantaneous/ daily/ monthly/ yearly), Daily Peak Generation, temperature, wind speed etc.) to INDIAN OVERSEAS BANK and integrate with the station BMS.
- xxii. Fibre Optic Ethernet Ring network (Managed type Ethernet switches in each Control Room) should be provided between MCR & Inverter Control Rooms.

### **Solar Radiation and Environment Monitoring System.**

- i. Computerized solar radiation and environment monitoring system shall be installed on one of the buildings along with the solar PV power plant.
- ii. The system shall consist of various sensors, signal conditioning, data acquisition, LCD display and remote monitoring.
- iii. Global and diffuse beam solar radiation in the plane of array (POA) shall be monitored on continuous basis. Global Horizontal Irradiation at the collector panel is required to be measured.
- iv. Solar PV module back surface temperature shall be also monitored on continuous basis.
- v. 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.
- vi. Solar radiation and environment monitoring system shall have real time clock, internal reliable battery backup and data storage capacity to record data round the clock for a period of min. 1 year.

vii. The data shall be recorded in a common work sheet chronologically date wise. The data file should be MS Excel compatible. The data shall be represented in both tabular and graphical form.

viii. All instantaneous data shall be shown on the computer screen.

ix. Historical data shall be available for USB download and analysis.

x. Provision for Internet monitoring and download of data shall be incorporated.

xi. Remote Monitoring and data acquisition through Remote Monitoring System software at the INDIAN OVERSEAS BANK site 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 supplier. Provision for interfacing these data on INDIAN OVERSEAS BANK control server and portal in future.

## **METERING**

a) The developer should install a meter at the site for measuring energy consumed by the INDIAN OVERSEAS BANK and generate the report on monthly basis by raising an invoice.

b) The bidder must take approval/NOC from the INDIAN OVERSEAS BANK and/or TANGEDCO (as applicable) for the connectivity, technical feasibility, and synchronization of SPV plant with distribution network and submit the same to INDIAN OVERSEAS BANK before commissioning of SPV plant.

c) Liasoning work and approval for Net-metering and other work as per requirement from TANGEDCO will be in the scope of bidder. CEIG approvals will be under the scope of the bidder.

d) Reverse power relay/ Zero Export Controller/ DG synchronising shall be provided by Bidder (if necessary), as per local TANGEDCO requirement.

e) Energy meters shall be provided by the bidder at necessary places.

## **PROTECTIONS**

The system should be provided with all necessary protections like earthing, lightning, and grid islanding as follows:

### **LIGHTNING PROTECTION**

a) The SPV power plants shall be provided with lightning & overvoltage protection. The main aim in this protection shall be to reduce the over voltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc. The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors. Lightning

protection should be provided as per IEC 62305 standard. The protection against induced high-voltages shall be provided by the use of metal oxide arrestors (MOVs) and suitable earthing such that induced transients find an alternate route to earth.

### **SURGE PROTECTION**

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

### **EARTHING PROTECTION**

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

b) Earth resistance shall not be more than 1 ohms. It shall be ensured that all the earthing points are bonded together to make them at the same potential.

### **GRID ISLANDING:**

a) In the event of a power failure on the electric grid, it is required that any independent power-producing inverters attached to the grid turn off in a short period of time. This prevents the DC-to-AC inverters from continuing to feed power into small sections of the grid, known as “islands.” Powered islands present a risk to workers who may expect the area to be unpowered, and they may also damage grid-tied equipment. The Rooftop PV system shall be equipped with islanding protection. In addition to disconnection from the grid (due to islanding protection) disconnection due to under and over voltage conditions shall also be provided.

b) A manual disconnect 4pole isolation switch beside automatic disconnection to grid would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance. This switch shall be locked by the utility personnel.

### **CABLES:**

Cables of appropriate size to be used in the system shall have the following characteristics:

- i. Shall meet IEC 60227/IS 694, IEC 60502/IS1554 standards
- ii. Temp. Range:-10degC to +80degC.
- iii. Voltage rating 660/1000V
- iv. Excellent resistance to heat, cold, water, oil, abrasion, UV radiation
- v. Flexible Sizes of cables between array interconnections, array to junction boxes, junction boxes To Inverter etc. shall be so selected to keep the voltage drop (power loss) of the entire solar system to the minimum (2%)
- vi. For the DC cabling, XLPE or, XLPO insulated and sheathed, UV-stabilized single core multi-stranded flexible copper cables shall be used; Multi-core cables shall not be used.



- vii. For the AC cabling, PVC or, XLPE insulated and PVC sheathed single or, multi-core multistranded flexible copper cables shall be used; Outdoor AC cables shall have a UV stabilized outer sheath.
- viii. Overall HR FRLSZH insulation for UV protection and confirm IEC 69947.
- ix. The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use. Outer sheath of cables shall be electron beam cross-linked XLPO type and black in colour.
- x. The DC cables from the SPV module array shall run through a UV-stabilized PVC conduit pipe of adequate diameter with a minimum wall thickness of 1.5mm.
- xi. Cables and wires used for the interconnection of solar PV modules shall be provided with solar PV connectors (MC4) and couplers
- xii. All cables and conduit pipes shall be clamped to the rooftop, walls and ceilings with thermoplastic clamps at intervals not exceeding 50 cm; the minimum DC cable size shall be 4.0 mm<sup>2</sup> copper; the minimum AC cable size shall be 4.0 mm<sup>2</sup> copper. In three phase systems, the size of the neutral wire size shall be equal to the size of the phase wires.
- xiii. Cable Routing/ Marking: All cable/wires are to be routed in a GI cable tray and suitably tagged and marked with proper manner by good quality ferule or by other means so that the cable easily identified. In addition, cable drum no. / Batch no. to be embossed/ printed at every one meter. All cable tests and measurement methods should confirm to IEC 60189-1:2018 or latest.
- xiv. Cable Jacket should also be electron beam cross-linked XLPO, flame retardant, UV resistant and black in colour.
- xv. All cables and connectors for use for installation of solar field must be of solar grade which can withstand harsh environment conditions including High temperatures, UV radiation, rain, humidity, dirt, salt, burial and attack by moss and microbes for 25 years and voltages as per latest IEC standards. DC cables used from solar modules to array junction box shall be solar grade copper (Cu) with XLPO insulation and rated for 1.1kV as per relevant standards only. Cabling in the yard or control room shall be carried out as per IE rule.
- xvi. The ratings given are approximate. Bidder to indicate size and length as per system design requirement. All the cables required for the plant shall be provided by the bidder. Any change in cabling sizes if desired by the bidder shall be approved after citing appropriate reasons. All cable schedules/ layout drawings shall be approved prior to installation.
- xvii. Multi Strand, Annealed high conductivity copper conductor PVC type 'A' pressure extruded insulation or XLPE insulation. Overall PVC/XLPE insulation for UV protection Armoured cable for underground laying. All cable trays including covers to be provided. All cables conform to latest edition of IEC/ equivalent BIS Standards as specified below: BoS item / component Standard Description Standard Number Cables General Test and Measuring Methods, PVC/XLPE insulated cables for working Voltage up to and including 1100 V, UV resistant for outdoor installation IS /IEC 69947. The total voltage drop on the cable segments from the solar PV modules to the solar grid inverter shall not exceed 2.0%. Selected cables shall carry a current density of maximum 1.2 A/Sq.mm.
- xviii. The total voltage drop on the cable segments from the solar grid inverter to the building distribution board shall not exceed 2.0%.

## **TOOLS & TACKLES AND SPARES:**

- a) After completion of installation & commissioning of the power plant, necessary tools & tackles shall be maintained by the bidder for maintenance purpose.

b) A list of requisite spares in case of PCU/inverter comprising of a set of control logic cards, IGBT driver cards etc. Junction Boxes. Fuses, MOVs / arrestors, MCCBs etc along with spare set of PV modules be indicated, which shall be maintained. A minimum set of spares shall be maintained in the plant itself for the entire period of warranty and Operation & Maintenance which upon its use shall be replenished. On completion of contract period, the same shall be handed over to INDIAN OVERSEAS BANK.

#### **DANGER BOARDS AND SIGNAGES:**

a) Danger boards should be provided as and where necessary as per IE Act. /IE Rules as amended up to date. Three signage's shall be provided one each at battery cumcontrol room, solar array area and main entry in to the area. Text of the signages may be finalized in consultation with INDIAN OVERSEAS BANK.

#### **FIRE EXTINGUISHERS:**

a) The firefighting system for the proposed power plant for fire protection shall be consisting of

- i. Portable fire extinguishers in the control room for fire caused by electrical shortcircuits.
- ii. Sand buckets in the control room

b) The installation of Fire Extinguishers should confirm to TAC regulations and BIS standards. The fire extinguishers shall be provided in the control room housing PCUs as well as on the Roof or site where the PV arrays have been installed.

#### **STAGE-IV: COMMERCIAL BID**

The bidders who qualify the Technical Bid and Technical Evaluation shall be eligible for the Commercial Bid. The bidders should quote per kWh rate of the power to be consumed by the bank for a period of 25 years.

- a) The bidder quoting minimum price per kWh shall be adjudged L1
- b) The bidders shall quote the Tariff in three decimal places. (Ex. Rs. X.XXX)
- c) If two or more bidders quote the same rate, the selection of successful bidder shall be at Employer's discretion pertaining to the eligibility criteria. The bidders who secured highest marks in the Technical bid evaluation shall be awarded the contract if two or more bidders had quoted the same price in commercial bid.
- d) If the price quoted by L1 bidder is higher than Rs 3.250/kWh (Rate Fixed by SECI) then ,the rate fixed by SECI i.e. Rs 3.250/kWh shall be taken as the L1 price.and the L1 bidder is required to execute the contract for Rs 3.250/kWh
- e) The quoted price shall remain constant for the contract period of 25 years with no incremental change.

- f) The awarded contractor shall not break the contract and should adhere to the contract guidelines.
- g) The system should be handed over to the bank after the duration of the contract in good working condition.
- h) The bidders are not allowed to submit work orders performed under joint ventures. If any such documents are found with joint ventures, they are liable to be disqualified during technical evaluation.
- i) The bidders should submit the commercial bid on the format provided in Annexure VI.

### **PERFORMANCE SECURITY/ PERFORMANCE BANK GUARANTEE (PBG)**

Within 30 days from the date of issue of Letter of Acceptance, Successful Bidder shall furnish the Performance Security amounting to **Rs 2,40,000** only in the form of unconditional and irrevocable Bank Guarantee in the prescribed format issued by a Scheduled Commercial Bank based in India including scheduled Commercial Foreign Banks having business branch/office in India.

In case of breach of any terms and conditions stipulated in the contract, performance deposit/Guarantee of the firm/company will be liable to be forfeited/encashed by INDIAN OVERSEAS BANK besides annulment of the contract.

The Performance Security shall be denominated in Indian Rupees and shall be in the form of a bank guarantee from scheduled commercial bank and shall be payable at Chennai. The Bank Guarantee shall also be confirmed from the Chennai branch of issuing bank.

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

- If the Successful Bidder is not able to submit Project Sanction Documents to the satisfaction of INDIAN OVERSEAS BANK.
- If the Successful Bidder is not able to commission the projects to the satisfaction of INDIAN OVERSEAS BANK, for which Letter of Acceptance/sanction letter has been issued.
- If power producer is not able to pay penalty on account of not meeting the year wise requirement of minimum unit generation of installed and commissioned capacity as per Schedule IV of PPA or Annexure IV.
- Termination of Power Purchase agreement due to Power Producer's default on any grounds other than above.

In all the above cases corresponding allocated capacity shall also become liable for cancellation.

Moreover, in case of breach of any terms and conditions stipulated in the contract, performance deposit/Guarantee of the firm/company will be liable to be forfeited/encashed by INDIAN OVERSEAS BANK besides annulment of the contract.

The Performance Bank Guarantee (PBG) initially shall be valid for a minimum period of 10 Years from the date of issue of Letter of Acceptance (LOA) for an amount of **Rs. 2,54,400** and thereafter, PBG amount shall be reduced to **Rs. 1,27,200** till PPA is in force (renewable every five years).

## **PAYMENT TERMS**

PLEASE REFER CLAUSE 7 OF POWER PURCHASE AGREEMENT

## **INSTRUCTIONS TO BIDDERS**

### **DRAWINGS & MANUALS:**

- a) Three sets of Engineering, electrical drawings and Installation and O&M manuals are to be supplied. Bidders shall provide complete technical data sheets for each equipment giving details of the specifications along with make/makes in their bid along with basic design of the power plant and power evacuation, synchronization along with protection equipment.
- b) Approved ISI and reputed makes for equipment be used.
- c) For complete electro-mechanical works, bidders shall supply complete design, details and drawings for approval to INDIAN OVERSEAS BANK before progressing with the installation work.

### **PLANNING AND DESIGNING:**

Developer will engage proof consultant for checking of all Structural, Electrical and all other drawings and designs relating to this solar power project

- a) The bidder should carry out Shadow Analysis at the site and accordingly design strings & arrays layout considering optimal usage of space, material and labour. The bidder should submit the array layout drawings along with Shadow Analysis Report to INDIAN OVERSEAS BANK for approval.
- b) INDIAN OVERSEAS BANK reserves the right to modify the landscaping design, Layout and specification of sub-systems and components at any stage as per local site conditions/requirements.
- c) Prior to submission of drawings to INDIAN OVERSEAS BANK, Developer will engage third party agency (proof consultant / Chartered engineer) for checking of all Structural, Electrical and all other drawings and designs relating to this solar power project.
- d) The same third party agency will have to verify the installation after completion, whether it is safe and is as per the design approved.
- e) The third party agency employed by the developer should have earlier experience of such works.
- f) The bidder shall submit preliminary drawing for approval & based on any modification or recommendation, if any. The bidder shall submit three sets hard copy and soft copy in CD of final Good for Construction (GFC) drawing for formal approval. The Bidder shall proceed the works with GFC drawings only.

## **DRAWINGS TO BE FURNISHED BY BIDDER AFTER AWARD OF CONTRACT:**

The Contractor shall furnish the following drawings including interface drawings after Award/Intent and obtain approval:-

- a) General arrangement and dimensioned layout.
- b) Schematic drawing showing the requirement of SPV panel, Power conditioning. Unit(s)/ inverter, Junction Boxes, AC and DC Distribution Boards, meters etc.
- c) Structural drawing along with foundation details for the structure.
- d) Itemized bill of material for complete SPV plant covering all the components and associated accessories.
- e) Layout of solar Power Array.
- f) Shadow analysis of the area.
- g) Guaranteed Technical Particular (GTP) of Solar PV modules, inverters, Remote monitoring system, DC cables, AC cables, Junction Box.

## **SAFETY MEASURES:**

The bidder shall take entire responsibility for electrical safety of the installation(s) including connectivity with the grid and follow all the safety rules & regulations applicable as per Electricity Act, 2003 and CEA guidelines etc. The contractor should follow workmen compensation policy and CAR policy.

## **SAFETY AT SITE:**

- i) Solar developer shall engage one qualified safety engineer to ensure safe work environment during the execution stage of work. They shall provide the curriculum vitae of the engineer involved in the installation and the maintenance of the project
- ii) If found, that safety engineer is not available at site suitable penalty of Rs. 10,000/- (Rupees Ten Thousand Only) shall be imposed per violation/instance on solar developer after issuing of first warning
- iii) Any damage caused to the Bank's property by the solar developer during installation, lifting materials should be reported to the Bank and the penalty should be paid separately. If the solar developer fails to inform and continue the work then their contract will be terminated and their materials should be cleared off the site immediately.

## **STORAGE**

The contractor is responsible for storage of materials at the site. Any damage, theft, pilferage of materials is under the responsibility of the contractor.

## **RE-POWERING:**

During the term of agreement, the power producer with the consent of purchaser can change the solar power producing equipment by replacing with higher efficient and higher capacity equipment in the same area as provided for solar PV power plant. They shall change the

equipments whose lifetime and functionality degrades with newer equipment to continue the generation of the solar power plant. The replacement duration of the equipments should be discussed with INDIAN OVERSEAS BANK prior to the replacement. This shall be without any change of conditions and tariff of this agreement and without any liability to the purchaser. Cost of shifting of any facilities in the premises or any other cost arising due to above change accrued by purchaser shall be compensated by the power producer.

## **INSURANCE**

The Bidder shall be responsible and take an Insurance Policy for transitcum- 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 O&M period. The CAR insurance and applicable insurance during O&M period should cover 100% of the cost.

The Bidder shall also take insurance for Third Party Liability covering loss of human life, engineers and workmen and also covering the risks of damage to the third party/ material/ equipment/ properties during execution of the Contract. Before commencement of the work, the Bidder will ensure that all its employees and representatives are covered by suitable insurance against any damage, loss, injury or death arising out of the execution of the work or in carrying out the Contract.

## **OPERATION & MAINTENANCE (O&M)**

The bidder shall be responsible for operation and maintenance of the Solar PV systems for a period of 25 years for during which INDIAN OVERSEAS BANK will monitor the project for effective performance in line with conditions specified elsewhere in the bid document. During this period, the bidder shall be responsible for supply of all spare parts as required from time to time for scheduled and preventive maintenance, major overhauling of the plant, replacement of defective modules, inverters, PCU's, etc and maintaining log sheets for operation detail, deployment of staff for continuous operations and qualified engineer for supervision of O&M work, complaint logging & its attending. The developer (i.e. selected bidder) is responsible for remedying any damage in the roof at the time of installation of Solar Power System and for the whole O&M period (25 Years). To ensure the damages are rectified/made good a third party inspection jointly with power producer and power purchaser will be conducted annually. The developer should immediately take necessary action to repair any damage to the roofs. INDIAN OVERSEAS BANK may impose suitable penalty for the delay caused to resolve the issue.

## **PLANT PERFORMANCE EVALUATION**

The successful bidder shall be required to meet minimum guaranteed generation with acceptable Performance Ratio at the time of commissioning and related Capacity Utilization Factor (CUF) as per the Global Horizontal Irradiance (GHI) levels of the location during the O&M period. Performance Ratio should be shown minimum of 75% at the time of inspection for initial commissioning acceptance. Maintenance of Minimum CUF shall be deemed to have been achieved based on the units generated per KWp installed capacity at any site as per the year wise generation table given in Annexure- C. The bidder should send the periodic plant output details to INDIAN OVERSEAS BANK for ensuring the CUF. The Performance Ratio will be measured at Inverter output level during peak radiation conditions.

## **PENALTY ON LOWER PERFORMANCE**

The successful bidder shall be responsible for the energy generation of the Solar PV power plant for the whole O&M period of 25 years. If in any year of the term of agreement the energy generation (in terms of units) is found to be less than the value committed by successful bidder through Annexure IV of PPA (calculated on the basis of minimum CUF with acceptable degradation values as in tender), a penalty amount as per formula below will be imposed to successful bidder. If successful bidder is unable to pay the penalty in the stipulated time (i.e. 30 Days), the same will be recovered in accordance with clause 3.17 of this RFS or shall be deducted from the subsequent bills and the balance amount will be paid to the bidder.

Penalty= (committed generation as per Annexure-IV of PPA – Actual generation during the same period) x (difference of average landed cost of electricity from grid per unit at the end of that year applicable to power purchaser and applicable solar power tariff payable to power producer for that year).

Example:

*Suppose bidder has committed for a generation of 1,31,400 kWh by a plant of 100 kWp for a particular year. The Average cost of electricity from grid is Rs. 8.00/kWh and solar tariff of that year is Rs. 6.00/kWh as per price bid. The actual energy generated by that plant for that year is 1,31,000. So the energy difference happened to be 400 kWh. Corresponding penalty imposed would be  $(131400-131000)*(8-6) = \text{Rs. } 800.00$  So, the Penalty that should be paid to INDIAN OVERSEAS BANK for that year by the bidder would be Rs.800.00.*

## **PROGRESS REPORT**

The bidder shall submit the progress report fortnightly (15 days) to INDIAN OVERSEAS BANK. INDIAN OVERSEAS BANK will have the right to depute its representatives to ascertain the progress of contract at the premises of works of the bidder.

## **PROJECT INSPECTION**

The project progress will be monitored by INDIAN OVERSEAS BANK and the projects will be inspected for quality at any time during commissioning or after the completion of the project either by officer(s) from INDIAN OVERSEAS BANK or any authorized agency/ expert. INDIAN OVERSEAS BANK may depute a technical person(s) for inspection, third party verification, monitoring of system installed to oversee, the implementation as per required standards and also to visit the manufacturers' facilities to check the quality of products as well as to visit the system integrators to assess their technical capabilities as and when required.

## **FORCE MAJEURE**

Notwithstanding the provisions of clauses contained in this NIT document; the INDIAN OVERSEAS BANK shall not forfeit (a) Security deposit for delay and (b) termination of contract; if Contractor is unable to fulfill his obligation under this contract due to force majeure conditions.

For purpose of this clause, "Force Majeure" means an event beyond the control of the contractor and not involving the contractor's fault or negligence and not foreseeable, either in its sovereign or contractual capacity. Such events may include but are not restricted to Acts of God, wars or

revolutions, fires, floods, epidemics, quarantine restrictions and freight embargoes etc. Whether a “Force majeure” situation exists or not, shall be decided by INDIAN OVERSEAS BANK and its decision shall be final and binding on the contractor and all other concerned.

In the event that the contractor is not able to perform his obligations under this contract on account of force majeure, he will be relieved of his obligations during the force majeure period. In the event that such force majeure extends beyond six months, INDIAN OVERSEAS BANK has the right to terminate the contract in which case, the security deposit shall be refunded to him.

If a force majeure situation arises, the contractor shall notify INDIAN OVERSEAS BANK in writing promptly, not later than 14 days from the date such situation arises. The contractor shall notify INDIAN OVERSEAS BANK not later than 3 days of cessation of force majeure conditions. After examining the cases, INDIAN OVERSEAS BANK shall decide and grant suitable additional time for the completion of the work, if required. As per the relevant law, in event of a disagreement between parties on existence of force majeure event arbitration shall decide.

### **COVID 19 PROTOCOLS**

The awarded bidder should ensure to follow safety precautions like sanitizing their hands before the start of work, wearing protective masks, avoiding social distancing during the duration of the installation period and the maintenance schedule within the premises of INDIAN OVERSEAS BANK. An undertaking is needed from the awarded bidder that none of their employees/contractors are contracted with COVID19.



## **UNDERTAKING FOR CORRUPT & FRAUDULENT PRACTICE**

It is confirmed and declared that we, or any of our associate, have not been engaged in any fraudulent and corrupt practice and that no agent, middleman or any intermediary has been, or will be, engaged to provide any services, or any other items of work related to the award and performance of this contract and no agency commission or any payment which may be construed as an agency commission has been, or will be, paid and that the tender price will not any such amount.

In case above is not found true at any later stage, INDIAN OVERSEAS BANK may initiate any punitive step it deems fit.

**STAMP & SIGNATURE OF AUTHORIZED SIGNATORY**

To  
General Manager  
General Administration Department  
Indian Overseas Bank  
Central Office, 763 Anna Salai  
Annexe Building, Ground Floor  
Chennai - 600 002

Dear Sir,

**DESIGN, MANUFACTURE, SUPPLY, ERECTION, TESTING AND COMMISSIONING  
INCLUDING WARRANTY, OPERATION & MAINTENANCE OF GRID CONNECTED  
ROOFTOP SOLAR PHOTOVOLTAIC PLANT UNDER RESCO MODEL FOR A PERIOD OF 25  
YEARS FOR INDIAN OVERSEAS BANK CENTRAL OFFICE CHENNAI**

1. With reference to your tender notice published in Newspapers \_\_\_\_\_ on \_\_\_\_\_ & Indian Overseas Bank Website on \_\_\_\_\_, we enclose our offer for design, manufacture, supply, erection, testing and commissioning including warranty, operation & maintenance of grid connected rooftop solar photovoltaic plant under resco model for a period of 25 years for INDIAN OVERSEAS BANK CENTRAL OFFICE CHENNAI.
2. We confirm that our offer is in conformity with Terms & Conditions listed in the NIT. **We have not been blacklisted by any Banks or PSUs during last ten years for installation of solar rooftop systems.**
3. We understand that the Bank has the right to reject our offer in full or in part at any stage without assigning any reason whatsoever. We agree that the decision of the Bank in selection of L1 contractor will be final.
4. We confirm that all information furnished in our offer is correct to the best of our knowledge and belief. We understand that if any false information is detected at any later date, the agreement executed on the subject shall be treated as invalid and we ourselves will be solely responsible for the consequences.
5. We have enclosed herewith two Demand Drafts favoring Indian Overseas Bank, payable at Chennai towards cost of Tender application and EMD. We have also submitted all documents as per NIT.

| <u>Details</u>      | <u>Cost of Application Rs 2000</u> | <u>EMD Rs 50,000</u> |
|---------------------|------------------------------------|----------------------|
| <u>DD No</u>        |                                    |                      |
| <u>Date</u>         |                                    |                      |
| <u>Issuing Bank</u> |                                    |                      |

Yours faithfully,

Authorized Signature with Company Seal

**TECHNICAL BID  
(ON BIDDER LETTERHEAD)**

**Ownership Status: Proprietor/ Partnership/ Company**

| S.No | Eligibility Criteria   | Contractor | Doc/copy to be enclosed                               | Page no |
|------|--|------------|---|---------|
| 1    | DD towards Cost of Application Rs.2000/- (Rupees Two Thousand only) favoring INDIAN OVERSEAS BANK, payable at Chennai is submitted?      | Yes/No     | DD in original  |         |
| 2    | Whether DD towards EMD Amount of Rs.50,000/-(Rupees Fifty Thousand Only) favoring INDIAN OVERSEAS BANK, payable at Chennai is submitted? | Yes/No     | DD in original  |         |
| 3    | Annexure - I has been submitted as per format given in NIT   | Yes/No     | Annexure – I  |         |
| 4    | Whether the contractor has submitted document relevant to the work experience?   | Yes/No     | Work experience documents                             |         |
| 5    | Whether the contractor is assessed for Income tax?   | Yes/No     | PAN and IT returns for the last 3 FY, GST certificate |         |
| 6    | Whether the contractor has a local office in Chennai registered under Shop and Establishment Act?  | Yes/No     | Registration Certificate                              |         |
| 7    | Whether the contractor is Empanelled by SECI/MNRE for Implementing Roof top Solar PV System under RESCO Model in the state of Tamilnadu? | Yes/No     | Letter of Award                                       |         |
| 8    | Whether the CONTRACTOR is registered for GST?  | Yes/No     | Registration  |         |

|    |  |        |                          |  |
|----|--|--------|--------------------------|--|
|    |  |        | Certificate              |  |
| 9  | Whether the contractor is registered under EPF and Miscellaneous Provisions Act 1952?  | Yes/No | Registration Certificate |  |
| 10 | Copy of the NIT issued by the Bank with each page duly signed and stamped by the competent authority having agreed to terms and conditions for the tender. | Yes/No | Copy of NIT.             |  |

We understand that criteria and documents mentioned above are **MANDATORY** & non submission or non-linking of the document correctly will lead to rejection of the offer.

Yours faithfully,

Authorized Signature with Company Seal

**TECHNICAL BID EVALUATION  
(ON BIDDER LETTERHEAD)**

| Sl.No | Technical Parameters  | Documentary evidence                                   | Para Code | Points (Self Assessed) |
|-------|---|--|-----------|------------------------|
| 1     | Average Turnover for last 3 years (in lakhs)  | Certificate from CA & Copy of Profit & Loss Statements | A         |                        |
| 2     | 1 work of 80% of the / Estimate Plant Size- grid connected system   | Agreements and Work orders                             | B         |                        |
|       | OR) 2 works of 50% of the Estimate Plant Size - grid connected system   | Agreements and Work orders                             | C         |                        |
|       | (OR) 3 works of 40% of the Estimate Plant Size - grid connected system  | Agreements and Work orders                             | D         |                        |
| 3     | Experience of similar RESCO model projects to clients within India with Single plant size of 70 KWP and above– grid connected systems | Agreements and Work orders                             | E         |                        |
| 4     | Experience with banks and Governmental organizations  | Agreements and Work orders                             | F         |                        |
| 5     | Office setup in Chennai for operation and maintenance of the plant  | Registration Certificate                               | G         |                        |
| 6     | Number of business years in solar rooftop business  | Agreements and Work orders                             | H         |                        |
| 7     | Proposed plant capacity at our site as per the survey carried out by the  | Survey Report  | I         |                        |

|   |                        |              |   |  |
|---|------------------------|--------------|---|--|
|   | prospective bidders    |              |   |  |
| 8 | ISO 9001 certification | Certificates | J |  |

**1. Note:** Points to be awarded subject to meeting criteria as mentioned above. For example: **2.5 Points** for Turnover up to 12 lakhs, **5 Points** for Turnover above 12 lakhs & up to 24 lakhs, **7.5 Points** for Turn Over above 24 lakhs & up to 40 lakhs and **10 Points** for Turnover above 40 lakhs. Further, the assessment of “Technical Bid Evaluation” shall be undertaken only in case the bidder is meeting eligibility criteria and statutory requirements as mentioned in the NIT.

2. Further, the assessment of “Technical Bid Evaluation” shall be undertaken only in case the bidder is meeting eligibility criteria and statutory requirements as mentioned in the NIT.

Yours faithfully,

Authorized Signature with Company Seal

**ANNEXURE IV**

**POWER PLANT GENERATION DETAILS**

The Power Producer agrees to guarantee the following Minimum Generation (table) per annum per kWp for the total system of \_\_\_\_\_ kWp

| Minimum Guaranteed Generation per kWp per year                         |                              |             |                              |
|--|------------------------------|-------------|------------------------------|
| End of FY  | Minimum Generation (kWh/kWp) | End of year | Minimum Generation (kWh/kWp) |
| 2021-2022  | 1400                         | 2034-2035   | 1229                         |
| 2022-2023  | 1386                         | 2035-2036   | 1216                         |
| 2023-2024  | 1372                         | 2036-2037   | 1204                         |
| 2024-2025  | 1358                         | 2037-2038   | 1192                         |
| 2025-2026  | 1345                         | 2038-2039   | 1180                         |
| 2026-2027  | 1331                         | 2039-2040   | 1168                         |
| 2027-2028  | 1318                         | 2040-2041   | 1157                         |
| 2028-2029  | 1305                         | 2041-2042   | 1145                         |
| 2029-2030  | 1292                         | 2042-2043   | 1134                         |
| 2030-2031  | 1279                         | 2043-2044   | 1122                         |
| 2031-2032  | 1266                         | 2044-2045   | 1111                         |
| 2032-2033  | 1253                         | 2045-2046   | 1100                         |
| 2033-2034  | 1241                         |             |                              |
| Note: The first year generation starts from April 2021 will March 2022 |                              |             |                              |



**ANNEXURE V**

| <b>Purchase Price for _____ kWp system @ Rs _____/- Watt</b> |                           |
|--|---------------------------|
| <b>Year</b>  | <b>Salvage Value (Rs)</b> |
| 1 <sup>st</sup> year   |                           |
| 2 <sup>nd</sup> year   |                           |
| 3 <sup>rd</sup> year   |                           |
| 4 <sup>th</sup> year   |                           |
| 5 <sup>th</sup> year   |                           |
| 6 <sup>th</sup> year   |                           |
| 7 <sup>th</sup> year   |                           |
| 8 <sup>th</sup> year   |                           |
| 9 <sup>th</sup> year   |                           |
| 10 <sup>th</sup> year  |                           |
| 11 <sup>th</sup> year  |                           |
| 12 <sup>th</sup> year  |                           |
| 13 <sup>th</sup> year  |                           |
| 14 <sup>th</sup> year  |                           |
| 15 <sup>th</sup> year  |                           |
| 16 <sup>th</sup> year  |                           |
| 17 <sup>th</sup> year  |                           |
| 18 <sup>th</sup> year  |                           |
| 19 <sup>th</sup> year  |                           |
| 20 <sup>th</sup> year  |                           |
| 21 <sup>st</sup> year  |                           |
| 22 <sup>nd</sup> year  |                           |
| 23 <sup>rd</sup> year  |                           |
| 24 <sup>th</sup> year  |                           |
| 25 <sup>th</sup> year  |                           |

**PRICE BID FORMAT**

**To  
General Manager  
General Administration Department  
Indian Overseas Bank  
Central Office, 763 Anna Salai  
Annexe Building, Ground Floor  
Chennai - 600 002**

Dear Sir,

**DESIGN, MANUFACTURE, SUPPLY, ERECTION, TESTING AND COMMISSIONING  
INCLUDING WARRANTY, OPERATION & MAINTENANCE OF GRID CONNECTED  
ROOFTOP SOLAR PHOTOVOLTAIC PLANT UNDER RESCO MODEL FOR A PERIOD OF 25  
YEARS FOR INDIAN OVERSEAS BANK CENTRAL OFFICE CHENNAI**

With reference to the above mentioned tender with tender number \_\_\_\_\_ we hereby provide our commercial offer for supplying solar power per kWh without any escalation for 25 years.

| S.No | Tariff/kWh (in INR)<br>(three decimal places) | No of years of the PPA | Escalation % every<br>year |
|------|---|------------------------|----------------------------|
| 1    |   | 25 Years               | 0                          |

We have provided the above pricing to the best of our knowledge and will execute the project agreeing to the terms and conditions mentioned in the Power Purchase Agreement.

Yours faithfully,

Date:

Authorized Signature with Company Seal

**POWER PURCHASE AGREEMENT (PPA) BETWEEN  
CONTRACTOR AND GOVT.ORGANIZATION, PSU AND OFFICES  
FOR  
DESIGN, MANUFACTURE, SUPPLY, ERECTION, TESTING AND  
COMMISSIONING INCLUDING WARRANTY, OPERATION &  
MAINTENANCE OF GRID CONNECTED ROOF-TOP SOLAR  
PHOTOVOLTAIC AND SMALL SOLAR POWER PLANTS IN RESCO  
MODEL**

This Power Purchase Agreement (PPA) is executed on \_\_ (date), \_\_ (month), (year) at < location> between \_\_\_\_\_ Authorized representative of Purchaser < i.e. Government Organization, PSU and Offices > (detail address), (hereinafter referred to as "Purchaser") AND M/s (Name of Power Producer) (CIN No.

\_\_\_\_\_), a company incorporated under the Companies Act, 1956/2013 having its registered office at \_\_\_\_\_ (detail address) (hereinafter referred to as "Power Producer" which expression shall, unless repugnant to the meaning or context hereof, be deemed to include its successors and assigns). The Purchaser and Power Producer are each individually referred to as a "Party" and collectively as the "Parties".

WHEREAS:

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

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

## **1. Definitions and Interpretation**

### **1.1 Definitions**

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

- (a) "Actual Monthly Production" means the amount of energy recorded by the Main Metering System during each calendar month of the Term, pursuant to Section 5.2;
- (b) "Affiliate" means with respect to any specified Person, any other Person, directly or indirectly controlling, controlled by or under common control with such specified Person)
- (c) "Agreement" means this Power Purchase Agreement executed hereof, including the schedules, amendments, modifications and supplements made in writing by the Parties from time to time.
- (d) "Applicable Law" means
- (e) laws, with respect to any Person, any constitutional provision, law, statute, rule, regulation, ordinance, treaty, order, decree, judgment, decision, certificate, holding, injunction, registration, license, franchise, permit, authorization, guideline, Governmental Approval, consent or requirement or any Governmental Authority in India having jurisdiction over such Person or its property, enforceable by law or in equity, including the interpretation and administration thereof 1:4 such Governmental Authority.

- (f) "Assignment" has the meaning set forth in Section 14.1:
- (g) "Business Day" means any day other than Sunday or any other day on which banks in < name of the State> are required or authorized by Applicable Law to be closed for business:
- (h) "Commercial Operation Date" has the meaning set forth in Section 4.3(b)
- (i) "Consents, Clearances and Permits" shall mean all authorization, licenses, approvals, registrations, permits, waivers, privileges, acknowledgements, agreements or concessions required to be obtained From or provided by any concerned authority for the purpose of setting up of the generation facilities and / or supply of power:
- (j) "Deemed Generation" has the meaning set forth in Section 5.3 (c)
- (k) "Delivery Point" shall be the single point, at a location mutually agreed by the Parties, in line with applicable regulation/ rules where Solar Power is delivered by the Power Producer from the System to the Purchaser.
- (l) "Dispute" has the meaning set forth in Section 17.7 (b);
- (m) "Disruption Period" has the meaning set forth in Section 5.3 (c)
- (n) "Distribution Utility" means the local electric distribution owner and operator providing electric distribution and interconnection services to Purchaser at the Premises;
- (o) "Due Date" has the meaning set forth in Section 7.4;

- (p) "Effective Date" has the meaning set forth in Section 2;
- (q) "Estimated Remaining Payments" means as of any date, the estimated remaining Solar Power Payments to be made through the end of the applicable Term, as reasonably determined by the Power Producer in accordance with Section 7.1;
- (r) "Expiration Date" means the date on which the Agreement terminates by reason of expiration of the Term.
- (s) "Force Majeure Event" has the meaning set forth in Section 11.1
- (t) "Governmental Approval" means any approval, consent, franchise, permit, certificate, resolution, concession, license or authorization issued by or on behalf of any applicable Governmental Authority for the purpose of setting up of the Project and / or for sale and purchase of Solar Power of the Project pursuant to the Agreement.
- (u) "Governmental Authority" means any central, state, regional, district, town, city or municipal government, whether domestic or foreign, or any department, agency, bureau, or other administrative, regulatory or judicial body of any such government.
- (v) "Indemnified Persons" means the Purchaser Indemnified Parties or the Power Producer-indemnified Parties, as the context requires.
- (w) "Insolvency Event" means with respect to a Party, that either
  - i. Such party has (A) applied for or consented to the appointment of or the taking of possession by a receiver, custodian, trustee, administrator, liquidator on the likes of itself or of all or a substantial part of its assets or business; (B) been unable to pay its debts as such-debts become due; (C) made a general

assignment for the benefit of its creditors, (D) commenced a voluntary proceeding under any insolvency or bankruptcy law; (E) filed a petition seeking to take advantage of any other law relating to the bankruptcy, insolvency, reorganization, winding up or composition or readjustment of debts; or (F) taken any corporate or other action for the purpose of effecting any of the foregoing; or

- ii. It is clarified that a dissolution or liquidation will not be an Insolvency Event if such dissolution or liquidation is for the purpose of a merger, consolidation or reorganization, and the resulting company retains credit worthiness similar to the dissolved or liquidated entity and expressly assumes all obligations of the dissolved and liquidated entity under this Agreement and is in a position to the perform them.
- 
- (x) "Installation Work" means the construction and installation of the System and the Start-up, testing and acceptance (but not the operation and maintenance) thereof; all performed by or for the Power Producer at the Premises.
  - (y) "Invoice Date" has the meaning set forth in Section 7.2.
  - (z) "Losses" means all losses, liabilities, claims, demands, suits, causes of action, judgments, awards, damages, cleanup and remedial obligations, interest, fines, fees, penalties, costs and expenses (including all attorneys' fees and other costs and expenses incurred in defending any such claims or other matters or in asserting or enforcing and indemnity' obligation)
  - (aa) "Main Metering System" means all meter(s) and metering devices owned by the Power Producer and installed at the Delivery point for measuring and recorded the delivery and receipt of energy.
  - (aa) "Metering Date" means the first Business day of each calendar month



subsequent to the month in which the Solar Power is generated by the Power Producer. The billable units shall be equal to the difference between the meter reading on the Metering Date and the meter reading on the previous month's Metering Date.

- (bb) "Party" or Parties" has the meaning set forth in the preamble to this Agreement.
- (cc) "Performance Ratio" (PR) means the ratio of plant output versus installed plant capacity at any instance with respect to the radiation measured.  $PR = (\text{Measured output in kW} / \text{Installed plant capacity in kW} * 1000 \text{ W/m}^2 / \text{Measured radiation intensity in W/m}^2)$
- (dd) "Person" means an individual, partnership, corporation, Limited Liability Company, business trust, Joint Stock Company, trust, unincorporated association, joint venture, firm, or other entity, or a Governmental Authority.
- (ee) "Power Producer Default" has the meaning set forth in Section 12.1 (a).
- (ff) "Power Producer Indemnified" has the meaning set forth in Section 16.2.
- (gg) "Premises" means the premises described in Schedule 1 to this Agreement. For the avoidance of doubt, the Premises include, the entirety of any and underlying real property located at the address described in Schedule 1 to this Agreement.
- (hh) "Purchase Date" means the date on which title to the System transfers to the Purchaser pursuant to the Purchaser exercising its purchase option under Section 3.2.
- (ii) "Purchase Price" means the fee payable by Power Purchaser to the Power Producer under the circumstances described in Section 3.2

- (jj) "Purchaser Default" has the meaning set forth in Section 12.2 (a).
- (kk) "Purchaser Indemnified Parties" has the meaning set forth in Section 16.1
- (ll) "Representative" has the meaning set forth in Section 15.1.
- (mm) "Scheduled Complete Date" has the meaning set forth in Section 4.1(g)
- (nn) "Selectee" means, a new company (i) proposed by the Lenders read with Schedule III hereof and approved by the Purchaser (ii) or proposed by the Purchaser in accordance with Schedule III hereof and approved by the Lenders, for substituting the Power Producer for the residual period of the Agreement by amendment of the Agreement or by execution of a fresh power purchase agreement in accordance with the terms and conditions contained in the said Schedule.
- (oo) "Solar Power" means the supply of electrical energy output from the System.
- (pp) "Solar Power Payment" has the meaning set forth in Section 7.1.
- (qq) "System" includes the integrated assembly of photovoltaic panels, mounting, assemblies, inverters, converters, metering, lighting fixtures, transformers, ballasts, disconnects, combiners, switches, wiring devices and wiring, and all other material comprising the Installation Work.
- (rr) "System Operations" means the Power Producer's operation; maintenance and repair of the System performed in accordance the requirement herein.
- (ss) "Tariff" means the price per kWh set forth in Schedule II hereto.
- (tt) "Term" has the meaning set forth in Section 3.1:

## **1.2 Interpretation**

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

## **2. Effective Date**

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

## **3. Terms and Termination**

### **3.1 Term**

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

### **3.2 Purchase Option/ Purchase Obligation**

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

### **3.3 Conditions of the Agreement prior to installation**

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

- (a) There has been a, material adverse change in the rights of Purchaser to

occupy the Premises or the Power Producer to install the System at the Premises.

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

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

##### **4.1 Installation Work**

- a) The Power Producer will cause the Project to be designed, manufactured, supplied, engineered, erected, tested and commissioned, operated & maintained and constructed substantially in accordance with RFS No \_\_\_\_\_ dated:\_\_\_\_\_and the sanction letter issued by <NAME OF EXPERT PSU>. The Power Producer shall provide to the Purchaser a bill of materials listing the major equipment constituting the System. Such bill of materials shall be provided within 30 days of the Commercial Operation Date.
- b) The Power Producer shall have access as reasonably permitted by the Purchaser to perform the Installation Work at the Premises in a manner that minimizes inconvenience to and interference with the use of the Premises to the extent commercially practical.
- c) It is agreed between the Parties that the Power Producer shall commission the System with a capacity of\_\_\_ kWp. Power Producer may construct a System of smaller size if it receives only part approval of government subsidies or for any other material commercial reason, as mutually agreed between the Parties  
in writing, In the event a System of smaller capacity is eventually agreed to be

installed, the clauses pertaining to Purchase Price as set out under this Agreement shall be adjusted proportionately as per mutual agreement between the Parties in writing.

- d) The Power Producer shall provide and lay the dedicated electrical cables for transmission of Solar Power from the System up to the Delivery Point. Transmission or distribution of Solar Power beyond this point will be the responsibility of the Purchaser. The Delivery Point shall be where the Main Metering System is located.
- e) Unless otherwise agreed between the Parties, the Power Producer shall not do (a) chipping of rooftop; or (b) water proofing of roof to be disturbed ;(c) Carry out any other modification of the Premises without the written consent of the Purchaser.
- f) The Power Producer shall maintain general cleanliness of area around the Project during construction and operation period of the Project. In case any damages is caused to the equipment / facilities owned by the Purchaser due to the Power Producer, the same shall be made good rectified by the Power Producer at their cost.
- g) The Power Producer shall, within fifteen (15) working days of the Effective Date, submit to the Purchaser shop drawings of the Project for approval ("Shop Drawings"). The drawings will have to be approved from the Power Purchaser within 3 working days from the submission of the drawings. If the Purchaser has any objection/recommendation in the Shop Drawings, he shall communicate the same to Power Producer within a period of ten (10) working days of the date of submission of the Shop Drawings. Any delay will extend the Effective Date and such approval shall not be unreasonably withheld. Subject to any punch-list

items which shall be agreed by the Purchaser as not being material to completion of the Project, the Power Producer agrees that it shall achieve the completion of the Project/ Commissioning of the Project within the scheduled completion period from the Effective Date ("Scheduled Completion Date"). Purchaser shall ensure that sufficient load is available at the Delivery Point to ensure synchronization and drawl of power from System.

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

#### **4.2 Approvals and Permits**

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

### **4.3 System Acceptance Testing**

- (a) The Power Producer shall give 10 days advance notice to conduct the testing of the Project and shall conduct testing of the Project in the presence of Purchaser's designated representative.
- (b) If the results of such testing indicate that the System is capable of generating electric energy (at full rated KWp) for 5 continuous hours using such instruments and meters as have been installed for such purposes, then the Power Producer shall send' a Written notice to Purchaser to that effect, and the date of successful conducting such tests and injection of. Power at Delivery Point shall be the **"Commercial Operation Date"**

## **5 System Operations**

### **5.1 The Power Producer as Owner and Operator**

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

Power Producer shall not be responsible for any work done by others on any part of the System/Project authorized by the Purchaser and not authorized in advance by the Power Producer in writing. Power Producer shall not be responsible for any loss, damage, cost or expense arising out of or resulting from improper operation or 'maintenance of the System by Purchaser or anyone instructed to do such work by Purchaser. In the event of a problem with the System, as a result of the Purchaser

actions for which Power Producer is not responsible as provided in this Agreement,



Purchaser may choose and pay Power Producer for diagnosing and correcting the problem at Power Producer or Power Producer's contractors standard rates.

## **5.2 Metering**

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

to the Purchaser at the Delivery Point.

- (g) Power Producer shall be responsible for transformer etc. "if required" & metering as per respective clause of RFS (reference to be quoted).

### 5.3 System Disruptions

- (a) Availability of premises: Purchaser will provide full access of the site to Power Producer for installation, operation and maintenance of solar power plant during the period of Agreement. Power Purchaser will also provide restricted access of the Premises to Power Producer for operation and maintenance of solar power plant.
- (b) Purchaser will not provide/construct any structure within its Premises or around its premises which shades the solar panels effecting the generation of the energy during the Agreement period.
- (c) Roof Repair and other System Disruptions In the event that (a) the Purchaser repairs the Premises' roof for any reason not directly related to damage, if any, caused by the System, and such repair required the partial or complete temporary disassembly or movement of the System, or (b) any act or omission of Purchaser or Purchaser's employees, Affiliates, agents or subcontractors (collectively, a "**Purchaser Act**" ) result in a disruption or outage in System production, and such events attributable to Purchaser (except Force majeure, then, in either case) Purchaser shall (i) pay the Power Producer for all work required by the Power Producer to disassemble or move the System and re-assemble the system after completion of the repair work and (ii) continue to make all payments for the Solar Power during such period of System disruption

(the "**Disruption Period**"). For the purpose of calculating Solar Power Payments and lost revenue for such Disruption Period, Solar Power shall be deemed to have been produced at the average rate. Over the preceding 12 (Twelve) months, or, if the disruption occurs within the first 12 months of operation, the average over such period of operation (deemed generation). Power producer shall inform about the 'disruption or outage in System production, for reasons attributable to purchaser in 'writing with date and time of such occurrences, and Purchaser's liability shall start from the date of intimation for above of disruption or outage in system production, on account of Purchaser.

## **6 Delivery of Solar Power**

### **6.1 Purchaser Requirement:**

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

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

failing which the Power Producer shall claim provisional deemed generation till the issue is finally settled.

## **6.2 Estimated Annual Production**

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

## **6.3 Suspension of Delivery**

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

## **7 Tariff and Payments**

**7.1** Consideration Purchaser shall pay to the Power Producer a monthly payment (the "**Solar Power Payment**") for the Solar Power generated by the System as per the Metering clause 5.2 (b) above during each calendar month of the Term equal to the actual Monthly Production as recorded in Joint Meter Reading Report for the System for the relevant month multiplied by the Tariff irrespective of (i) whether any or all units of Solar Power has been drawn, consumed or utilized by Purchaser and / or (ii) whether any Solar Power has been injected, whether inadvertently or otherwise, into the grid of the Distribution Utility. The Power Producer will bill the Purchaser for each KWh

metered as above at the Delivery Point, at the Tariff prevailing at that point of time. As detailed in Schedule - II, the Tariff will be equal to Rs. \_\_\_/kWh levelized tariff as per <NAME OF EXPERT PSU> allocations. The 'year' Considered shall be the financial year which April 1st to 31st March of every year as per <NAME OF EXPERT PSU> Schedule II provides a detailed year on year tariff schedule.

## **7.2 Invoice**

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

**7.3** The invoice to the purchaser shall include.

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

## **7.4 Time of payment**

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

## **7.5 Method of Payment**

Purchaser shall make all payments under the Agreement by cheque / demand draft/ electronic funds transfer only in immediately available funds to the' account designated by the Power Producer from time to time.. All payments made hereunder shall be non- refundable, subject to the applicable tax deduction at source, and be made free and clear of any other tax, levy, assessment; duties or other charges and not subject to

reduction, set-off, or adjustment of any kind. Further, if any taxes and duties are leviable currently or in future, such taxes and duties shall be paid by the Purchaser over and above the solar electricity tariff mentioned in this agreement. Such taxes and duties could include, but not restricted to Electricity Duty, Tax on Sale of Electricity (TOSE). If the Purchaser deducts any tax at source, the Purchaser will issue a tax credit certificates as per law.

#### **7.6 Late Payment Surcharge/ Early Payment Discount**

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

#### **7.7 Disputed Payments**

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

## **7.8 Change in Law:**

(a) For the Purpose of this section 7.8, the term "Change in Law" shall mean the occurrence of any of the following events after the Effective date, resulting into any additional recurring / non-recurring expenditure by the Power Producer or any income to the Power Producer. The enactment, coming into effect, adoption, promulgation, amendment, modification or repeal (without re-enactment or consolidation) in India, of any Law, including rules and regulations framed pursuant to such Law: or

- (i) A change in the interpretation of any Law by any Governmental Authority having the legal power to interpret or apply such Law, or any competent court; or
- (ii) The imposition of a requirement, for obtaining any Government Approvals which was not required earlier; or
- (iii) a change in the terms and conditions prescribed for obtaining any Government Approvals or the inclusion of any new terms or conditions for Obtaining such Government Approvals; or
- (iv) any introduction of any tax made applicable for supply of power by the Power Producer as per the terms of this Agreement. Any benefit due to change in tax on the sale of solar energy shall be passed on to Purchaser.
- (v) Any benefit arising due to change in above para (i) to (iv) shall be passed on to the Purchaser. But not include any change in any withholding tax on income or dividends distributed to the shareholders of the Power Producer.

(b) Application and Principles for computing impact of Change in Law:

While determining the consequence of Change in Law under this Article 7.8, the Parties shall have due regard to the Principle that the purpose of compensating the Party affected by such change in Law, is to restore through monthly bill payment, to the extent contemplated in this Article 7.8, the affected Party to the same economic position as if such Change in Law has not occurred and such impact shall be mutually decided in writing.

(c) Solar Power Payment Adjustment Payment on account of Change in Law Subject to provisions mentioned above, the adjustment in Solar Power Payment shall be effective from:

- (i) The date of adoption, promulgation, amendment, re-enactment or repeal of the Law or Change in Law; or
- (ii) The date of order/ judgment of the competent court; of tribunal or Governmental Authority, if the Change in Law is on account of a change in interpretation of Law.

## **8 General Covenants**

### **8.1 Power Producer's Covenants**

The Power Producer covenants and agrees to the following:

- (a) **Notice of Damage or Emergency:** The Power Producer shall (a) promptly notify Purchaser if it becomes aware of any damage to or loss of the use of the System or that could reasonably be expected to adversely affect the System, (b) immediately notify Purchaser once it becomes aware of any event or circumstance that poses an imminent risk to human health, the environment, the System or the Premises.
- (b) **System Condition:** The Power Producer shall take all actions reasonably



necessary to ensure that the System is capable of providing Solar Power at a commercially reasonable continuous rate: Subject to there being no Purchaser Default, the Power Producer 'shall provide 24 x 7 offsite / offsite monitoring and maintenance of the System throughout the period of this agreement at no additional cost.

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

## 8.2 Power Producer's Representatives

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

Name: \_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

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

Name: \_\_\_\_\_

Telephone: \_\_\_\_\_

Email: \_\_\_\_\_

## 8.3 Purchaser's Covenants

Purchaser covenants and agrees to the following:

- (a) **Notice of Damage or Emergency:** Purchaser shall (a) promptly notify the Power Producer if it becomes aware of any damage to or loss of the use of the System or that could reasonably be expected to adversely affect the System; (b)

immediately notify the- Power Producer once it becomes aware of any event or circumstance that poses an imminent risk to human health, the environment, the System or the Premises.

- (b) **Liens:** Purchaser shall not directly or indirectly cause, create, incur, assume or suffer to exist any Liens on or with respect to the System or any interest therein. If Purchaser breaches its obligations under this Clause, it shall immediately notify the Power Producer in writing, and shall promptly cause such Lien to be discharged and released of record without any cost to the Power Producer, and shall indemnify the Power Producer against all costs and expenses (including reasonable attorneys fees and court costs) incurred in discharging and releasing such Lien.
- (c) **Consents and Approvals:** Purchaser shall ensure that any authorizations required of Purchaser under this Agreement, including those required for installation of System at the Premises and to drawl consume Solar Power are provided in a timely manner. The Purchaser shall cooperate with the Power Producer to obtain such approvals, permits, rebates or other 'financial incentives.
- (d) **Access to Premises Grant of License:** Purchaser hereby grants to the Power Producer a license co-terminus with the Term, containing all the rights necessary for the Power Producer to use portions of the Premises for the installation, operation and maintenance of the System pursuant to the terms of this Agreement, including ingress and egress rights to the Premises for the Power Producer and its employees and authorized representatives and access to electrical panels and conduits to interconnect or disconnect the System with the Premises electrical wiring with the consent and approval of the Purchaser's authorized representative identified by the Purchaser. Photo IDs will be provided by the Power Producer. Power Purchaser will assist in availing permissions to the site.

- (e) **Security:** The building which has enhanced security of Solar Power System Purchaser will keep the premises locked. In spite of these measures, if any damages to the System takes place due to theft or vandalism then the same shall be claimed or reimbursed through insurances by Power producer. In case of theft and vandalism acts, the Purchaser will assist the Power Producer in procedures of filing FIRs, insurance claims and any other related activities. Whenever, the damages to the System occurs (except due to negligence of Power Producer) then the same shall be jointly assessed by both the Parties and a severity level will be decided, which will further decide the duration offered to the Power Producer to correct the damage, and the Power Producer shall be paid the amount on the basis of 'Deemed generation' for such a period. Power Producer shall be entitled to any insurance proceeds received for damages in this clause. Purchaser will not conduct activities on, in or about the Premises that have a reasonable likelihood of causing damage, impairment or otherwise adversely affecting the System. If System is damaged due to any such activity or through any other agency contracted by the Purchaser directly or indirectly, such damage will be borne by the Purchaser.
- (f) Regardless of whether Purchaser is owner of the Premises or leases the Premises from a landlord, Purchaser hereby covenants that (a) the Power Producer shall have access to the Premises and System during the Term of this Agreement, and  
(b) neither Purchaser nor Purchaser's landlord will interfere or handle any of the Power Producer's equipment or the System without written authorization from the Power Producer.
- (g) **Temporary storage space during installation :** Purchaser shall provide sufficient space at the Premises for the temporary storage and staging of tools, materials and equipment and for the parking of construction crew vehicles and temporary Construction, trailers and facilities reasonably necessary during the Installation Work, System Operations and access for rigging and material handling.

- (h) Sunlight Easements: Purchaser will take all reasonable actions as necessary to prevent other building, structures or flora from overshadowing or otherwise blocking access of 'sunlight to the System, including but not limited to-such actions as may be reasonably necessary to obtain a solar access easement for such purpose.
- (i) **Evacuation** — Purchaser shall off take 100% of the Solar Power generated from the Delivery Point, and pay all invoices raised by the Power Producer under this Agreement by the 'Due Date and pay interest on delayed payments, if any, as per this Agreement.
- (j) **Water** - Power Purchaser at zero cost shall arrange Raw Water at a given point as per the requirements of the Power Producer, for periodic cleaning of the solar panels ( liters - twice a month).
- (k) **Auxiliary Power** — The Purchaser shall provide sufficient auxiliary power to the Power Producer for the maintenance and operation of its system, if available and possible, at the rate Purchaser is paying to the DISCOM.
- (l) **Relocation** - If one or more of the Solar Power Plant panels needs to be temporarily moved or its generation suspended, for any other reason requested by the Power Purchaser, the Power Purchaser will be responsible for pre- agreed costs on actuals only, arising from moving, disassembling and re- installing/ commissioning the Solar Power Plant, as agreed between the Parties. The Power Producer will be responsible for providing detailed documentary proof of the actual pre-agreed costs borne for such relocation/disassembling. Within 30 days of these satisfactory documents being provided by the Power Producer, the Purchaser shall reimburse these pre-agreed expenses in full, and delayed payment beyond the date mentioned above will attract Late Payment charges as described in Clause 7.6. During any interruption in generation during such relocation, the Purchaser will

continue to be billed as per Deemed Generation, during the period of interruption, for the affected Solar Power Plant(s).

## **9 Representations & Warranties**

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

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

its Affiliates is a party or by which it or any of its Affiliates or its or their property is bound, (ii) its organizational documents, or (iii) any Applicable Laws.

## **10 Taxes and Governmental Fees**

### **10.1 Purchaser obligations**

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

### **10.2 Power Producer Obligations**

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

## **11 Force Majeure**

### **11.1 Definition**

**"Force Majeure Event"** means any act or event that prevents the affected Party from performing its obligation in accordance with the Agreement, if such act or event is beyond the reasonable control of the affected Party and such Party had been unable to overcome such act or event with the exercise of due diligence (including the

expenditure of reasonable sums). Subject to the foregoing conditions, "Force Majeure Event" shall include without limitation the following acts or events: (i) natural phenomena, such as storms, hurricanes, floods, lightning, volcanic eruptions and earthquakes; (ii) explosions or fires arising from lighting or other causes unrelated to the acts or omissions of the Party seeking to be excused from performance; (iii) acts of war or public disorders, civil disturbances, riots, insurrection, sabotage, epidemic, terrorist acts, or rebellion. A Force Majeure Event shall not be based on the economic hardship of either Party. In case of any damage because of force majeure event, the System shall be repaired / commissioned at its own cost by the Power Producer.

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

### **11.3 Termination as a Consequence of Force Majeure Event**

If a Force Majeure Event shall have occurred that has affected the Power Producer's performance of its obligations hereunder and that has continued for a continuous period of one hundred eighty (180) days, then Purchaser shall be entitled to terminate the Agreement and if such Force Majeure Event continues for further ninety (90) days period, the Agreement shall automatically terminate. Upon such termination for a

Force Majeure Event, neither Party shall have any liability to the other (other than any



such liabilities that have accrued prior to such termination).

## **12 Default**

### **12.1 Power Producer Defaults and Power Purchaser Remedies**

- (a) Power Producer Defaults: The following events shall be defaults with respect to the Power Producer (each, a "**Power Producer Default**").
  - (i) An Insolvency Event shall have occurred with respect to the Power Producer;
  - (ii) Failure to achieve Commissioning of the System within the period as per RFS document; and
  - (iii) The Power Producer breaches any material term of the Agreement and
    - (A) if such breach can be cured within sixty (60) days after Purchaser's written notice of such breach and the Power Producer fails to cure the same; or (B) the Power Producer fails to commence and pursue a cure within such sixty (60) days period if a longer cure period is needed.
- (b) **Purchaser's Remedies:**
  - (i) If a Power Producer Default described in Section 12.1 (a) has occurred and is continuing, in addition to other remedies expressly provided herein, and subject to Section 13, Purchaser shall have a right to deliver a notice of its intention to terminate this Agreement ("Purchaser Preliminary Default Notice"), which shall specify in reasonable detail,  
the circumstances giving rise to the issue of such notice.

- (ii) Upon the occurrence and continuation of Power Producer Default and the failure by the Power Producer to cure such default within the applicable cure period specified in this Article; the Purchaser shall be at liberty avail the services of any other firm / successful bidder.
- (iii) Following the issue of Purchaser Preliminary Default Notice, it shall be the responsibility of the Parties to discuss as to what steps shall be taken with a view to mitigate the consequences of the relevant Power Producer's Default having regard to all the circumstances: If the Power Producer Default is not cured within a period of sixty (60) days of the issue of Purchaser Preliminary Default Notice or any other such period mutually agreed upon by the Parties, the Purchaser shall have the right to terminate this Agreement by issuing a Purchaser Termination Notice.
- (iv) Upon the delivery of the Purchaser Termination Notice, this Agreement shall stand terminated. The Power Producer shall have the liability to- make payment within sixty (60) days from the date of Purchaser Termination Notice towards compensation to Purchaser equivalent to the difference between the Tariff and the grid rate notified by the relevant Government Authority for that point in time multiplied by the estimated Solar Power generated for a period of two years following the termination, considered on normative capacity utilization factor.
- (v) if the Power Producer fails to remove the System from the Premises within one month from the date of termination, the Purchaser shall be entitled to dispose of the System in any manner it deems fit.
- (vi) The Power Purchaser may exercise any other remedy it may have at law or equity or under the Agreement.

## **12.2 Power Purchaser Defaults and Power Producer's Remedies**

- (a) Purchaser Default : The following events shall be defaults with respect

to Purchaser (each, a "**Purchaser Default**")

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

## **13 Limitations of Liability**

**13.1** Except as expressly provided herein, neither Party shall be liable to the other

Party or its Indemnified Persons for any special, punitive, exemplary, indirect, or consequential damages, losses or damages for lost revenue or lost profits, whether foreseeable or not, arising out of, or in connection with the Agreement.

- 13.2** Subject to the provisions of the Agreement, the Power Producer shall be solely responsible for the manner in which its obligations under this Agreement are to be performed. All employees and representatives of the Power Producer, or contractors engaged by the Power producer in connection with Power Producer and shall not be deemed to be employees, representatives, contractors of the Purchaser Nothing contained in the Agreement or in any agreement or contract executed by the Power Producer shall be construed to create any contractual relationship between any such employees, representatives or contractors and the Purchaser.
- 13.3** Notwithstanding any liability. or obligation that may arise under this Agreement, any loss, damage, liability, payment, obligation or expense which is insured or not or for which the Purchaser can claim compensation under any insurance policy, shall not be charged to or payable by the Purchaser

## **14 Assignment & Novation**

- 14.1 Assignment:** Notwithstanding anything contained herein, the Power Producer has the right to assign all or any of its rights under this Agreement (including rights over any assets hereunder), to any third party including, though not restricted to any lender, equipment lessor or other party("Assignment"), with the consent of the Power Purchaser. The Power Purchaser shall not unreasonably withhold such consent. In the event of such assignment, the Purchaser will be able to hold the Power Producer as well as the party to whom the benefits under this contract are assigned, to be jointly and severally responsible for performing the obligations under this contract. Further, in the event of assignment, the Purchaser agrees to make the payments due to the

Power Producer under this agreement, directly to the assignee, upon receipt of such notice by the Power Producer. If the Power Producer were to sell the Solar Power Plant, then the new buyer(s) would need to abide by this Agreement. Further, the Power Producer reserves the right to assign whole or part of the assets to lenders/ leasing companies. Purchaser may assign its rights under this Agreement, without the prior consent of Power Producer, to an Affiliate or any successor in interest to Purchaser, whether by way of merger, reorganization or sale of assets (including any sale of a line of business). This Agreement shall insure to the benefit of and be binding upon Purchaser and its successors or assigns. However, any such actions as intended by the Power Producer under Article 14.1 and Article 14.2 shall be binding on Power Purchaser ,if there are zero material inconsistencies present in the contract provisions during the time of assignment/novation, else, it shall be construed as default in contract and appropriate actions shall be taken as deemed fit.

**14.2 Novation:** The Parties agree and acknowledge that the Power Producer may intend to novate the Agreement to a party, and has the right to transfer any or all of its rights and obligations under this Agreement to a party or any other third party (“New Party”), with the consent of the Power Purchaser. The Power Purchaser shall not unreasonably withhold such consent. Upon Novation, the New Party shall automatically and without any further action be entitled to all the same rights and assume the same obligations, under this Agreement, as if it were originally a party to this Agreement. Further, the Purchaser hereby agrees and undertakes that, promptly upon receiving a request from the Power Producer, the Purchaser shall execute such further writings, deeds and/or agreements and take all such further actions as may be necessary for effecting or implementing the transfer of any or all of the Power Producer’s rights and/or obligations under this Agreement to the New Party. If the parties agree to do Novation then separate Novation agreement shall be executed.

### **14.3 Notices**

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

Power Producer's address and contact details:

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Purchasers address and contact details:

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### **14.4 Notice**

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

## **15. Confidentiality**

### **15.1 Confidentiality obligation**

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

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

## **15.2 Permitted Disclosures**

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

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



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

## **16 Indemnity**

### **16.1 Power Producer's Indemnity**

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

### **16.2 Purchaser's Indemnity**

Subject to Section 13, Purchaser agrees that it shall indemnify, defend and hold harmless the Power Producer, its permitted successors and assigns and their respective directors, officers, employees, contractors, sub-contractors, and agents (collectively, the "Power Producer indemnified Parties") from and against any and all Losses incurred by the Power Producer Indemnified Parties to the extent arising from or out  
of any claim for or arising out of any injury to or death or any Person or loss or cl6mage

to property of any Person to the extent arising out of Purchaser's negligence or willful misconduct. Purchaser shall not, however, be required to reimburse or indemnify any Power Producer Indemnified Party for any Loss to the extent such Loss is due to the negligence or willful misconduct of any Power Producer Indemnified Party.

## **17. Miscellaneous**

### **17.1 Amendments**

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

### **17.2 Goodwill and Publicity**

Neither Party shall use any name, trade name, service mark or trademark of the other Party in any promotional or advertising material without the prior written consent of such other Party. The Parties shall coordinate and cooperate with each other when making public announcements related to the execution and existence of this Agreement, and each Party shall have the right to promptly review, comment upon and approve any publicity materials, press releases and other public statements by the other Party that refer to, or that describe any aspect of, this Agreement; provided that no such publicity releases or other public statements (except for filings or other statements or releases as may be required by applicable law) shall be made by either Party without the prior written consent of the other Party. Without limiting the generality of the foregoing and whether or not the consent of the other Party is required or obtained, all public statements must accurately reflect the rights and obligations of the Parties under this Agreement.

### **17.3 Industry Standards**

Except as otherwise set forth herein, for the purpose of the Agreement, the normal

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

#### **17.4 Cumulative Remedies**

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

#### **17.5 No Waiver**

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

#### **17.6 Survival**

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

#### **17.7 Governing Law & Jurisdiction**

- (a) This Agreement shall be governed by and construed in accordance with the laws of India. The Parties agree that the courts in Delhi shall have jurisdiction over any action or proceeding arising under the Agreement.

(b) In the event of any Dispute, difference of opinion or dispute or claim arising out of or relating to this Agreement or breach, termination or the invalidity thereof, shall firstly be attempted to be resolved by conciliation. Any Dispute that cannot be settled through conciliation procedure shall be referred to arbitration in accordance with the procedure given below. The Parties agree to comply with the awards resulting from arbitration and waive their rights to any form of appeal insofar as such waiver can validly be made. Cost of conciliation shall be equally shared by both the parties.

**(c) Arbitration Procedure:**

**Settlement of Dispute :**

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

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

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

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

**In All Other Cases**

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

The Purchaser and the Power Producer shall each appoint one arbitrator, and these two arbitrators shall jointly appoint a third arbitrator, who shall chair the arbitration panel. If the two arbitrators do not succeed in appointing a third arbitrator within Thirty (30) days after the later of the two arbitrators has been appointed, the third arbitrator shall, at the request of either party, be appointed by the Appointing Authority for third arbitrator which shall be the President, Institution of Engineers.

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

If for any reason an arbitrator is unable to perform its function, the mandate of the Arbitrator shall terminate in accordance with the provisions of applicable laws as mentioned in Clause\_(Governing Law) and a substitute shall be appointed in the same manner as the original arbitrator.

Arbitration proceedings shall be conducted with The Arbitration and Conciliation Act, 1996. The venue or arbitration shall be New Delhi.

The decision of a majority of the arbitrators (or of the third arbitrator chairing the arbitration panel, if there is no such majority) shall be final and binding and shall be enforceable in any court of competent jurisdiction as decree of the court. The parties thereby waive any objections to or claims of immunity from such enforcement.

The arbitrator(s) shall give reasoned award.

Notwithstanding any reference to the arbitration herein, the parties shall continue to perform their respective obligations under the agreement unless they otherwise agree.

Cost of arbitration shall be equally shared between the Power Producer and Purchaser.

## **17.8 Severability**

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

give effect to the underlying intent of the Parties and to the intended economic benefits of the Parties.

### **17.9 Successors and Assigns**

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

### **17.10 Counterparts**

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

### **17.11 Independent Service Provider**

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

### **17.12 Non-Exclusive Agreement**

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

### **17.13 Entire Agreement**

This Agreement constitutes the entire agreement between the Parties hereto with

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

#### **17.14 Insurance**

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

**17.15** Annual accounts reconciliation shall be conducted annually between the Power Producer and Purchaser.

#### **17.16 Entire Agreement**

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



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

| FOR & ON BEHALF OF     |  | FOR & ON BEHALF OF |  |
|------------------------|--|--------------------|--|
| THE PRESIDENT OF INDIA |  | POWER PRODUCER     |  |
| Signature:             |  | Signature:         |  |
| Name:                  |  | Name:              |  |
| Designation:           |  | Designation:       |  |

| WITNESSES |              | WITNESSES |              |
|-----------|--------------|-----------|--------------|
| 1)        | Signature:   | 1)        | Signature:   |
|           | Name:        |           | Name:        |
|           | Designation: |           | Designation: |

|    |              |    |             |
|----|--------------|----|-------------|
| 2) | Signature:   | 2) | Signature   |
|    | Name:        |    | Name        |
|    | Designation: |    | Designation |

## SCHEDULE-I

Description of the Premises:

|                    |                                      |
|--------------------|--------------------------------------|
| Premises Overview  |                                      |
| Segment            |                                      |
| Type of Roof       |                                      |
| Hours of Operation |                                      |
| Security           |                                      |
|                    |                                      |
|                    |                                      |
|                    |                                      |
|                    | <b>Capacity and Area Requirement</b> |
|                    |                                      |
| Capacity           | _____kWp                             |
| Module Area        | _____sqm (PV System)                 |
| Number of Building | _____                                |
| Roofs              |                                      |
| Capacity           | _____                                |
| Distribution       |                                      |
|                    |                                      |

## SCHEDULE II

### FEES

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

Purchase shall pay power producer for solar power at the rate equal to INR\_\_\_/kWh which is the levelized tariff as per <NAME OF EXPERT PSU> allocation.

Year wise tariff is as follows;

|         |  |
|---------|--|
| Year 1  |  |
| Year 2  |  |
| Year 3  |  |
| Year 4  |  |
| Year 5  |  |
| Year 6  |  |
| Year 7  |  |
| Year 8  |  |
| Year 9  |  |
| Year 10 |  |
| Year 11 |  |
| Year 12 |  |
| Year 13 |  |
| Year 14 |  |

|         |  |
|---------|--|
| Year 15 |  |
| Year 16 |  |
| Year 17 |  |
| Year 18 |  |
| Year 19 |  |
| Year 20 |  |
| Year 21 |  |
| Year 22 |  |
| Year 23 |  |
| Year 24 |  |
| Year 25 |  |

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

### **SCHEDULE III**

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

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

The Price reference taken for calculating the total cost of the system is as per RFS rates for the state of \_\_\_\_\_ has used the CERC guidelines for arriving at the Project cost.

| <b>Year of Term<br/>( End of Year)</b> | <b>Calendar Year</b> | <b>Purchase Price in Crores ( Rs)</b> |
|--|----------------------|---------------------------------------|
| 1                                      |                      |                                       |
| 2                                      |                      |                                       |
| 3                                      |                      |                                       |
| 4                                      |                      |                                       |
| 5                                      |                      |                                       |
| 6                                      |                      |                                       |
| 7                                      |                      |                                       |

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**SCHEDULE IV**

|        |   |   |                    |  |
|--------|---|---|--------------------|--|
|        | Project :                               | _____kWp Solar On-Grid Power Project ____ |                    |  |
|        |   |   |                    |  |
|        | Location :                              | New Delhi                                 |                    |  |
|        |   |   |                    |  |
|        |   |   | Design Criteria    |  |
|        | Expected Yearly Energy Generation Sheet |   |                    |  |
|        |   |   |                    |  |
| End of | Yearly Degradation                      | Global incident in                        | Energy injected    |  |
| Year   | 'MWh' (Modules &                        | coll. Plane (GlobInc)                     | into grid (E_Grid) |  |
|        | System)                                 | 'kWh/Sq.mtr' Yearly                       | 'MWh' Yearly 'A'   |  |

|          |  |  |  |
|----------|--|--|--|
| Client : | Degradation consider in<br>PV system generation data |  |  |
| 1.       | 1.0%   |  |  |
| 2.       | 1.0%   |  |  |
| 3.       | 1.0%   |  |  |
| 4.       | 1.0%   |  |  |
| 5.       | 1.0%   |  |  |
| 6.       | 1.0%   |  |  |



|    |      |  |  |
|----|------|--|--|
| 7. | 1.0% |  |  |
|----|------|--|--|

|     |      |  |  |
|-----|------|--|--|
| 8.  | 1.0% |  |  |
| 9.  | 1.0% |  |  |
| 10. | 1.0% |  |  |
| 11. | 1.0% |  |  |
| 12. | 1.0% |  |  |
| 13. | 1.0% |  |  |
| 14. | 1.0% |  |  |
| 15. | 1.0% |  |  |
| 16  | 1.0% |  |  |
| 17  | 1.0% |  |  |
| 18  | 1.0% |  |  |
| 19  | 1.0% |  |  |
| 20  | 1.0% |  |  |
| 21  | 1.0% |  |  |
| 22  | 1.0% |  |  |
| 23  | 1.0% |  |  |
| 24  | 1.0% |  |  |
| 25  | 1.0% |  |  |

## **SCHEDULE V**

### **Government approvals**

1. To be obtained by the power producer

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

2. To be obtained by Power Purchaser

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

**REMAINDER OF THE PAGE IS INTENTIONALLY LEFT BLANK**

| <b>Purchase Price for..... kWp system @ Rs.____/- Watt.</b> |                            |
|---|----------------------------|
| <b>Year</b>   | <b>Salvage Value (Rs.)</b> |
| 1st year  |                            |
|   |                            |
| 2nd year  |                            |
|   |                            |
| 3rd year  |                            |
|   |                            |
| 4th year  |                            |
|   |                            |
| 5th year  |                            |
|   |                            |
| 6th year  |                            |
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| 7th year  |                            |
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| 8th year  |                            |
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| 9th year  |                            |
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| 10th year |  |
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| 11th year |  |
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| 12th year |  |
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| 13th year |  |
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| 14th year |  |
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| 15th year |  |
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| 15th year |  |
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| 16th year |  |
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| 17th year |  |
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| 18th year |  |
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| 19th year |  |
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| 20th year |  |
|           |  |
| 21th year |  |
|           |  |
| 23rd year |  |
|           |  |
| 24th year |  |
|           |  |
| 25th year |  |

**SCHEDULE VI**

**ANNEXURE-I**

**BANK DETAILS**

NAME OF THE BENEFICIARY:

PRINCIPAL PLACE OF BUSINESS

&ADDRESS: NAME OF THE BANK:

BANK ADDRESS:

BANK ACCOUNT NO:

TYPE OF BANK ACCOUNT -

SB/CA/CC: IFSC/NEFT/RTGS

CODE:

MICR CODE:

PAN CARD NO:

PHONE NO./FAX NO. WITH STD CODE:

EMAIL ID OF CONTACT PERSON: